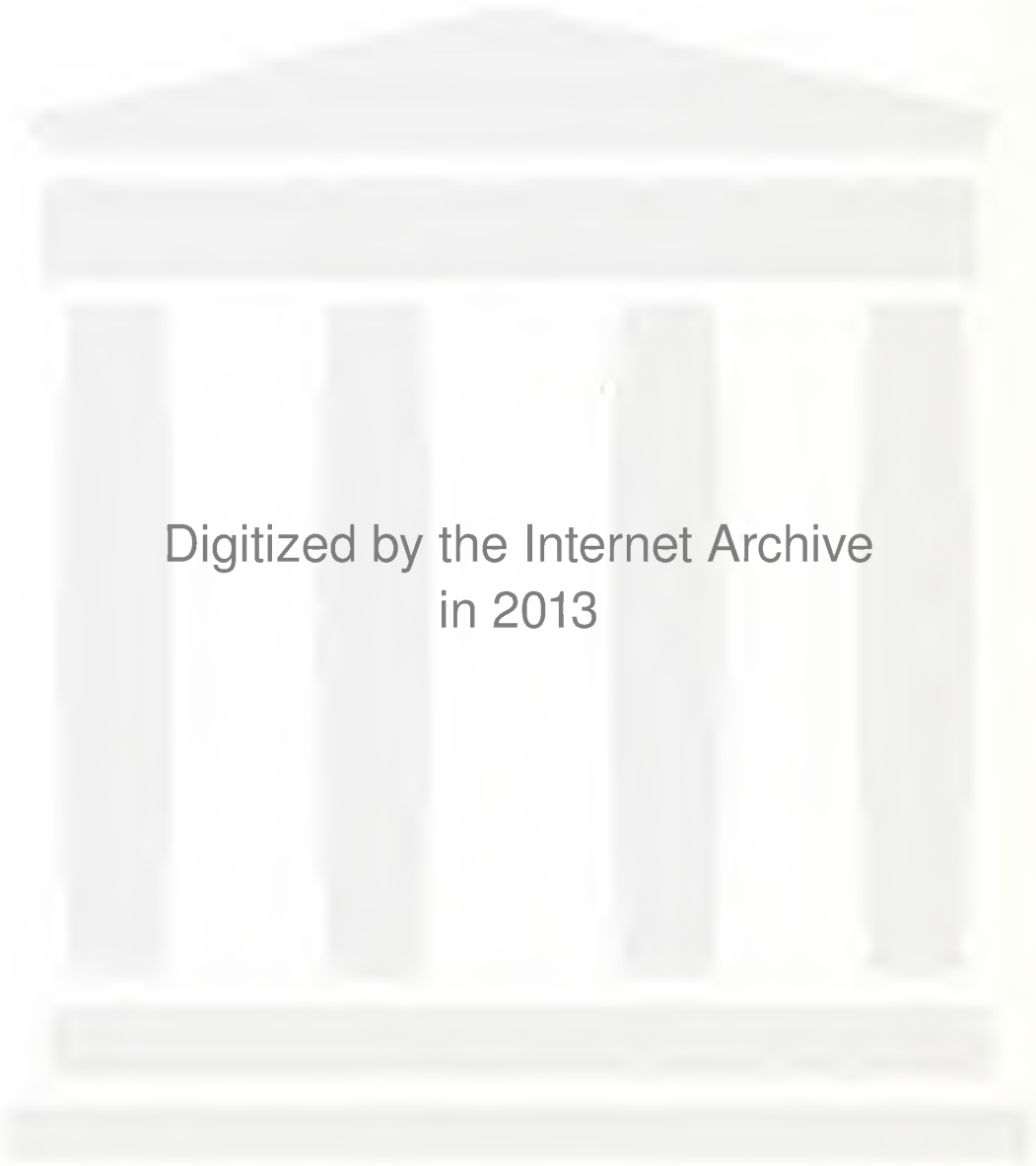
Sausalito Public Library

For Reference

Not to be taken from this room


Digitized by the Internet Archive
in 2013

http://archive.org/details/newencyclopaedia2009ency

REFERENCE

Sausalito Public Library
420 Litho St.
Sausalito, CA 94965
(415) 289-4121

ENCYCLOPÆDIA

Britannica

REFERENCE

2009

BOOK OF THE YEAR®

Sausalito Public Library
420 Litho St.
Sausalito, CA 94965
(415) 289-4121

ENCYCLOPÆDIA
Britannica

Encyclopædia Britannica, Inc. Chicago • London • New Delhi • Paris • Seoul • Sydney • Taipei • Tokyo

ENCYCLOPÆDIA
Britannica

BOOK OF THE YEAR

DIRECTOR AND EDITOR
Karen Jacobs Sparks

SENIOR EDITOR
Melinda C. Shepherd

EDITORIAL STAFF
Patricia Bauer
Heather Campbell
Virginia Gorlinski
David C. Hayes
Sherman Hollar
Kathleen Kuiper
Lorraine Murray
Jeff Wallenfeldt

DIRECTOR, STATISTICAL STAFF
Rosaline Jackson-Keys

SENIOR EDITOR,
STATISTICAL STAFF
Stephen Neher

EDITOR, STATISTICAL STAFF
Thad King

MANAGER, MEDIA
ACQUISITION
Kathy Nakamura

MEDIA EDITORS
Kimberly L. Cleary
Nicole Digiacomo

DIRECTOR, ART
AND COMPOSITION
Steven N. Kapusta

ILLUSTRATION STAFF
Thomas J. Spanos

SUPERVISOR, COMPOSITION
Carol A. Gaines

COMPOSITION STAFF
Cate Nichols

MANAGER, MEDIA
ASSET MANAGEMENT
Jeannine Deubel

MEDIA ASSET
MANAGEMENT STAFF
Kurt Heintz

MAP EDITOR, CARTOGRAPHY
Michael Nutter

DIRECTOR, COPY DEPARTMENT
Sylvia Wallace

COPY SUPERVISORS
Julian Ronning
Barbara Whitney

COPY EDITORS
Yvette Charboneau
John Cunningham
Kimberly Jeffries
Dennis Skord
Diana Solomon

SENIOR COORDINATOR,
PRODUCTION CONTROL
Marilyn L. Barton

DIRECTOR, INFORMATION
MANAGEMENT AND RETRIEVAL
Carmen-Maria Hetrea

INDEX SUPERVISOR
Edward Paul Moragne

CONTENT ANALYSTS
John Higgins
Stephen S. Seddon

HEAD LIBRARIAN
Henry Bolzon

CURATOR/GEOGRAPHY
Lars Mahinske

ASSISTANT LIBRARIAN
Robert M. Lewis

ADMINISTRATIVE STAFF
Barbara A. Schreiber

EDITORIAL TECHNOLOGIES
Steven Bosco
Lisa Braucher
Bruce Walters
Mark Wiechec

DIRECTOR, MANUFACTURING
Kim Gerber

ENCYCLOPÆDIA BRITANNICA, INC.
Chairman of the Board
Jacob E. Safra

President
Jorge Aguilar-Cauz

Senior Vice President,
Corporate Development
Michael Ross

Senior Vice President and Editor
Dale H. Hoiberg

Director of Production
Marsha Mackenzie

2009 ENCYCLOPÆDIA BRITANNICA, INC. Britannica Book of the Year, Encyclopædia Britannica, Britannica, and the Thistle logo are registered trademarks of Encyclopædia Britannica, Inc.

Library of Congress Catalog Card Number: 38-12082
International Standard Book Number: 978-1-59339-837-8
International Standard Serial Number: 0068-1156

No part of this work may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the publisher.

Britannica.com may be accessed on the Internet at http://www.britannica.com.

(Trademark Reg. U.S. Pat. Off.) Printed in U.S.A.

Foreword

The year 2008 was one of momentous change and wild uncertainty. Though many concerns were raised about China's prospects for mounting the Olympic Games, Beijing triumphed in spectacular form and staged many of the sporting events in uniquely designed venues. Later in the year, the global economic collapse sent the financial markets plunging and investors scrambling and forced consumers to tighten their belts. Worldwide, populations that were already struggling to meet basic needs were further hampered by soaring food prices. Meanwhile, freegans, individuals dedicated to finding alternatives to a consumerist economy, munched on discarded vegetarian foodstuffs. A fractious U.S. presidential campaign resulted in the election of Democrat Barack Obama, who made history as the first African American to win that office. The presidential campaign highlighted the emergence of "citizen journalists," everyday people who reported the news. In Turkey the government grappled with maintaining a political balance between secular and Islamic influences. The Anglicans, too, faced discontent as a split in the church left the communion fragmented. In India, Mumbai was paralyzed for nearly three days owing to a coordinated terrorist attack. All of these topics are covered in Special Reports.

Early in the year, the price of gasoline soared in the U.S. to unprecedented heights, and worries surfaced about fossil-fuel supplies and petroleum reserves in particular. The environment was also of great concern as scientists pondered the cause of the collapse of millions of honey-bee colonies and, to prepare for an ecological calamity, secured seed samples from a prodigious variety of plants in seed banks for safekeeping. Some observers were worried about CERN's start-up of the Large Hadron Collider, the world's largest and highest-energy particle accelerator, which met delay after an initial successful test operation. The avenue of education called "distance learning" gained strength as students in greater numbers embraced the concept to allow them to gain instruction without entering traditional classrooms. DARPA, a world leader in technical innovation, celebrated its 50th anniversary. The Paralympic Games in Beijing brought world attention to the feats of disabled athletes. In The Sudan, however, strife continued in the Darfur region, where 300,000 people had been killed, many in acts of genocide. These subjects are showcased in Sidebars.

A number of political figures gained new stature during the year, notably U.S. Democrat Barack Obama, who became the country's president-elect; Sarah Palin, the Alaskan governor who ran on the Republican ticket for vice president; and Dmitry Medvedev, the new president of Russia. In a not-so-serious vein, actress Tina Fey delighted television audiences with her spot-on impersonation of Palin, while TV talk-show host Jay Leno poked fun at the entire political campaign. These personalities have profiles in the Biographies section.

Hollywood was hit hard during the year, with the passing of acting legends Paul Scofield, Charlton Heston, Paul Newman, and Van Johnson as well as with the deaths of director-producer Sydney Pollack, dancer-actress Cyd Charisse, and sultry singer Eartha Kitt. The literary world lost Nobel Prize-winning writers Aleksandr Solzhenitsyn of Russia and Britain's Harold Pinter, in addition to American oral historian Studs Terkel. New Zealand explorer Sir Edmund Hillary, pioneering American cardiovascular surgeon Michael DeBakey, and Indonesian strongman Suharto also left the scene. Portraits of these luminaries can be found in the Obituaries section.

An article on the newly independent country of Kosovo makes a debut, along with a statistics page about Kosovo that appears in the World Data section of the volume. The wrap-up of 2008 awaits your perusal and promises to provide a historical look at one of the most memorable years in history.

Karen Sparks
Director and Editor

Contents

2009

DATES OF 2008

Calendar 8

Disasters 56

PEOPLE OF 2008

Nobel Prizes 64

Biographies 69

Obituaries 113

SPECIAL REPORTS

The Financial Crisis of 2008 170
By Joel Havemann

The U.S. Election of 2008 176
By David C. Beckwith

Citizen Journalism:
A News [R]evolution 180
By Lawrence Albarado

Skyrocketing Food Prices:
A Global Crisis 182
By Janet H. Clark

The Freegans—the Ultimate
Recyclers 184
By Mary Grigsby

The Precepts of Traditional
Chinese Medicine 186
By Nan Lu

A Serious Fracture in the
Anglican Church 188
By R. Scott Appleby

Turkey's Secular/Islamic
Conundrum 190
By Metin Heper

Terror in Mumbai 192
By Dr. Shanthie Mariet D'Souza

Games of the XXIX Olympiad . . . 194
By Melinda C. Shepherd

EVENTS OF 2008

Anthropology and Archaeology . . 200

Architecture and
Civil Engineering 204

Art and Art Exhibitions 209
Art, Art Exhibitions, Photography

Business Overview 214
THE FUTURE OF FOSSIL FUEL

Computers and
Information Systems 219

Earth Sciences 225
Geology and Geochemistry, Geophysics, Meteorology and Climate

Education 229
Primary and Secondary Education, Higher Education, DISTANCE LEARNING—EDUCATION BEYOND BUILDINGS

The Environment 233
International Activities, National Developments, Environmental Issues, Wildlife Conservation, SEED BANKS—PRESERVING CROP DIVERSITY

Fashions 239

Health and Disease 242

Life Sciences 247
Zoology, Botany, Molecular Biology and Genetics, Paleontology, HONEYBEES AND COLONY COLLAPSE DISORDER

Literature 254
English, German, French, Italian, Spanish, Portuguese, Russian, Persian, Arabic, Chinese, Japanese

Military Affairs 270
WMD, Arms Control, and Disarmament; Conflicts; Military Technology; Armed Forces and Politics; Military and Society; DARPA—50 YEARS OF INNOVATION

Performing Arts 273
Music, Dance, Theatre, Motion Pictures

Physical Sciences 290
Chemistry, Physics, THE LARGE HADRON COLLIDER—THE WORLD'S MOST POWERFUL PARTICLE ACCELERATOR, *Astronomy, Space Exploration*

Religion 298

Sports and Games 304
Automobile Racing; Baseball; Basketball; Bobsleigh, Skeleton, and Luge; Boxing; Cricket; Curling; Cycling; Equestrian Sports; Football; Golf; Gymnastics; Ice Hockey; Ice Skating; Sailing (Yachting); Skiing; Squash; Swimming; Tennis; Track and Field Sports (Athletics); THE PARALYMPIC GAMES: A FORUM FOR DISABLED ATHLETES; *Volleyball; Weightlifting; Wrestling; Sporting Record*

THE WORLD IN 2008

World Affairs 354
United Nations, European Union, Multinational and Regional Organizations, Dependent States, Antarctica, Arctic Regions

Countries of the World 363
COMBATING THE CRISIS IN DARFUR

CONTRIBUTORS 493

WORLD DATA 497

INDEX 857

Mourners attend the funeral of one of the victims killed in the terrorist attacks in Mumbai that turned India's financial capital into a war zone for nearly three days in late November.

Gurinder Osan/AP

Dates of 2008

During the opening ceremonies of the 2008 Olympic Games in Beijing, performers dance around a giant globe illuminated with images of Olympic athletes.

Fabrice Coffrini—AFP/Getty Images

January

As we meet tonight, our economy is undergoing a period of uncertainty. . . . At kitchen tables across our country, there is a concern about our economic future.

U.S. Pres. George W. Bush,
in his final state of the union address, January 28

1 With the beginning of the new year, Prime Minister Janez Jansa of Slovenia assumes the presidency of the European Union.

•

The Kenya Assemblies of God church in the village of Kiambaa, where hundreds of Kikuyu people are taking refuge from the violence that broke out after the disputed election of Dec. 27, 2007, is attacked by a mob and set on fire; some 50 people are burned to death.

•

The government of Pakistan chooses to postpone until February the national and provincial elections scheduled for January 8.

•

At a house in Baghdad where people are gathered to commemorate a man who had died in a car bombing three days earlier, a suicide bomber detonates his weapon, killing 30 of those present.

•

The euro replaces the Cypriot pound as Cyprus's currency and the Maltese lira as Malta's currency as the euro zone expands.

2 The military government of Myanmar (Burma) orders the tax on satellite television to be increased by a factor of 160, which brings it to about three times the average annual income; the action effectively cuts off any outside source of news.

•

The government of Sri Lanka formally annuls a cease-fire with the Liberation Tigers of Tamil Eelam that had been agreed to six years earlier; for practical purposes the agreement had not been observed since early 2006.

•

The price of a barrel of light sweet crude oil for the first time reaches $100 on the New York Mercantile Exchange, though it closes at $99.62.

3 A bomb goes off near a shopping mall in Diyarbakir, Tur., killing 5 people and injuring more than 60.

•

James H. Billington, the U.S. librarian of Congress, announces the appointment of Jon Scieszka, author of *The Stinky Cheese Man and Other Fairly Stupid Tales*, to the newly created position of ambassador for young people's literature.

4 The movie studio Warner Brothers announces that in future it will release its movies on Sony's Blu-ray discs rather than Toshiba's HD DVDs; industry insiders feel that this has decided which high-definition format will become the industry standard.

•

The British utility Scottish and Southern Energy agrees to buy Airtricity, Ireland's biggest wind-farm operator, for €1.83 billion (about $2.7 billion).

•

The 30th annual Dakar Rally, which was to begin January 5 in Lisbon with some 550 competitors and to end January 20 in Dakar, Senegal, is canceled; organizers say that terrorist organizations had made threats to disrupt the race.

5 Presidential elections called by Pres. Mikheil Saakashvili after a brief state of emergency in November 2007 are held in Georgia; Saakashvili wins narrowly.

6 The Arab League approves of a plan for a new government in Lebanon, which has been without a president since Nov. 23, 2007.

•

Near Mexican Hat, Utah, a bus carrying people to Phoenix from a ski trip in Telluride, Colo., goes off the road in the midst of a widespread and heavy storm and rolls down an embankment; at least nine passengers are killed.

7 Italian government troops begin clearing garbage from the streets of Naples, where it has been piling up since municipal dumps began overflowing on Dec. 21, 2007.

•

The legislature of the Marshall Islands elects Litokwa Tomeing president of the country; he replaces Kessai Note and, unlike Note, opposes the Compact of Free Association with the U.S.

Thomas Matthiesen—The Canadian Press/University of Minnesota/AP

Howard D. Schultz, the chairman of Starbucks Coffee, announces that he is taking over as CEO in place of James L. Donald, saying the company needs to regain focus.

Louisiana State University defeats Ohio State University 38–24 in college football's Bowl Championship Series title game in New Orleans to win the NCAA Football Bowl Subdivision (formerly Division I-A) championship.

8 Pres. Mwai Kibaki of Kenya announces his choices for half of the cabinet, and violence breaks out anew in several cities; some 500 people have been killed since violence erupted following the disputed election in 2007.

U.S. troops in Iraq begin a major offensive against Sunni insurgents in Diyala province.

Philippe de Montebello, who has been director of the Metropolitan Museum of Art in New York City for 30 years, announces his intention to retire at the end of the year.

9 The legislature of the UN-administered Serbian province of Kosovo chooses the former leader of the Kosovo Liberation Army, Hashim Thaci, to be prime minister.

The World Health Organization publishes a study that estimates the number of Iraqi civilians killed in the war from its inception in 2003 until June 2006 at about 151,000; previously the nongovernmental organization the Iraqi Body Count had estimated the number of deaths during that period at 47,668.

10 Plans to replace older nuclear plants are approved by the government of the U.K.

Shortly before a planned rally outside a courthouse in Lahore to protest the dismissal of Pakistani Chief Justice Iftikhar Mohammed Chaudhry, a suicide bomber sets off an explosion that kills at least 23 people, nearly all police officers.

Members of the Revolutionary Armed Forces of Colombia (FARC) release to emissaries of Venezuelan Pres. Hugo Chávez two Colombian women: Consuelo González de Perdomo, who was a member of the legislature when she was kidnapped in 2001, and Clara Rojas, who was an aide to presidential candidate Ingrid Betancourt (herself still a captive) when she was kidnapped in 2002.

11 The government of Nepal sets the election for a constitutional assembly for April 10.

For the first time, the price of gold futures rises above $900 an ounce before closing at $898.70 an ounce; it reaches $914 on January 14 before falling to $881.25 on January 16.

The Bank of America announces its planned purchase of troubled mortgage company Countrywide Financial Corp.

U.S. Secretary of Homeland Security Michael Chertoff announces the standards that state identity cards must meet to qualify as identification at airports and federal buildings under the Real ID act; several states refuse to comply with the legislation, for a variety of reasons.

12 Iraq's legislature passes a law to allow former Ba'thist officials to apply for positions in the government; this is the first small step toward meeting the political benchmarks set by the U.S. government for Iraq.

Legislative elections in Taiwan are won by the Nationalist Party, which takes 81 of the 113 seats; Pres. Chen Shui-bian resigns as head of the Democratic Progressive Party.

The legislature of Croatia approves a new centre-right government under Prime Minister Ivo Sanader.

13 Jackie Selebi resigns as president of Interpol the day after he was put on leave as head of South Africa's police because of the possibility that he will be charged with corruption.

Doris A. Taylor, head of a team of scientists at the University of Minnesota, reports that her team has successfully created new beating hearts by growing heart cells from newborn rats in the heart structure taken from dead rats. *(Photo above.)*

14 The spacecraft MESSENGER passes within 200 km (124 mi) of Mercury's surface, taking photographs and measurements, in the first of its three passes of the planet, which was last visited by NASA's Mariner 10 in 1975.

A suicide bomber attack at the luxury Serena Hotel in Kabul kills at least six people, mostly staff but also a Norwegian journalist and an American.

Malawi ends its diplomatic ties with Taiwan in favour of establishing them with China.

In the field of children's literature, the Newbery Medal

is awarded to Laura Amy Schlitz for *Good Masters! Sweet Ladies! Voices from a Medieval Village*, a series of monologues and dialogues set in the Middle Ages, and Brian Selznick wins the Caldecott Medal for illustration for his long illustrated novel *The Invention of Hugo Cabret*.

15 Hundreds of Islamic militants attack a well-stocked government paramilitary fort in Sararogha in Pakistan's South Waziristan province, killing 22 soldiers and stripping the fort of arms and ammunition.

•

At the Macworld Expo trade show in San Francisco, Apple CEO Steven P. Jobs introduces the ultralight MacBook Air laptop computer and the ability to rent movies by downloading them through iTunes.

•

The opposition Democratic Labour Party wins 20 of 30 legislative seats in elections in Barbados; the following day David Thompson replaces Owen Arthur as prime minister.

16 Clemente Mastella resigns as Italy's minister of justice because of allegations of widespread corruption.

•

The Proceedings of the Royal Society B reports the discovery in Uruguay of fossil evidence of the existence two million to four million years ago of a rodent, named *Josephoartigasia monesi*, which was some 3 m (10 ft) long and weighed up to 1,100 kg (2,200 lb).

17 A three-hour gun battle between drug cartel members and government forces takes place in Tijuana, Mex., where two days earlier a police commander and his family had been killed.

•

Geoscientists report that a natural gas black shale reservoir in the northern Appalachians could hold as much as 15 trillion cu m (516 trillion cu ft) of gas; it would be a huge addition to U.S. reserves.

18 On the first day of the religious festival of 'Ashura', fighting between a millennial militia, the Soldiers of Heaven, and Iraqi government forces in several places in southern Iraq leaves at least 66 dead; nevertheless, millions of pilgrims make their journey to Karbala' unmolested.

•

Israel closes all border crossings between itself and the Gaza Strip, blocking, among other things, aid shipments, saying the step is intended to discourage rocket attacks from Gaza on Israel.

•

Élie Doté resigns as prime minister of the Central African Republic; on January 22 Faustin Archange Touadéra is named to replace him.

19 Spanish Interior Minister Alfredo Pérez Rubalcaba announces the arrest in Barcelona of 14 people of Pakistani and Indian origin who are believed to have been planning a terrorist attack on the city.

20 Presidential elections in Serbia result in the need for a runoff between Pres. Boris Tadic and Tomislav Nikolic of the Serbian Radical Party.

•

It is reported that David D. Hiller, publisher of the *Los Angeles Times*, has removed James E. O'Shea as editor for refusing to make requested job cuts in the newsroom.

21 On a visit to Turkey, Sudanese Pres. Omar al-Bashir defends his recent appointment of Musa Hilal as a senior government adviser; Hilal is generally believed to be a leader of the Janjawid militia forces.

•

Stock markets in cities around the world fall steeply; fear of a U.S. recession is believed to explain the sell-off.

•

Israel announces that it will offer generous tax incentives as part of a program to support the use of electric cars in conjunction with entrepreneur Shai Agassi and the car company Renault; it is expected that the program will have 100,000 electric cars on the road by the end of 2010.

•

At Thoroughbred horse racing's 2007 Eclipse Awards, Curlin is named Horse of the Year.

22 Thailand's military junta disbands the day after the first meeting of the country's legislature since the 2006 military coup.

•

After an emergency meeting the U.S. Federal Reserve lowers its benchmark lending rate three-quarters of a percentage point, to 3.5%, the largest single-day reduction it has ever made; stocks initially plummet but rally robustly.

•

Serbia announces that the Russian state-owned gas company Gazprom has bought a 51% interest in NIS, the Serbian oil monopoly.

•

Iraq's legislature adopts a new flag, the same as the previous one except that the three stars that represent Ba'thist ideals have been removed.

23 Prime Minister Kostas Karamanlis of Greece begins a three-day visit to Turkey; it is the first official visit to Turkey by a Greek prime minister since May 1959.

•

At the divided town of Rafah, members of Hamas break down a portion of the wall closing off Egypt from the Gaza Strip, and thousands of Palestinians pour across the broken partition to purchase supplies. *(Photo right.)*

•

In Mosul, Iraq, a house used by insurgents, possibly as a bomb factory, explodes as police approach; at least 34 people are killed, most of them crushed to death in neighbouring buildings that collapse from the force of the explosion.

24 The French banking giant Société Générale announces that a midlevel employee, Jérôme Kerviel, for the past year was a rogue trader and caused the bank to lose €4.9 billion ($7.2 billion).

•

The government of Italian Prime Minister Romano Prodi falls after a no-confidence vote.

•

Researchers at the J. Craig Venter Institute report that they have synthesized the genome of a small bacterium (*Mycoplasma genitalium*) by assembling about 100 DNA fragments in a major step toward creating a complete artificial organism.

25 A dusk-to-dawn curfew is imposed in

Mohammed Saber—epa/Corbis

Nakuru, Kenya, in an attempt to contain ethnic violence that has broken out, contributing to a death toll of more than 650 people throughout the country since the disputed election.

26 Members of a criminal gang led by Rondell Rawlins attack the village of Lusignan, Guyana, massacring 11 people, at least 5 of whom are children.

•

Russian Mariya Sharapova defeats Ana Ivanovic of Serbia to win her first Australian Open women's tennis championship; the following day Novak Djokovic of Serbia defeats Frenchman Jo-Wilfried Tsonga to win his first men's title.

•

Top film awards at the annual Sundance Film Festival in Park City, Utah, go to *Frozen River, Trouble the Water, The Wackness,* and *Fields of Fuel.*

27 Paddy Ashdown of the U.K. withdraws from consideration for the post of UN special envoy to Afghanistan in the face of opposition from Afghan Pres. Hamid Karzai; Afghanistan objected to the enlarged mandate planned for Ashdown.

•

Russia's Central Election Commission denies leading opposition presidential candidate Mikhail Kasyanov a place on the ballot.

•

Indonesia's former president Suharto dies; a week of official mourning is declared.

•

Yokozuna Hakuho defeats *yokozuna* Asashoryu to win the Emperor's Cup at the New Year Grand Sumo Tournament in Tokyo; the contestants had even records going into the final match.

28 The ruling party in Turkey reaches an agreement on an amendment to the constitution that will allow women who wear head scarves for religious reasons to attend university; the measure must be approved by the legislature.

•

Officials in the Galapagos Islands report that authorities in Ecuador are investigating the killing of 53 sea lions that have been found with crushed skulls on the island of Pinta in the nature reserve.

•

U.S. Pres. George W. Bush delivers his final state of the union address; he asks for patience on the Iraq War, addresses economic worries, and presents a modest domestic agenda.

29 King Bhumibol Adulyadej of Thailand ratifies the legislature's selection of Samak Sundaravej as the country's new prime minister.

•

Hundreds of women rally in Kandahar, Afg., to protest the January 26 kidnapping of American women's aid worker Cyd Mizell and her Afghan driver.

30 Italian Pres. Giorgio Napolitano asks Franco Marini, president of the Senate, to form a temporary government.

•

The U.S. Federal Reserve Board cuts its benchmark interest rate a further half of a percentage point, to 3%.

31 David Kimutai Too, an opposition lawmaker, is shot to death by a policeman in Eldoret, Kenya; though government officials say the killing was not politically motivated, violence throughout the country intensifies in response to the murder.

•

The European Union says that if Italy fails to solve the garbage crisis in Naples within a month, it will be in violation of the organization's law and will face legal action.

•

The World Health Organization reports that programs in which mosquito nets and artemisinin, a new antimalarial medicine, were widely distributed in several African countries generally cut the number of deaths from malaria in half.

February

For the pain, suffering, and hurt of these Stolen Generations, their descendants, and for their families left behind, we say sorry. . . . And for the indignity and degradation thus inflicted on a proud people and a proud culture, we say sorry.

Australian Prime Minister Kevin Rudd,
in his historic apology to the country's Aborigines, February 13

1 Two women suicide bombers, who are possibly mentally disabled, detonate their weapons in the Ghazil animal market in Baghdad, killing some 98 people.

•

The American oil company Exxon Mobil Corp. reports that it earned $40.6 billion last year, a new record for the highest profit ever recorded; the previous record high prolit was also reported by Exxon Mobil.

•

Government officials in Japan say that at least 175 people have become ill after eating dumplings imported from China that were tainted with insecticide.

•

Microsoft makes an unsolicited bid to buy the online search engine company Yahoo! for $44.6 billion.

2 Rebel troops attempting to overthrow Pres. Idriss Déby enter N'Djamena, the capital of Chad, and surround the presidential palace as Chad's armed forces resist.

•

Pres. Nicolas Sarkozy of France and the model and pop singer Carla Bruni are married in Paris.

3 Pres. Boris Tadic wins reelection in a runoff presidential election in Serbia; Tadic favours bringing Serbia into the European Union.

•

In Glendale, Ariz., the New York Giants defeat the New England Patriots 17–14 to win the National Football League's Super Bowl XLII; the Patriots had an undefeated record going into the game.

•

Hannah Montana & Miley Cyrus: Best of Both Worlds, a concert film shown only in I-Max and other 3-D theatres, tops the North American box office.

4 A suicide bomber kills one person in Dimona, Israel; it is the first attack there and the first suicide attack in Israel since January 2007.

•

As Sri Lanka celebrates the 60th anniversary of its independence, a roadside bomb in the Weliova region blows up a bus, killing 12 people; the previous day a suicide bomber killed 11 people in Colombo's main railway station, and the day before that a bomb on a bus traveling with Buddhist pilgrims in Dambulla killed 18 people.

•

The $250,000 A.M. Turing Award for excellence in computer science is granted to Edmund M. Clarke, E. Allen Emerson, and Joseph Sifakis for their development of model checking, an automated method to discover errors in the design of computer hardware and software.

•

NASA transmits the Beatles song "Across the Universe" toward Polaris, the North Star, in celebration of the 50th anniversary of the agency and of its first satellite, Explorer I; the occasion also marks the 45th anniversary of the Deep Space Network of communication and the 40th anniversary of the recording of the song.

5 The death toll from violence in Kenya since the presidential election in December 2007 passes 1,000 people as officials from the ruling and opposition parties begin negotiations on how to end the crisis.

•

Fighting in N'Djamena, Chad, abates, which indicates that rebel fighters have retreated from the city.

•

The Australian company Geodynamics Ltd. completes a production well for deep, dry geothermal energy in the Cooper Basin region of South Australia; the well is intended to be the first hot fractured-rock source of commercial electricity generation.

6 The vice president of Pakistan's Awami National Party is assassinated in Karachi, and rioting erupts.

•

A large U.S. study of middle-aged and older people with Type II diabetes who are at high risk for heart attack and stroke is halted when it

is found that aggressively lowering their blood sugar levels has clearly increased the number of deaths due to heart disease, a result diametrically opposed to what had been expected.

7 Edward Lowassa resigns as prime minister of Tanzania because of suspicion of his involvement with a failed energy deal with an American company; the following day Pres. Jakaya Kikwete names Mizengo Pinda to replace him.

•

France becomes the fifth country to ratify the Lisbon Treaty, a governing package designed to reform the European Union following its recent expansion.

•

Two studies are published in the journal *Science* showing that the use of biofuels is leading to the clearing of rainforest and scrublands for crops and that in sum the production of biofuels is causing more greenhouse gas emissions than the use of fossil fuels.

•

Combustible sugar dust causes an enormous explosion at the Dixie Crystal sugar refinery in Port Wentworth, Ga.; at least 13 employees are killed, with dozens seriously injured.

•

The Licey Tigers (Tigres) defeat the defending champions, the Cibao Eagles (Águilas), 8–2 in the final game of the round-robin tournament in Santiago, Dom.Rep., to win baseball's Caribbean Series with a tournament record of 5–1; for the first time in the history of the event, both teams are from the host country.

8 Dean Barrow is sworn in as the first black prime minister of Belize the day after his United Democratic Party won 81% of seats in a legislative election.

9 In Abu Dhabi, U.A.E., ground is broken on Masdar, a city that is being built by using renewable energy and that is designed to function without producing carbon emissions; it is expected to be completed in about 10 years and to have a population of 100,000.

•

A tentative agreement between the Writers Guild of America and movie and television production companies is reached, which indicates a likely end to the writers' strike that began on Nov. 5, 2007, and has stopped production of 63 TV shows; the strike formally ends on February 12.

10 A car bomb kills at least 23 people at a checkpoint outside Balad, Iraq.

•

The Namdaemun Gate in Seoul, built in 1398 and regarded as South Korea's most important national treasure, is destroyed by fire, in spite of the efforts of hundreds of firefighters. *(Photo below.)*

•

Armed thieves enter the Emil Buerhle Collection art museum in Zürich and steal the paintings *Poppies near Vétheuil* by Claude Monet, *Count Lepic and His Daughters* by Edgar Degas, *Chestnut in Bloom* by Vincent van Gogh, and *Boy in a Red Jacket* by Paul Cézanne in the biggest art robbery ever to take place in Switzerland; the Monet and van Gogh paintings are recovered eight days later.

•

At the Grammy Awards in Los Angeles, the top winner is British vocalist Amy Winehouse, who wins five awards, including both record of the year and song of the year for "Rehab" and the award for best new artist; the surprise choice for album of the year is *River: The Joni Letters* by jazz artist Herbie Hancock.

•

In Ghana, Egypt defeats Cameroon 1–0 to win the African Cup of Nations in association football (soccer) for a record sixth time.

11 Pres. José Ramos-Horta of East Timor is critically injured in an apparent assassination attempt; the country's prime minister, Xanana Gusmão, is also attacked, but he escapes injury.

•

The drug company Baxter International announces its suspension of production of heparin, a blood thinner, because some 350 people have reacted badly to it, in some cases fatally.

•

The Columbus science module, created by the European Space Agency, is successfully attached to the International Space Station, greatly increasing the station's size and doubling its research capability.

12 Pakistan's army chief, Gen. Ashfaq Parvez Kayani, orders all military officers in government civil positions to resign from those posts.

•

A report from a census of tigers in India is released; it finds that the number of tigers since the last census, in 2002, has fallen from 3,642 to only 1,411.

•

K-Run's Park Me in First wins Best in Show at the Westminster Kennel Club's 132nd dog show; the popu-

Lee Jin-man/AP

lar beagle, known as Uno, is the first of its breed to win the top award at the premier American dog show.

13 Iraq's legislature passes a package bill that includes an outline for defining provincial powers and an amnesty for detainees; the amnesty is one of the benchmarks that the U.S. government has expected from Iraq.

•

For the first time in the country's history, Prime Minister Kevin Rudd formally apologizes to Australia's Aborigines for the government's past mistreatment of them.

•

Malaysian Prime Minister Abdullah Ahmad Badawi dissolves the legislature, making it necessary to hold elections within the next two months.

14 A gunman enters a lecture hall at Northern Illinois University and begins shooting from the stage; he kills 5 students and wounds 16 others before killing himself.

•

Kiribati declares a marine protected area that, at 425,300 sq km (164,200 sq mi), is the largest in the world; it preserves a rare oceanic coral archipelago ecosystem.

•

A U.S. government report shows that the country's trade deficit in December 2007 dropped to $58.8 billion and that the overall figure for 2007 also dropped by 6.2%; it is the first decrease in the figure since 2001.

15 After several inconclusive elections in the legislature, Vaclav Klaus is narrowly reelected president of the Czech Republic.

•

Klaus Zumwinkel resigns as the head of Germany's postal service after he is suspected of having evaded $1.46 million in taxes in a widespread tax scandal.

•

Paraguay declares a state of emergency in response to an outbreak of yellow fever in the area of Asunción; the last yellow fever outbreak was in 1974.

•

Scottish cyclist Mark Beaumont breaks the world record for riding a bicycle around the world when he crosses the finish line in Paris 195 days after he began the 29,000-km (18,000-mi) journey; the previous record of 276 days 19 hr 15 min was set in 2005 by British cyclist Steve Strange.

16 A suicide bomber drives an explosives-laden car into a crowd at a campaign rally in Parachinar, Pak., and detonates it; at least 37 people are killed.

•

The Brazilian film *Tropa de elite*, directed by José Padilha, wins the Golden Bear at the Berlin International Film Festival.

17 The UN-administered Serbian province of Kosovo unilaterally declares its independence; the following day the U.S., France, and Germany, among others, recognize its sovereignty, but Russia, Spain, and Serbia are among those that refuse recognition.

•

A suicide bomber detonates his weapon at a dogfighting match outside Kandahar, Afg., killing at least 80 people, including a prominent anti-Taliban police chief.

•

The U.S. Department of Agriculture announces the recall of 65 million kg (143 million lb) of ground beef from a Westland/Hallmark Meat Co. slaughterhouse in California where operations have been suspended owing to inhumane handling of its animals; a video made by the Humane Society and released on January 30 showed downer cattle—those that cannot walk—being forcibly taken to slaughter, though downer cattle are forbidden in the food supply.

•

The first round of presidential elections in the Republic of Cyprus produces the need for a runoff between Dimitris Christofias of the Communist Party and Ioannis Kasoulides of the Democratic Rally party; the incumbent, Tassos Papadopoulos, loses.

•

In Daytona Beach, Fla., Ryan Newman wins the 50th running of the Daytona 500, the premier NASCAR race, by 0.092 second in an upset victory.

18 Legislative elections in Pakistan result in a pronounced victory for the Pakistan People's Party (once led by Benazir Bhutto), with 120 seats, and the Pakistan Muslim League-N of Nawaz Sharif, with 90, and an equally pronounced defeat for Pres. Pervez Musharraf's party, which wins only 51 seats.

•

British Prime Minister Gordon Brown holds a news conference to explain and defend the government's decision to nationalize the failing mortgage lender Northern Rock.

•

The BBC transmits its final English-language shortwave radio broadcast in Europe; the service began 75 years earlier with an inaugural transmission by King George V.

19 Prime Minister Serzh Sarkisyan handily wins election as president of Armenia; the following day thousands of people demonstrate in Yerevan against the election results, which they believe to have been rigged.

•

Fidel Castro announces his official retirement, saying he does not want another term as president of Cuba.

•

Toshiba announces that it will phase out the production of HD DVD players and other products, leaving Sony's Blu-ray the sole new optical media format.

•

The 111-year-old Dow Jones industrial average replaces the Altria Group and Honeywell International with the Bank of America Corp. and the Chevron Corp. on its listing; it is the first change to the 30-stock index since April 2004.

20 Zimbabwe's statistics office reports that the official rate of inflation in January reached 100,580%.

•

A U.S. missile interceptor successfully strikes a falling spy satellite, destroying its fuel tank as planned.

•

Both the high-end unique gadgetry store Sharper Image and the catalog housewares retailer Lillian Vernon file for bankruptcy protection.

21 Thousands of demonstrators angry about Kosovo's declaration of independence attack and set fire to the U.S. embassy in Belgrade, Serbia.

•

U.S. Pres. George W. Bush arrives in Liberia at the end of a six-day, five-country tour of Africa; he is the first sitting president since Jimmy Carter to visit the country, and he is greeted warmly.

•

Brazil's central bank reveals that in January Brazil for

the first time became a net creditor country.

22 Japanese Prime Minister Yasuo Fukuda orders a review of the structure of the Ministry of Defense because of criticism arising from its handling of an incident on February 19 in which its most advanced destroyer rammed into and destroyed a small fishing boat in spite of having spotted it.

•

In Iraq the Shi'ite cleric Muqtada al-Sadr extends the cease-fire being observed by his Mahdi Army militia a further six months.

•

Officials of the open-wheel automobile Indy Racing League announce an agreement with the rival Champ Car World Series to merge the two into a single series; it will extend the IndyCar Series from 16 to 19 events.

23 The Ugandan government reaches a formal cease-fire agreement with the rebel group the Lord's Resistance Army.

•

A team of scientists and engineers composed entirely of women guides the Mars exploration rover Spirit; the event, the first time an all-women team has guided a major NASA mission, is organized in recognition of the coming Women's History Month celebration in March.

24 Dimitris Christofias wins the runoff election for president of Cyprus; he immediately agrees to meet the Turkish Cypriot leader, Mehmet Ali Talat, to renew efforts at reunification of the island.

•

At the 80th Academy Awards presentation, hosted by Jon Stewart, Oscars are won by, among others, *No Country for Old Men* (best picture) and its directors, Joel and Ethan Coen, and actors Daniel Day-Lewis, Marion Cotillard, Javier Bardem, and Tilda Swinton.

25 Flemish and Walloon leaders in Belgium agree on a series of reforms, including giving more powers to the regions, that should make it possible for a new government to be formed after close to nine months of disagreement.

•

Lee Myung-bak is sworn in as president of South Korea.

•

A spokesman for the Taliban in Afghanistan publicly announces a demand that all cell phone companies halt service between the hours of 5:00 PM and 7:00 AM; the purpose of the sought curfew is to erode the ability of NATO and U.S. forces to trace the positions of Taliban fighters through cell phone signals.

26 A panel of judges in Nigeria upholds the election of Umaru Musa Yar'Adua as president in a challenge brought by the two opposition candidates in the election of April 2007.

•

The Svalbard Global Seed Vault in the Norwegian Arctic is ceremonially opened with its first consignment of seeds; the depository is intended to safeguard samples of all known food crop seeds against any human or natural disaster. *(Photo right.)*

•

The New York Philharmonic plays a concert in Pyongyang, N.Kor., that includes Antonin Dvorak's *Symphony Number 9 in E Minor (From the New World)*, George Gershwin's *An American in Paris*, and the Korean folk song "Arirang."

•

Starbucks closes 7,100 stores for three hours for retraining of its employees.

27 Former Thai prime minister Thaksin Shinawatra returns to Thailand after spending 17 months in exile; he is wanted on charges of corruption.

•

A recently passed law calling for provincial elections by October and granting greater powers to provincial governments is vetoed by Iraq's presidency council, which consists of Pres. Jalal Talabani and two vice presidents.

28 Kenyan Pres. Mwai Kibaki and opposition leader Raila Odinga reach an agreement on a power-sharing government in which Kibaki remains president, Odinga becomes a powerful prime minister, and cabinet appointments are split between the parties.

•

Street demonstrations in cities and towns in Cameroon continue to grow, with at least 20 deaths reported; the protesters are angry about rising fuel costs and about a proposed change to the constitution that lengthens the presidential term of office.

•

Rioting over rising food and fuel prices takes place in Ouagadougou, Burkina Faso; similar riots have taken place in other towns.

•

The Pew Center on the States releases a report showing that for the first time more than 1% of American adults are behind bars, with close to 2.3 million adults incarcerated at the beginning of 2008.

•

The first 30,000 pages of the Web-based Encyclopedia of Life go live; the encyclopaedia, which intends to catalog all living species by organizing information that is already available, is expected to grow to 1.77 million pages.

29 Turkey ends its eight-day incursion into northern Iraq, withdrawing its troops to the Turkish side of the border.

•

The government of India passes a budget that includes a provision to cancel all the debt owed by the country's small farmers.

•

A suicide bomber kills at least 46 people at a funeral in Mingora in northwestern Pakistan.

John McConnico/AP

March

First and foremost, you must vote.
Every single person
must exercise his or her franchise.

King Jigme Khesar Namgyal Wangchuk of Bhutan, exhorting his subjects to vote in the following day's election that will end his absolute rule, March 23

1 Colombian armed forces attack a Revolutionary Armed Forces of Colombia (FARC) camp in Ecuador, killing 24 people, including the organization's second-in-command, Raúl Reyes.

•

AOL ceases its support for Netscape Navigator, which was the dominant Internet Web browser in the mid-1990s; it recommends that customers switch to Firefox or Flock.

2 Pres. Robert Kocharyan declares a state of emergency in Armenia after protests the previous day over the results of the February 19 election turned violent, leaving eight people dead.

•

At a gathering of tribal elders who convened in Darra Adamkhel, Pak., in order to discuss forming a force to fight local militants, a bomb kills 42 people and injures 58 others.

•

As expected, Dmitry Medvedev is elected president of Russia.

3 Israeli troops withdraw from Gaza after a two-day offensive that left 116 Palestinians dead, and Hamas holds a victory rally.

•

The price of oil reaches $103.95 a barrel, breaking the record that was set in August 1980 when that price, $39.50, is adjusted for inflation.

•

Ecuador breaks off diplomatic relations with Colombia in response to the raid that Colombia made two days earlier against Revolutionary Armed Forces of Colombia (FARC) guerrillas in Ecuador.

4 Ian Paisley announces that he will retire in May as first minister of Northern Ireland's power-sharing government and as head of the Democratic Unionist Party.

•

Longtime Green Bay Packers quarterback Brett Favre, who set several records in his 17-year career, announces his retirement from professional football.

5 The U.S. National Oceanic and Atmospheric Administration and the University of Hawaii release a study saying that barren areas of the Pacific and Atlantic oceans have increased some 15% since 1998.

•

The U.S. Food and Drug Administration reports that heparin associated with bad reactions, including 19 deaths, was produced with ingredients made in China and contained a contaminant that effectively mimicked the active ingredient in genuine heparin.

6 A gunman invades the well-known Mercaz Harav yeshiva in Jerusalem and opens fire, killing at least eight students.

•

Two bombs explode in sequence in a shopping district in Baghdad; at least 68 people are killed.

•

Mexico's Senate approves a sweeping reform of the country's criminal justice system that, among other things, introduces open trials; the reform was previously approved in the Chamber of Deputies and must also be approved by a majority of state legislatures.

•

The U.S. Federal Reserve Board reports that in the second quarter of 2007, for the first time since the board began tracking data in 1945, the amount of equity Americans own in their homes fell below 50%.

•

The U.S. Federal Aviation Administration fines Southwest Airlines a record $10.2 million for flying older Boeing 737 planes that had not yet been inspected, in contravention of FAA rules.

•

In New York City the winners of the National Book Critics Circle Awards are announced as Junot Díaz for *The Brief Wondrous Life of Oscar Wao* (fiction), Harriet Washington for *Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present* (nonfiction), Tim Jeal for *Stanley: The Impossible Life of Africa's Greatest Explorer* (biography), Edwidge Danti-

cat for *Brother, I'm Dying* (autobiography), Mary Jo Bang for *Elegy* (poetry), and Alex Ross for *The Rest Is Noise: Listening to the Twentieth Century* (criticism); Emilie Buchwald is granted the Ivan Sandrof Lifetime Achievement Award.

7 At a summit meeting in the Dominican Republic, the leaders of Colombia, Ecuador, and Venezuela reach an agreement to end the spreading diplomatic crisis that was initiated by Colombia's military strike on the Revolutionary Armed Forces of Colombia (FARC) encampment in Ecuador's territory.

•

Pres. Jalal Talabani of Iraq meets with Turkish Pres. Abdullah Gul in Ankara, Tur., in an effort to bring about improved relations between the countries.

8 Legislative elections in Malaysia result in the worst showing for the ruling National Front party in almost 40 years, though it does just barely retain its majority.

•

Pres. Boris Tadic of Serbia announces plans to call an early election as a result of dissension over Kosovo's declaration of independence from Serbia.

9 In legislative elections in Spain, the ruling Spanish Socialist Workers' Party (PSOE) wins 43.6% of the vote, retaining power; the conservative Popular Party wins 40.1%.

•

In London, *Hairspray* wins four Laurence Olivier Awards—best new musical, best actor in a musical (Michael Ball), best actress in a musical (Leanne Jones), and best supporting performance in a musical (Tracie Bennett).

10 The Roman Catholic Church publishes a new list of mortal sins; it includes pollution, excessive wealth, and tampering with the order of nature.

•

In a ceremony in New York City, the Rock and Roll Hall of Fame, located in Cleveland, inducts musicians Leonard Cohen, Madonna, John Mellencamp, and Little Walter, the groups the Dave Clark Five and the Ventures, and producers Kenny Gamble and Leon Huff.

•

Indian authorities block hundreds of Tibetan protesters near Dharmshala at the beginning of a six-month march to Tibet to protest China's hosting of the Olympic Games. *(Photo below.)*

11 China announces a planned reorganization of its government that will create ministries to oversee environmental protection, social services, housing and construction, and industry and information.

•

In the first municipal elections in Batticaloa, Sri Lanka, in 13 years, the Tamil Makkal Viduthalai Pulikal Party wins 11 of the 19 seats on the city council; the party is made up of fighters who broke with the Liberation Tigers of Tamil Eelam and began fighting for the government.

•

Two bombs in Lahore, Pak., the first at a Federal Investigation Agency office, kill at least 24 people.

12 Former star prosecutor Eliot Spitzer announces his resignation as governor of the U.S. state of New York after knowledge that he was a client of a pricey prostitution service has come to light.

•

NASA's spacecraft Cassini passes within 50 km (30 mi) of the surface of Saturn's moon Enceladus in order to sample ice plumes from cracks in the moon's surface.

•

The Web site Hulu.com, a joint venture of NBC Universal and Fox that makes television shows and movies available to anyone with an Internet connection, goes live.

•

Michael Heller, a Polish cosmologist and philosopher, is named the winner of the Templeton Prize for Progress Toward Research or Discoveries About Spiritual Realities.

•

Kate Christensen wins the PEN/Faulkner Award for fiction for her novel *The Great Man*.

•

Lance Mackey wins the Iditarod Trail Sled Dog Race for the second consecutive year, crossing the Burled Arch in Nome, Alaska, after a journey of 9 days 11 hours 46 minutes 48 seconds.

13 It is reported that hundreds of monks in Tibet have been protesting China's rule over the province for the past few days.

•

Pres. Omar Hassan Ahmad al-Bashir of The Sudan and Pres. Idriss Déby of Chad sign an agreement to end rebel attacks across each other's borders.

•

The body of Archbishop Paulos Faraj Rahho of the Chaldean Catholic Church in Mosul, Iraq, is found in Mosul; he was kidnapped on February 29.

•

For the first time, Cuba allows ordinary citizens to

Ashwini Bhatia/AP

purchase appliances and electronic devices such as computers and DVD players.

14 Violence breaks out in Lhasa, the capital of Tibet, between residents and Chinese security forces.

In legislative elections in Iran, conservatives win 132 seats and reformists only 31; the European Union characterizes the conduct of the election as neither free nor fair.

A tornado roars through downtown Atlanta, injuring dozens and causing major damage to city landmarks.

A recently recognized portrait of the composer Wolfgang Amadeus Mozart is authenticated in London; the portrait is believed to have been painted about 1783 by Austrian artist Joseph Hickel and is one of only four known portraits from Mozart's time in Vienna.

15 A munitions depot near Tirana, Alb., blows up, and the series of explosions as well as a strong shock wave leave 26 people dead and hundreds injured; on March 17 Defense Minister Fatmir Mediu resigns.

A 19-story construction crane topples to the ground in New York City, destroying a town house and damaging several other buildings; six construction workers and a tourist are killed.

With its 29–12 defeat of France, Wales wins the Six Nations Rugby Union championship, having achieved a won-lost record of 5–0.

G. Wayne Clough, president of the Georgia Institute of Technology, is named to head the Smithsonian Institution.

16 The bank JPMorgan Chase & Co. announces that with $30 billion in funding from the Federal Reserve, it will buy the collapsing Wall Street investment bank Bear Stearns for only $2 a share.

The House of Augustus in Rome, featuring vivid frescoes painted about 30 BC, is opened to the public for the first time, following decades of restoration work.

The wreck of HMAS *Sydney*, which disappeared 66 years earlier, is found off Western Australia, where it sank on Nov. 19, 1941, after being torpedoed by the German raider *Kormoran*, with 645 aboard; the search vessel *Geosounder* finds the wreckage some 112 nautical miles from Denham.

17 The World Glacier Monitoring Service releases a report charting changes in glaciers through 2006; the study shows that the pace of melting appears to be accelerating.

In Mitrovica, in northern Kosovo, Serbs attempting to force a partition of the northern part of Kosovo (which is populated heavily with ethnic Serbs) from the rest of Kosovo attack UN peacekeeping forces.

A bomb goes off near a shrine in Karbala', Iraq; at least 43 people are killed.

18 Kenya's National Assembly approves a power-sharing plan intended to end the crisis set in motion by the presidential election.

The Dow Jones industrial average rises 420 points, its highest one-day point gain since July 2002, in response to a three-quarter-point rate cut by the Federal Reserve.

German Chancellor Angela Merkel addresses the Israeli Knesset (legislature); she is the first German chancellor to do so in Israel's 60-year history.

19 Emir Sheikh Sabah al-Ahmad al-Jabir al-Sabah of Kuwait dissolves the government and calls for elections to be held.

Toshihiko Fukui's term as head of Japan's central bank ends without a successor's having been chosen, as the Diet (legislature) is unable to agree on a candidate.

Greece is paralyzed by a widespread strike to protest proposed changes to the pension law.

U.S. Pres. George W. Bush marks the fifth anniversary of the start of the Iraq War with a speech saying that going to war was the right thing to do and insisting that the war continue until the attainment of victory.

20 Yves Leterme of the Flemish Christian Democratic Party is sworn in as prime minister of a coalition government in Belgium nine months after elections.

A report published in the journal *Nature* describes the discovery of a molecule of methane, an organic substance, and the confirmation of the presence of water on the exoplanet HD 189733b in the constellation Vulpecula.

A report is published in the journal *Science* saying that a study of a fossil thigh bone of the six-million-year-old protohuman species *Orrorin tugensis* found that the species was able to walk upright and that it may be more closely related to *Australopithecus* than to *Homo;* this is now the earliest-known example of bipedalism in hominins.

21 The Republic of Cyprus's newly elected president, Dimitris Christofias, meets with Turkish Cypriot leader Mehmet Ali Talat; they agree to resume talks aimed at reuniting the Greek and Turkish sides of the country.

A Russian environmental agency announces plans to inspect a large Siberian oil field owned by TNK-BP, a joint venture of the British oil company BP and the Alfa, Access/Renova group (AAR); two days earlier Russian security forces had raided the corporate headquarters of TNK-BP.

22 Ma Ying-jeou of the Nationalist Party is elected president of Taiwan; Ma campaigned on a platform of seeking closer economic ties with China.

Asif Ali Zardari, head of the victorious Pakistan People's Party, names Yousaf Raza Gillani to become Pakistan's prime minister.

23 A roadside bomb in Baghdad kills four U.S. soldiers, bringing the number of American troops killed in the Iraq War to 4,000; at least 58 Iraqis are also killed in violence throughout the country.

Hours after baptizing Muslim-born Egyptian writer Magdi Allam, Pope Benedict XVI delivers Easter greetings in Vatican City in 63 languages, celebrates religious conversions to Christianity, and prays for peace in troubled regions of the world.

24 Voters in Bhutan choose the members of the National Assembly, the lower house of the country's new legislature, transforming the country into a parliamentary monarchy; 45 of the 47 seats are won by the Bhutan Peace and Prosperity Party, and turnout is close to 80%.

•

Pakistan's newly named prime minister orders the release of the judges placed under house arrest in late 2007 by Pres. Pervez Musharraf.

•

JPMorgan Chase agrees to increase the price that it will pay for the stock of the defunct investment bank Bear Stearns to $10 a share and to increase its stake in the company to 39%.

•

The Olympic torch is ceremonially lit in Olympia, Greece, though the ceremony is briefly interrupted by a few pro-Tibet protesters; until August 8 the torch is to travel around the world before arriving in Beijing for the Olympic Games. *(Photo below.)*

25 Military forces of the African Union and Comoros seize control of the autonomous island of Anjouan from Mohamed Bacar, who took power in a coup in 2001.

•

Scientists report that a 415-sq-km (160-sq-mi) chunk of ice has fallen from the Wilkins ice shelf in western Antarctica; it is believed that the collapse, which began on February 28, can be attributed to global warming.

•

Thousands of people rally throughout Argentina in support of farmers who have been on strike for two weeks against an export tax on grains; the strike has caused shortages of foodstuffs and cancellation of numerous delivery contracts.

26 Scientists report that the Cassini spacecraft has found that geysers on the Saturnian moon Enceladus contain molecules of water, methane, carbon dioxide, and carbon monoxide, all organic molecules.

Michael Steele/Getty Images

•

The space shuttle *Endeavour* returns to Earth after a two-week mission to the International Space Station in which its crew began installing the Japanese science lab Kibo and constructed and deployed Dextre, a Canadian robot, among other things.

•

The sale of the Jaguar and Land Rover car brands from the Ford Motor Co. to the Indian car company Tata Motors, part of the Tata Group, is announced.

•

American Airlines and Delta Air Lines ground more than 200 planes for inspections; American cancels 300 flights as a result.

27 As Iraqi security forces struggle to gain control of the city of Basra from Shi'ite militias, angered Shi'ites cause fighting in other cities in the country and mount demonstrations in Baghdad.

•

Gov. Aníbal Acevedo Vilá of Puerto Rico is indicted on federal charges involving campaign finance violations.

•

The Norwegian Academy of Science and Letters awards its annual Abel Prize for outstanding work in mathematics to American mathematician John Griggs Thompson and French mathematician Jacques Tits for their contributions to group theory.

28 U.S. military forces conduct air strikes in support of the Iraqi army's stalled offensive against Shi'ite militias in Basra.

•

North Korea conducts test launches of short-range missiles off its western coast and threatens to slow down the disabling of its nuclear facilities.

•

Chaos resulting from problems with new check-in and baggage-handling technology at the new Terminal 5 at London's Heathrow Airport continues for a second day.

29 Presidential elections are held in Zimbabwe, and international observers are barred.

•

The presidential palace in Mogadishu, Somalia, comes under mortar fire, and government troops return fire; at least 10 civilians are killed.

•

Curlin, 2007 Horse of the Year, wins the Dubai World Cup, the world's richest horse race.

•

Oxford defeats Cambridge in the 154th University Boat Race; Cambridge still leads the series, however, by 79–74.

30 Shi'ite cleric Muqtada al-Sadr calls for his followers in Basra to cease fighting in return for concessions from the Iraqi government.

•

Norm Duke wins the Professional Bowlers Association U.S. Open bowling tournament in North Brunswick, N.J.; he becomes only the second bowler to have won all four PBA Grand Slam events.

31 The French liquor company Pernod Ricard announces its purchase of Vin & Sprit, the parent company of Absolut vodka.

•

Prolific French architect Jean Nouvel is named winner of the 2008 Pritzker Architecture Prize; among his works are the Guthrie Theatre in Minneapolis, Minn., and the Agbar Tower in Barcelona.

April

We can now consign Kenya's past failures of grand corruption and grand tribalism to our history books.

Raila Odinga, upon being
inaugurated as prime minister of Kenya, April 17

1 After days of demonstrations and rioting by tens of thousands of people angry about the government of Yemen's failure to admit people from the former South Yemen into the army, the government sends tanks into the streets to try to put a stop to the unrest.

Intense fighting takes place between Chad's armed forces and rebel militias in the eastern part of the country.

Ian Khama takes office as president of Botswana the day after Festus Mogae resigned the post.

2 Official returns from the March 29 legislative elections in Zimbabwe are released, showing that the opposition Movement for Democratic Change won 109 seats and the ruling ZANU-PF took 97; though the MDC releases figures showing that Morgan Tsvangirai won the presidential election, no official results are given.

Irish Prime Minister Bertie Ahern announces that he intends to resign his post on May 6.

Farmers in Argentina suspend their 21-day strike for 30 days to engage in negotiations with the government.

3 At a NATO summit meeting in Bucharest, Rom., leaders agree to endorse a proposed U.S. missile defense system based in Europe and to increase the number of troops in Afghanistan but decline to offer the first step toward eventual membership to Georgia and Ukraine; in addition, Albania and Croatia are invited to full membership, but, on Greece's veto, Macedonia is not.

Petros Karadjias/AP

The barricades on Ledra Street in Nicosia, Cyprus, that have divided the city's Greek and Turkish areas since 1964 are pulled down in a ceremony attended by UN envoys in addition to representatives of both communities. *(Photos left.)*

The *Jules Verne*, an automated transfer vehicle developed by the European Space Agency, successfully docks at the International Space Station; it carries several tons of fuel, oxygen, food, clothing, and other equipment and supplies.

U.S.-based ATA Airlines ceases operations without warning, stranding thousands of travelers.

Tony Hoagland is named the second winner of the $50,000 Jackson Poetry Prize.

4 A UN climate conference in Bangkok concludes with an agreement on the first step toward a new climate-control treaty and an agreement to discuss emissions from airplanes and ships.

•

Authorities in Texas raid the Yearning for Zion Ranch of the polygamous sect the Fundamentalist Church of Jesus Christ of Latter-day Saints in Eldorado and take 52 girls into protective custody; eventually more than 400 children are removed from the compound.

5 Nine-year-old jumper Comply Or Die, ridden by jockey Timmy Murphy, wins the Grand National steeplechase horse race at the Aintree course in Liverpool, Eng.

•

Opposition presidential candidate Morgan Tsvangirai says that no runoff presidential election is called for in Zimbabwe and petitions the High Court in an attempt to force a release of the official tally for the presidential vote.

6 At the Olympic torch relay in London, pro-Tibet protesters attempting to seize or extinguish the torch to express their opposition to Chinese human rights abuses are engaged in a series of scuffles with police and prevented from achieving their goal.

•

Pres. Filip Vujanovic of Montenegro wins election to a new term of office.

7 Violent anti-Chinese protests assail the Olympic torch relay in Paris, resulting in its being extinguished several times and forcing the authorities to transport it by bus for part of the route.

•

In Haiti thousands of people protesting the high price of food shut down the capital, Port-au-Prince, days after food riots in Les Cayes led to five deaths.

•

The prime ministers of China, Cambodia, Laos, Myanmar (Burma), Thailand, and Vietnam ceremonially inaugurate Route 3 in Laos, the final link of a network of roads, largely financed by China, that connect Kunming, China, with Bangkok.

•

In New York City the winners of the 2008 Pulitzer Prizes are announced: six awards go to the *Washington Post*, which wins for public service, breaking news reporting, national reporting, international reporting, feature writing, and commentary; winners in letters include Junot Díaz in fiction and Tracy Letts in drama.

•

The National Collegiate Athletic Association championship in men's basketball is won by the University of Kansas, which defeats the University of Memphis 75–68; the following day the University of Tennessee defeats Stanford University 64–48 to win the women's NCAA title for the second consecutive year.

•

For the second time, the online search company Yahoo! rejects a buyout offer from software company Microsoft.

8 The Orange Democratic Movement, headed by Raila Odinga, suspends peace talks with Pres. Mwai Kibaki of Kenya, insisting on the dismissal of the standing cabinet before negotiations can continue; rioting erupts in Nairobi and Kisumu.

•

An online article in *The New England Journal of Medicine* reports that in a gene therapy trial three young adults suffering from congenital blindness had their functional vision restored.

•

American Airlines announces the cancellation of some 500 flights in order to allow reinspection of its MD-80 fleet after consultations with the U.S. Federal Aviation Administration; by April 11 more than 3,000 flights have been canceled, but full service returns on April 13.

•

The petroleum companies BP and ConocoPhillips agree to build a pipeline to carry natural gas from Alaska's Prudhoe Bay into Canada and possibly as far as Chicago.

9 Violence in reaction to an assault on a former cabinet minister breaks out in Karachi, with Pres. Pervez Musharraf's followers battling supporters of the new government; at least seven people are killed.

•

Kosovo's legislature adopts a constitution that makes the country a parliamentary democracy with a strong president; it will go into effect on June 15.

•

Legislative elections in South Korea give a majority to the Grand National Party of Pres. Lee Myung-bak.

•

Serzh Sarkisyan is sworn in as president of Armenia; he appoints Tigran Sarkisyan prime minister.

•

Masaaki Shirakawa is confirmed as governor of the Bank of Japan.

10 Voters in Nepal go to the polls to elect the Constituent Assembly that will write the country's new constitution; the Maoist party wins the largest number of seats.

•

Cameroon's legislature approves an amendment to the constitution that will allow the president to hold office indefinitely, ending the previous two-term limit.

•

The Pacific Fishery Management Council cancels the commercial Chinook salmon fishing season on the Pacific coast from California to north-central Oregon because of the population collapse of the prized fish.

•

In Atlanta, *big*, a collaborative mixed-media performance by the Atlanta Ballet and hip-hop luminary Antwan Patton (Big Boi), premieres at the Fox Theatre.

11 Left-wing lawmakers take over both houses of Mexico's legislature, staging a sit-in to protest planned changes to the state-run oil monopoly.

•

A new decree allows workers in Cuba who rent housing from their state employers to keep their homes after leaving their jobs, to gain title to their homes, and to pass their homes on to their children or other relatives.

12 At the joint IMF–World Bank spring meeting in Washington, D.C., the World Bank president, Robert Zoellick, describes the skyrocketing price of food and its impact on poorer countries; there have been food riots in cities throughout the world.

•

Pres. René Préval of Haiti announces new subsidies that will lower the price of rice by 15% in an attempt to mollify crowds who have been demanding high-level government resignations for failure to address the food crisis; the Senate nonetheless votes to remove Jacques-Édouard Alexis as prime minister.

Norway's first national opera house opens in Oslo with a gala attended by Queen Sonja of Norway, Queen Margrethe II of Denmark, and Chancellor Angela Merkel of Germany.

In Harbin, China, the U.S. defeats Canada 4–3 to win the International Ice Hockey Federation world women's championship.

13 The parties of Pres. Mwai Kibaki and opposition leader Raila Odinga agree on the composition of a new and much larger cabinet in Kenya.

The Iraqi government says that it has dismissed some 1,300 soldiers and policemen who deserted or otherwise laid down their arms in the operation in March against the Mahdi Army in Basra.

On a rainy day Martin Lel of Kenya wins the London Marathon for the second year in a row with a time of 2 hr 5 min 15 sec, and Irina Mikitenko of Germany, in her first marathon, is the fastest woman in the race, with a time of 2 hr 24 min 14 sec.

Trevor Immelman of South Africa wins the Masters golf tournament in Augusta, Ga., by three strokes.

14 In two days of legislative elections in Italy, the largest percentage of votes goes to Silvio Berlusconi's People of Freedom alliance.

It is reported that a virulent strain of the mosquito-borne dengue fever has left at least 80 people dead in Rio de Janeiro state in Brazil, and the disease continues to spread.

For the first time since 1965, passenger train service between Kolkata (Calcutta) in India and Dhaka, Bangladesh, takes place, with one train departing from each city.

The American midsize carriers Northwest Airlines and Delta Air Lines agree to merge; the combined airline will be known as Delta.

The video rental company Blockbuster makes public a hostile bid to buy electronics retailer Circuit City.

15 In Iraq a powerful car bomb kills at least 40 people in downtown Ba'qubah, while a suicide bomber in a restaurant in Al-Ramadi leaves 13 people dead.

16 In fierce fighting between Israeli armed forces and militants in the Gaza Strip, at least 21 people, some of them civilians, are killed.

Russian Pres. Vladimir Putin orders that a number of Russian ministries establish direct relations with their counterparts in the de-facto governments of the separatist provinces of Abkhazia and South Ossetia in Georgia.

Pres. Idriss Déby of Chad removes Prime Minister Delwa Kassire Koumakoye and replaces him with Youssouf Saleh Abbas.

Government figures show that the rate of inflation in Zimbabwe reached 165,000% in February, up from 100,000% in January.

The price of a barrel of oil reaches a new record high just under $115.

17 Raila Odinga is sworn in as prime minister of Kenya; an agreement made in February gives him power that is equal to that of the president.

In Zaranj, the capital of Afghanistan's Nimruz province, a suicide bomber detonates his weapon outside a mosque; at least 23 people are killed.

An unannounced meeting with several people who had been abused by priests in the archdiocese of Boston proves to be a highlight of Pope Benedict XVI's first papal visit to the U.S.

Sony BMG Music Entertainment announces that legendary hitmaker Clive Davis will step down as head of the BMG Label Group and will be replaced by Barry Weiss; industry observers are surprised.

18 The European Union agrees on a framework to outlaw the dissemination of terrorist propaganda for the purposes of recruiting, training, or bomb making through the Internet; the member countries will have to adjust their laws to conform to the EU goal.

Canada bans baby bottles made of polycarbonate because of fears that bisphenol A (BPA), a component of polycarbonate, could cause long-term hormonal damage.

In Durban, S.Af., dockworkers refuse to unload a Chinese shipment of weapons that are intended to be delivered to Zimbabwe, and South Africa's High Court issues an order prohibiting the transport of the weapons across South Africa to Zimbabwe; the Chinese ship departs the port.

19 Election officials in Zimbabwe begin a partial recount of the ballots from the March 29 general election at the request of the government; opposition leaders' legal challenge to stop the recount was unsuccessful.

A Russian Soyuz space capsule carrying back from the space station former International Space Station commander Peggy A. Whitson of the U.S., Russian flight engineer Yury I. Malenchenko, and South Korea's first astronaut, Yi So-yeon, lands about 418 km (260 mi) off its mark in Kazakhstan.

20 With his election to the presidency of Paraguay, former Roman Catholic bishop Fernando Lugo ends the rule of the Colorado Party, which had held power since 1946.

After two days of street fights between Ethiopian troops and Islamist militants in Mogadishu, Som., at least 81 people have been killed, many of them civilians.

American race car driver Danica Patrick wins the Indy Japan 300 race, coming in six seconds ahead of Brazilian Hélio Castroneves and becoming the first woman to win an IndyCar race.

At the BAFTA Television Awards in London, winners include the drama series *The Street*, the situation comedy *Peep Show*, and the reality show *Ramsay's Kitchen Nightmares*; the audience award for program of the year goes to *Gavin & Stacey*.

21 Maulana Sufi Muhammad, the leader of a group of radical Islamists that has fought the government of Pakistan for two decades, is released from prison by the new provincial government in Peshawar in return for a vow to abjure violence and work for peace.

The 112th Boston Marathon is won for the third consecutive year by Robert K. Cheruiyot of Kenya, with a time of 2 hr 7 min 46 sec; the fastest woman is Dire Tune of Ethiopia, who crosses the finish line 2 seconds ahead of Alevtina Biktimirova of Russia and posts a time of 2 hr 25 min 25 sec.

22 At a meeting convened in London by British Prime Minister Gordon Brown to discuss the rising price of food throughout the world, the World Food Programme's executive director, Josette Sheeran, likens the crisis to a "silent tsunami" in the poorest countries of the world.

The European Synchrotron Radiation Facility in France reports that paintings found in the Bamiyan caves in Afghanistan have been proved to have been painted with drying oils centuries before the first oil paintings appeared in Europe.

23 A major battle between government forces and the Liberation Tigers of Tamil Eelam takes place in northern Sri Lanka; some 90 combatants are killed.

Health authorities in Burkina Faso report that a meningitis outbreak has reached Ouagadougou and has to date killed 811 people.

The U.S. National Oceanic and Atmospheric Administration reports that atmospheric levels of carbon dioxide are increasing at an accelerating rate and that levels of methane are also beginning to rise.

24 Some 400,000 civil servants, most of them teachers, stage a one-day strike in the U.K. in protest over pay increases that have failed to keep pace with inflation.

Pres. Gurbanguly Berdymukhammedov of Turkmenistan restores the standard month names and day names to the calendar, abolishing the calendar that the previous president had decreed to further his cult of personality.

The fast-food chain Wendy's International agrees to be bought by Triarc Companies, the parent company of the Arby's chain of fast-food restaurants.

25 Police in Harare, Zimb., raid the headquarters of the opposition Movement for Democratic Change, arresting scores of people, and another raid targets the independent election monitoring organization Zimbabwe Election Support Network.

Leftist politicians in Mexico end the sit-in that had shut down the legislature after securing an agreement that a plan to overhaul the state oil monopoly would be debated for 71 days.

The banking company Wachovia Corp. agrees to pay up to $144 million in fines and restitution to end an investigation into relationships the bank had with telemarketers that allowed them to steal millions of dollars from account holders.

26 A running gun battle between rival groups of drug traffickers takes place in Tijuana, Mex.; 13 people are killed.

Transit workers in Toronto unexpectedly go on strike hours after their union rejected a tentative contract; thousands of passengers are stranded.

Rosie Greenway/Getty Images

27 At a military parade in Kabul staged to celebrate Afghanistan's national holiday, a coordinated attempt is made to assassinate Pres. Hamid Karzai, who escapes unharmed, though three people are killed, including a child caught in the cross fire.

28 The U.S. Supreme Court rules that Indiana's law requiring voters to show photo identification does not unconstitutionally infringe on the right to vote.

Mars, Inc., the maker of candies and other foodstuffs, announces its purchase of the Wrigley chewing gum company.

29 In response to an offer by the Popular Revolutionary Army to suspend its attacks on oil and gas pipelines, the government of Mexico agrees to negotiations with the organization.

The resignation of Wolfgang Wagner as director of the annual Wagner festival in Bayreuth, Ger., is announced; Wagner, grandson of composer Richard Wagner, has led the festival for 57 years.

Rockstar Games releases the fourth edition of its controversial video game series, *Grand Theft Auto IV;* this edition, which features a fully realized protagonist and complex plot lines, is greeted with critical acclaim. *(Photo above.)*

30 Turkey's legislature approves reforms to a law restricting free speech that limit the opportunities for prosecution and change a prohibition against insults to "Turkishness" to one against insults to the "Turkish nation."

In Honolulu, dozens of members of a sovereignty group occupy the Iolani Palace, a museum that was once the home of Hawaiian royalty, and take over the grounds, saying that the organization would stay there operating as the government of the Hawaiian Islands.

May

Myanmar is not in a position to receive rescue and information teams from foreign countries at the moment.

Myanmar (Burma) Foreign Ministry statement
one week after Cyclone Nargis devastated the country, May 9

1 Colourful Tory candidate Boris Johnson is elected mayor of London as the Labour incumbent, Ken Livingstone, is voted out.

•

Two suicide bombers leave at least 35 people dead in Balad Ruz, in Iraq's Diyala province, and a car bomb in Baghdad kills one U.S. soldier and nine Iraqi civilians.

•

At the National Magazine Awards in New York City, *National Geographic* wins three awards, including one for general excellence; other winners include *The New Yorker, GQ, Backpacker, Mother Jones, Print,* and, in the online category, RunnersWorld.com.

2 Tropical Cyclone Nargis makes landfall and churns up the southeast coast of Myanmar (Burma), causing enormous devastation, especially in the Irrawaddy River delta, and reportedly killing at least 351 people.

•

Zimbabwe's electoral commission releases official results of the March 29 presidential election, saying challenger Morgan Tsvangirai won 47.9% of the vote, to incumbent Robert Mugabe's 43.25%, necessitating a runoff; the Movement for Democratic Change maintains that Tsvangirai won 50.3% of the vote, an outright win.

•

The Chaitén volcano in Chile's Patagonia region begins a massive eruption, burying an area of about 155 sq km (60 sq mi) in more than 38 cm (15 in) of ash; the volcano had not erupted for some 9,000 years.

•

A motorcycle bomb kills 18 people outside a mosque in Sa'dah, Yemen.

3 Police take control of Honduras's National Penitentiary, north of Tegucigalpa, after rioting in which 17 inmates died; seven days earlier nine prisoners had died in rioting in a prison in San Pedro Sula.

•

Big Brown wins the Kentucky Derby, the first race of Thoroughbred horse racing's U.S. Triple Crown, but the event is marred when the filly Eight Belles, which finishes second, breaks both front ankles after crossing the finish line and is euthanized on the track.

4 Residents of the Santa Cruz department of Bolivia overwhelmingly vote in a nonbinding referendum for the administrative subdivision to become autonomous.

•

In honour of the 50th anniversary of the birth of artist Keith Haring, a recreation of a mural originally painted on a concrete wall in New York City in 1982 is unveiled; the mural, sponsored by the Keith Haring Foundation and Deitch Projects, will remain on view until the end of the year. *(Photo right.)*

5 Iran suspends talks with the U.S. concerning the security situation in Iraq.

•

Tens of thousands of people riot in Mogadishu, Som., enraged by the soaring price of food; troops open fire on the rioters, killing two.

•

The Italian conductor Riccardo Muti, who resigned from the Teatro alla Scala in Milan in 2005, is announced as the new music director of the Chicago Symphony Orchestra.

6 In Taiwan, in the midst of a scandal in which $30 million of government money (intended to be given to Papua New Guinea if it switched its diplomatic relations from China to Taiwan) seems to have been stolen, Foreign Minister James Huang, Vice-Premier Chiou I-chen, and another official all resign.

7 A general strike against Lebanese government economic policies spirals into street fighting between Hezbollah supporters (who favour the strike and oppose a government move to shut down a private Hezbollah telephone network) and those who favour the government.

•

Dmitry Medvedev takes office as president of Russia and names outgoing presi-

dent Vladimir Putin prime minister.

•

Ireland's Dáil (legislature) elects Brian Cowen prime minister.

•

Scientists announce the decoding of the genome of the platypus; the research is expected to yield insights that will contribute to understanding the evolution of mammals.

8 North Korea turns over to the U.S. 18,000 pages of documentation on its plutonium program dating back to 1990.

•

Silvio Berlusconi is sworn in for his third term as prime minister of Italy.

•

Edgar Millán Gómez, the acting chief of federal police in Mexico, is ambushed and killed by several men outside his home in Mexico City.

•

The recently reported death of fugitive financier Robert Vesco on Nov. 23, 2007, is confirmed; his Cuban widow says that she saw no sign of the fortune Vesco was said to have stolen from investors before fleeing the U.S. in 1972.

9 Hezbollah fighters seize control of a large portion of western Beirut.

•

Two shipments of food aid from the UN World Food Programme are confiscated by the Myanmar (Burma) government as it agrees to accept supplies but not personnel from outside sources, saying it will deliver the aid itself to victims of Cyclone Nargis.

10 A referendum on a new constitution that places a great deal of power in the hands of the military is held in Myanmar (Burma); 92.48% of voters are said to have approved the document.

•

Rebel fighters from the Darfur region of The Sudan attempt to attack Khartoum, the capital, but are repelled by the Sudanese armed forces.

•

Shi'ite leaders of Iraq's legislature and representatives of Shi'ite cleric Muqtada al-Sadr reach an agreement on a truce to end the bloodshed in the Sadr City neighbourhood of Baghdad.

•

Jenna Bush, daughter of U.S. Pres. George W. Bush, weds Henry Hager in a ceremony near Crawford, Texas.

11 In legislative elections in Serbia, the coalition For a European Serbia wins 102 of the 250 seats, followed by 78 seats for the Serbian Radical Party.

12 A magnitude-7.9 earthquake with its epicentre in Wenchuan causes devastation in the Chinese province of Sichuan as schools collapse, factories are destroyed, and whole villages are demolished; the initial death toll is about 10,000.

•

UN Secretary-General Ban Ki-moon tells the military government of Myanmar (Burma) that it must allow more foreign aid, and one American air transport is permitted to enter the country; the official cyclone toll is raised to 31,938 people dead and 29,770 missing.

•

In a raid on the Agriprocessors kosher meat processing plant in Postville, Iowa, U.S. Immigration and Customs Enforcement officers arrest 390 people; it is the largest immigration raid in U.S. history.

13 To the shock of environmentalists, Marina Silva resigns as Brazil's minister of the environment, citing a lack of government support for environmental goals; she is replaced by Carlos Minc.

•

In Jaipur, India, seven bombs go off in rapid succession, leaving at least 56 people dead.

•

Annika Sörenstam announces that she will retire from professional golf at the end of the year.

•

The U.S. National Endowment for the Arts announces that the winners of its first annual Opera Honors awards are directors James Levine and Richard Geddes, composer Carlisle Floyd, and soprano Leontyne Price; each will receive $25,000.

•

Carlos Ghosn, CEO of the car manufacturer Nissan Motor Co., announces that the company intends to bring an electric car to the American market by 2010.

•

The respected French encyclopaedia *Larousse* is offered in an online version to which users are invited to contribute.

•

The 1995 portrait *Benefits Supervisor Sleeping* by Lucian Freud is sold at auction by Christie's in New York City for $33.6 million, a record price for a work by a living artist.

14 Lebanon's government reverses its decisions to act against Hezbollah's private telephone network and to fire a Hezbollah ally from a government position.

•

China mobilizes soldiers to shore up dams in the region that was damaged by the Sichuan earthquake; the death toll is raised to 14,866, with 26,000 people believed

Mario Tama/Getty Images

to still be buried and 40,000 people missing.

•

The International Committee of the Red Cross estimates that the death toll from Cyclone Nargis in Myanmar (Burma) is between 68,833 and 127,990.

•

U.S. Secretary of the Interior Dirk Kempthorne announces that the polar bear will be listed as an endangered species because the growing melting of sea ice threatens the species' survival.

•

U.S. Pres. George W. Bush arrives in Israel for a gala celebration of the country's 60th anniversary.

•

The Russian association football (soccer) club FC Zenit St. Petersburg defeats FC Rangers of Glasgow, Scot., 2–0 to win the Union des Associations Européennes de Football (UEFA) Cup in Manchester, Eng.

15 The Lebanese government and the Hezbollah-led opposition agree to engage in renewed negotiations over a new government.

•

The California Supreme Court rules that state laws that limit marriage to opposite-sex couples are unconstitutional and that same-sex couples also have the right to marry.

16 Zimbabwe's election commission schedules a runoff election between Pres. Robert Mugabe and opposition leader Morgan Tsvangirai for June 27.

•

Leonel Fernández wins reelection as president of the Dominican Republic; some observers attribute his victory to the recent opening of a 14.5-km (9-mi) subway in Santo Domingo.

•

The central banks of Denmark, Norway, and Sweden announce a plan of emergency credit of up to €1.5 billion ($2.3 billion) for the central bank in Iceland; the value of the Icelandic currency, the króna, has been dropping precipitously.

•

Portugal's legislature adopts a spelling standardization agreement that will change the spelling of many words to match the Brazilian spelling.

•

The government of Myanmar (Burma) raises the official death toll from Cyclone Nargis to 78,000, with a further 55,917 listed as missing.

17 In legislative elections in Kuwait, Islamist candidates win 24 of the body's 50 seats, independents take 19 seats, and liberals garner 7.

•

Trucks carrying men firing assault rifles roll into Villa Ahumada, Mex.; 6 people are killed, including the chief of police, and 10 others are kidnapped, prompting the entire surviving police force to flee and leaving the rest of the town terrorized.

•

Kentucky Derby winner Big Brown decisively wins the Preakness Stakes, the second event in U.S. Thoroughbred horse racing's Triple Crown.

18 After a week of increasing and spreading anti-immigrant violence in and around Johannesburg in which at least 12 people were killed, South African Pres. Thabo Mbeki promises a commission to study the causes of the violence.

19 Nelly Avila Moreno (nom de guerre Karina), a top commander in FARC (Revolutionary Armed Forces of Colombia), surrenders to the Colombian army.

•

The Sukhoi Superjet 100, designed to replace the Tupelov 134 of the 1960s and the Yakovlev 42 of 1980 as a commercial airliner, makes its maiden flight; its Russian manufacturer hopes to sell more than 800 Superjets.

20 Pres. Lansana Conté of Guinea replaces Prime Minister Lansana Kouyaté with Ahmed Tidiane Souare; rioting occurs in Conakry in response.

•

For the first time in about 15 months, the foreign ministers of India and Pakistan engage in peace negotiations.

•

Ma Ying-jeou is inaugurated as president of Taiwan.

•

A U.S. federal Court of Appeals rules that the country's paper currency must be redesigned because the various denominations cannot be distinguished by the visually impaired.

21 The ruling United National Movement party wins legislative elections in Georgia by a wide margin.

•

Astronomers report that for the first time they have seen a star just before it became a supernova; by means of the Swift satellite telescope, the star, in the constellation Lynx, was seen emitting a burst of X-rays, which alerted scientists to its imminent explosion.

•

In association football (soccer), Manchester United defeats another English team, Chelsea, on penalty kicks to win the UEFA Champions League championship in Moscow.

22 The price of oil briefly reaches a record $135.09 a barrel before closing at $133.17.

•

An appellate court in Texas rules that the state was wrong in removing more than 450 children from the custody of their parents in the polygamist Yearning for Zion ranch in April.

•

Odchazeni ("Leaving"), an absurdist comedy that is playwright and former Czech president Vaclav Havel's first new play in 20 years, opens in the Archa Theatre in Prague.

23 Mozambique declares a state of emergency to make money available to assist thousands of Mozambicans fleeing anti-immigrant violence in South Africa.

•

Twelve countries in South America sign a treaty creating Unasur, a union intended to be similar to the European Union; the member countries are unable to agree on a unionwide defense strategy.

•

UN Secretary-General Ban Ki-moon announces that the rulers of Myanmar (Burma) have now agreed to allow aid workers from anywhere to enter the country in response to the Cyclone Nargis disaster.

24 UN Secretary-General Ban Ki-moon meets Chinese Premier Wen Jiabao in earthquake-ravaged Yingxiu and praises China's response to the disaster; China puts the death toll at 60,560, with a further 26,221 counted as missing.

•

In Belgrade, Serbia, the Russian pop star Dima Bilan wins the Eurovision Song Contest with his English-lan-

guage rendition of "Believe," produced by American rap impresario Timbaland.

25 Former army chief Michel Suleiman is elected president of Lebanon and takes office immediately; the country had been without a president since Nov. 24, 2007.

•

NASA's Phoenix Mars Lander, launched on Aug. 4, 2007, successfully makes a soft landing in the northern polar region of Mars, where it will analyze soil samples and search for proof of water.

•

FARC (Revolutionary Armed Forces of Colombia) confirms that its founder and chief, Pedro Antonio Marín, died on March 26.

•

The Sutong Bridge, between the Chinese cities of Suzhou and Nantong in Jiangsu province, opens to traffic; with a main span of 1,088 m (3,570 ft), it is the world's longest cable-stayed bridge.

•

Ozeki Kotooshu defeats *ozeki* Chiyotaikai to win sumo's Natsu Basho; Kotooshu, who is Bulgarian, is the first European to win an Emperor's Cup. *(Photo above.)*

•

The 92nd Indianapolis 500 automobile race is won by Scott Dixon of New Zealand.

26 The International Atomic Energy Agency releases a report saying that Iran has failed to be forthcoming about its nuclear programs and that its nuclear capabilities are advancing.

•

The Fédération Internationale de Football Association (FIFA), the governing body of world association football (soccer), suspends the Iraq Football Association, winner of the 2007 Asian Cup, because the government of Iraq earlier disbanded the Iraqi Olympic Committee and all other national sporting federations; the suspension is provisionally lifted on May 29.

Kyodo/AP Images

27 In the face of a military mutiny, Pres. Lansana Conté of Guinea fires Minister of Defense Mamadou Bailo Diallo.

•

At the American Geophysical Union meeting in Fort Lauderdale, Fla., scientists report having observed a coronal mass ejection in which gas spun in two directions at once; it is believed that this is the result of a twisted flux tube of solar magnetism unwinding.

28 Nepal's newly elected constituent assembly votes to transform the country from a monarchy to a republic, giving the royal family, which ruled the country for 240 years, 15 days to vacate the palace in Kathmandu.

•

In Ilulissat, Greenland, the U.S., Russia, Canada, Denmark, and Norway sign an agreement to abide by the 1982 UN Convention on the Law of the Sea regarding territorial claims on the Arctic and to work cooperatively to limit environmental and other risks in any increased shipping and commerce in the Arctic.

•

New York Gov. David Paterson directs all state agencies to recognize as valid all same-sex marriages that were legally entered into in other jurisdictions.

•

Fouad Siniora is reappointed to his position as prime minister of Lebanon.

•

The winners of the first biennial Kavli Prizes are announced by the Norwegian Academy of Science and Letters: Maarten Schmidt and Donald Lynden-Bell in astrophysics, Louis Brus and Sumio Iijima in nanoscience, and Sten Grillner, Thomas M. Jessell, and Pasko Rakic in neuroscience.

29 The confirmed death toll in China's Sichuan earthquake is reported as 68,500 people, with a further 19,000 missing and presumed dead.

•

It is announced in Myanmar (Burma) that the new constitution has gone into effect.

•

The Ruth Lilly Poetry Prize is presented in Chicago to Gary Snyder.

30 Silverjet, a business-class-only airline based in London, ceases operations; it is the third airline of that type to shut down in six months.

•

The much-anticipated movie *Sex and the City*, a sequel to the widely loved HBO television series (1998–2004), opens in movie theatres throughout the U.S.; its world premiere was in London on May 12.

31 Zimbabwe's army chief of staff says that it is the duty of members of the country's armed forces to vote for Pres. Robert Mugabe in the upcoming runoff presidential election.

•

The space shuttle *Discovery* lifts off from Cape Canaveral in Florida on a mission to take the Kibo science laboratory to the International Space Station; it also carries parts to repair the station's zero-gravity toilet, which broke several days earlier.

•

The Indian air force reopens an air base near the Karakoram Pass in the state of Ladakh; the base was closed 43 years earlier.

June

We will no longer participate in the violent illegitimate sham of an election process.

Morgan Tsvangirai, announcing his withdrawal as a candidate in Zimbabwe's upcoming runoff presidential election, June 22

1 Legislative elections in Macedonia are attended by violence in which at least one person dies in gunfire and by accusations of fraud; the majority of seats go to the ruling coalition.

•

Parents in several cities in China's Sichuan province protest the shoddy construction of schools that collapsed in the earthquake three weeks earlier, crushing children, and China raises the official toll of the quake to 69,000 dead and 18,800 missing and presumed dead.

•

The final of the new Indian Premier League takes place in Mumbai (Bombay); Jaipur's Rajasthan Royals, led by Australian bowler Shane Warne, defeat the Chennai (Madras) Super Kings by three wickets to win the cricket series.

2 Relief groups report that although the rulers of Myanmar (Burma) have increased openness somewhat, they are still severely limiting the access of foreign aid workers to the victims of Cyclone Nargis in the Irrawaddy delta.

•

A powerful car bomb explodes outside the Danish embassy in Islamabad, Pak.; at least eight people are killed.

3 A three-day conference on food security convened by the UN Food and Agriculture Organization and attended by top officials from some 150 countries opens in Rome.

4 Police in Bangladesh say that they have arrested more than 11,700 people in recent days in a new anticrime drive.

•

In Baghdad a car carrying rockets for an attack explodes in a residential area, killing at least 18 people; elsewhere in the city a car bomb kills four people, and in a nearby village three U.S. soldiers are slain.

•

Rose Tremain wins the Orange Broadband Prize, an award for fiction written by women and published in the U.K., for her novel *The Road Home*.

•

The Detroit Red Wings defeat the Pittsburgh Penguins 3–2 to win the Stanley Cup, the National Hockey League championship trophy.

5 It is learned that the government of Zimbabwe has ordered all humanitarian aid groups to cease operating in the country.

•

The Constitutional Court of Turkey strikes down a new law that would allow women who cover their heads with scarves for religious reasons to attend public universities.

6 In Seoul some 65,000 people demonstrate their opposition to a South Korean government plan to allow beef imports from the United States; such imports were banned in 2003.

•

Japan's Diet (legislature) passes a resolution recognizing the Ainu people as indigenous to the northernmost region of Japan.

•

A roadside bomb in a suburb of Colombo, Sri Lanka, blows up a passenger bus, killing 21 people; later a bomb explodes on a bus in central Sri Lanka, killing 2 more people.

7 U.S. cases of salmonella that have been tentatively linked to the consumption of certain raw tomatoes are reported by health officials to have spread to 16 states; consumers are warned to avoid red plum, red Roma, and red round tomatoes.

•

Ana Ivanovic of Serbia defeats Dinara Safina of Russia to win the women's French Open tennis title; the following day Rafael Nadal of Spain defeats Roger Federer of Switzerland to capture the men's championship for the fourth year in a row.

•

The Derby, in its 229th year at Epsom Downs in Surrey, Eng., is won by New Approach, ridden by Kevin Manning.

•

Long shot Da' Tara, with odds of 38–1, wins the Belmont Stakes, the last event in Thoroughbred horse racing's U.S. Triple Crown, by five and a quarter lengths; Big Brown, winner of the Kentucky Derby and the Preakness Stakes, comes in last.

8 A man in Tokyo's popular Akihabara district drives a truck through a crowd of people

in a deliberate killing spree after which he exits the truck and begins stabbing passers-by with a survival knife; at least seven people die in the rampage.

A double bombing kills 12 people, one of them a French engineer, near Beni Amrane, Alg.

David Cheskin—PA Photos/Landov

The i-LIMB, a commercially available bionic prosthetic hand that mimics both the form and the function of the human hand, wins the MacRobert Award for engineering excellence from the Royal Academy of Engineering in London. *(Photo right.)*

Yani Tseng of Taiwan wins the Ladies Professional Golf Association championship in a sudden-death play-off over Maria Hjorth of Sweden.

9 In Spain tens of thousands of truckers go on strike, blockading highways leading to France and surrounding Madrid in a protest against the skyrocketing price of diesel fuel.

A cache of cylinder seals dating from 3000–2000 BC that were looted from the National Museum of Iraq during the 2003 U.S.-led invasion of the country are ceremonially returned to Iraq's Ministry of Antiquities in Baghdad; the seals were found by customs officials in Philadelphia in May 2008.

Lake Delton, a centrepiece of the Wisconsin Dells resort area, breaches the highway after massive rainfalls and in less than two hours drains completely into the Wisconsin River.

10 After a firefight against insurgents in Afghanistan just over the border from Pakistan, U.S. forces make air and artillery strikes inside Pakistan that kill 11 Pakistani paramilitary soldiers, outraging Pakistan's government.

As tens of thousands of people demonstrate in downtown Seoul against the planned resumption of beef imports from the U.S., Prime Minister Han Seung-soo and the rest of the cabinet offer their resignations.

Armed battles break out on the border between Djibouti and Eritrea for the first time in 10 years.

11 King Gyanendra of Nepal, bowing to the desires of the country's new government, gives up his crown and leaves the royal palace to take up life as an ordinary citizen.

Norway's legislature passes a law giving same-sex couples the same rights to marriage and the adoption of children enjoyed by opposite-sex couples; the upper house approves the law on June 17.

NASA launches the Gamma-ray Large Area Space Telescope (GLAST); the space telescope, which can detect an immense range of light, will examine gamma-ray bursts and, it is hoped, give scientists new information about the nature of the universe.

The Lenfest Ocean Program publishes online a study of five species of sharks in the Mediterranean Sea; the scientists found that the numbers of all five species had declined by more than 96% over two centuries and that there was a dearth of breeding-age females.

The Belgian brewing giant InBev makes an unsolicited bid to buy American brewery Anheuser-Busch, headquartered in St. Louis, Mo.

12 A referendum is held in Ireland on whether to accept the Lisbon Treaty on governing the European Union; the treaty is rejected.

The U.S. Supreme Court rules that in spite of the Military Commissions Act of 2006, prisoners at the U.S. naval base at Guantánamo Bay, Cuba, have the right to challenge their detention in federal courts.

China and Taiwan agree to establish offices in one another's capitals to facilitate discussions about closer relationships.

As floodwaters roll down the Cedar River in Iowa, raising it 5 m (17 ft) above flood stage, torrential rains pound the area, and much of the town of Cedar Rapids is washed away.

13 Taliban insurgents stage an attack on the main prison in Kandahar, Afg., breaking down walls and killing 15 guards; some 1,200 inmates, among them at least 350 Taliban members, escape.

Iraqi Prime Minister Nuri Kamal al-Maliki declares that talks on a security agreement with the United States that is to define how the U.S. may act in Iraq after the expiration of the UN mandate have reached an impasse.

Thousands of people converge in Islamabad, Pak., to demand the reinstatement of judges dismissed in November 2007 by Pres. Pervez Musharraf.

14 Pres. Robert Mugabe of Zimbabwe declares that he has no intention of ceding power, even if he should lose the runoff presidential election scheduled for June 27.

Iraqi troops begin an operation in Al-'Amarah, a city that is politically dominated by Shi'ite cleric Muqtada al-Sadr.

15 Kosovo's constitution officially goes into effect.

The board of American International Group (AIG) removes Martin J. Sullivan as CEO and replaces him with chairman Robert B. Willumstad.

The 62nd annual Tony Awards are presented in New York City; winners include the productions *August: Osage County, In the*

Heights, *Boeing-Boeing*, and *South Pacific* and the actors Mark Rylance, Deanna Dunagan, Paulo Szot, and Patti LuPone.

In the 76th running of the 24 Hours of Le Mans endurance automobile race, the Audi team led by Tom Kristensen of Denmark takes the victory; it is Kristensen's record eighth victory in the classic automobile race.

16 Rebel forces briefly occupy the towns of Goz Beida, Am Dam, and Biltine in Chad and exchange gunfire with European Union peacekeeping forces.

A ceremony is held in Takanezawa, Japan, as the first Honda FCX Clarity rolls off the assembly line; the vehicle is the first hydrogen-powered fuel-cell car that is capable of being mass-produced.

Tiger Woods defeats Rocco Mediate in a thrilling sudden-death play-off to win the U.S. Open golf tournament in San Diego, Calif.

17 Pres. Felipe Calderón of Mexico signs into law a constitutional amendment requiring for the first time that trials be openly argued before a judge with a presumption of innocence; the enormous changes entailed must be completed by 2016.

A car bomb explodes at a crowded bus terminal at a marketplace in Baghdad; at least 63 people die.

The Boston Celtics defeat the Los Angeles Lakers 131–92 in game six of the best-of-seven tournament to secure the team's 17th National Basketball Association championship.

18 Israel proposes holding peace talks with Lebanon, indicating that it is even willing to discuss the disposition of the disputed Shebaa Farms area on the border between the countries.

China and Japan both announce that the countries have reached an agreement to jointly develop gas fields in the East China Sea that lie in territory that both countries claim.

A report published in the journal *Nature* says that a review of sea-level measurements indicates a computational error that resulted in an underestimation of sea-level increase; in fact, sea levels rose five centimeters (two inches) from 1961 to 2003, some 50% higher than earlier estimates.

19 A truce negotiated between Israel and the militant group Hamas, which controls the Gaza Strip, officially goes into effect.

China announces a sudden and high increase in the prices for diesel fuel, gasoline, and electricity.

20 China unveils a plan to halve the number of cars on the road in and around Beijing from July 20 to September 20 and to prevent high-emission vehicles, such as trucks, from entering the city during the same period; the intent is to reduce both traffic and air pollution during the Olympics.

Pres. Ellen Johnson-Sirleaf of Liberia releases the preliminary results of the country's first census in 24 years; the census, taken in late March, records the country's population as 3,489,072, an increase of 1,387,444 people since 1984.

The 2008 winners of the Kyoto Prize are announced: Richard M. Karp (advanced technology), Anthony J. Pawson (basic sciences), and Charles M. Taylor (arts and philosophy).

21 At the 113th British Amateur Championship tournament in golf, Reinier Saxton of The Netherlands emerges victorious.

Typhoon Fengshen roars through the Philippines, leaving at least 498 people dead, and the MV *Princess of the Stars*, a large ferry, capsizes and sinks in the storm off the Philippine island of Sibuyan; after Coast Guard operations begin more than 24 hours later, it is believed that some 800 people lost their lives. *(Photo below.)*

22 Morgan Tsvangirai withdraws his candidacy in the presidential runoff election in Zimbabwe, citing the violence of the campaign being waged against his followers.

At the end of a well-attended emergency energy summit meeting convened by Saudi Arabia, little agreement has been reached, though Saudi Arabia announces a planned increase in oil production.

Iconic American comedian George Carlin dies in Santa Monica, Calif.

Romeo Gacad—AFP/Getty Images

23 Coalition troops patrolling in eastern Afghanistan are ambushed by Taliban militants, about 55 of whom are killed in the ensuing battle.

•

Fighting in Tripoli, Leb., between supporters of the government and partisans of Hezbollah continues for a second day; at least eight people have been killed.

•

The large waste-disposal companies Republic Services and Allied Waste Industries announce an agreement for the American companies to merge.

•

Tina Ramirez announces her retirement as artistic director of Ballet Hispanico, which she founded in 1970.

24 The legislature of Belarus approves a draconian new law requiring all Internet sites in the country to register with the government.

•

Carlos Minc, Brazil's minister of the environment, announces that the government seized 3,100 cattle that were grazing on illegally deforested land in an ecological reserve in Pará state and intends to continue the course of action; the seizure took place on June 7.

•

The retail giant Home Depot announces that all of its stores will accept old compact fluorescent light bulbs for recycling; because the bulbs contain mercury, they cannot be disposed of in the conventional way.

25 The bodies of 28 members of a peace committee headed by a tribal leader and backed by the Pakistani government are found in South Waziristan; the victims had been kidnapped by the Taliban two days earlier.

•

The U.S. Supreme Court rules that the punitive damages awarded in a lawsuit related to the 1989 *Exxon Valdez* oil disaster must be reduced to $500 million, the amount that the Exxon Mobil Corp. has already paid out; in another ruling, the court bans the sentence of execution for the crime of child rape.

26 In a landmark ruling, the U.S. Supreme Court unprecedentedly holds that the Second Amendment to the Constitution confers an individual rather than a collective right to gun ownership and that state and city governments may not forbid the owning of handguns.

•

Girija Prasad Koirala resigns as prime minister of Nepal and asks the Maoist party to form a government.

•

A suicide bomber detonates his weapon at a meeting of an Awakening Council in Garma, Iraq, killing 20 people, and in Mosul a bombing that targeted the provincial governor kills at least 18 others instead.

•

At its meeting in Paris, the Internet Corporation for Assigned Names and Numbers (ICANN) issues new guidelines allowing users to apply to use any domain name of their devising and permitting domain names to be registered in scripts other than the Roman alphabet.

•

The price of a barrel of light sweet crude oil briefly reaches a new record of $140.39 a barrel before closing at a record $139.64.

•

In the face of growing questions of corruption surrounding the 2006 presidential election in Colombia, Pres. Álvaro Uribe calls for that election to be rerun.

•

A public art project by Danish Icelandic artist Olafur Eliasson goes on view in New York City; the installation, which consists of four man-made waterfalls ranging in height from 27 to 37 m (90 to 120 ft), will flow until October 13.

27 In a runoff election in which he is unopposed, Pres. Robert Mugabe of Zimbabwe officially garners 85% of the vote; turnout is cited as 42.4%.

•

Pres. Boris Tadic of Serbia nominates his minister of finance, Mirko Cvetkovic, as prime minister.

•

North Korea publicly demolishes the cooling tower of its Yongbyon nuclear weapons plant.

28 Massive and violent protests take place in Weng'an county in China's Guizhou province in response to the death of a teenage girl; the family of the girl maintains that there was an official cover-up involved.

•

Pakistani security forces shell Taliban positions outside Peshawar, which has been increasingly threatened by the Taliban; it is the first military action taken against militants by the Pakistani government that took office in March.

•

For the sixth consecutive day, crowds march in Srinagar in the Indian state of Jammu and Kashmir in protest against a rumoured plan to settle Hindus in the majority-Muslim state.

29 Israel agrees to trade the notorious Lebanese terrorist Samir Kuntar and four other Lebanese prisoners to the Lebanese militia Hezbollah in return for the bodies of the Israeli soldiers Ehud Goldwasser and Eldad Regev, whose July 12, 2006, kidnapping by Hezbollah led to Israel's war with Hezbollah that year.

•

As protests against possible South Korean imports of U.S. beef continue, they begin to turn violent, and police in Seoul block off areas where demonstrations most frequently take place.

•

Park Inbee of South Korea wins a four-stroke victory over Helen Alfredsson of Sweden to win the U.S. Women's Open golf tournament in Edina, Minn.; at 19, Park is the youngest player to have won the tournament.

•

Spain defeats Germany 1–0 in the final match to win Euro 2008; it is Spain's first major association football (soccer) title since it won the European championship in 1964.

30 Officials in Lithuania report that over the weekend some 300 Web sites were defaced with Soviet symbols and anti-Lithuanian slogans by hackers; two weeks earlier Lithuania had banned the display of Soviet symbols.

•

Iraq announces plans to open bidding on six major oil fields in the country to 35 foreign companies.

•

The 11th summit meeting of the African Union convenes in Ra's Nasrani (Sharm al-Shaykh), Egypt.

•

Eurostat reports that inflation in the euro zone for the 12 months ended in June has reached a record 4%; the European Central Bank strives to keep the rate under 2%.

July

We've now finally touched it and tasted it.
And I'd like to say,
from my standpoint, it tastes very fine.

William V. Boynton,
designer of the Phoenix Mars lander's Thermal and Evolved Gas Analyzer,
on the proof that water exists on Mars, July 31

1 Mongolian Pres. Nambaryn Enkhbayar declares a state of emergency in response to riots over allegations of fraud in recent legislative elections; the disturbances cause great destruction in the Mongolian National Modern Art Gallery in Ulaanbaatar.

The Dow Jones Industrial Average falls 0.8%, crossing the official threshold from a bull stock market to a bear market.

The presidency of the European Union rotates to the president of France, Nicolas Sarkozy.

2 In a meticulously planned and daring operation, Colombian forces rescue 15 hostages from the Revolutionary Armed Forces of Colombia (FARC), among them Ingrid Betancourt, a former presidential candidate kidnapped in 2002, and three American contractors seized in 2003.

The American trade union United Steelworkers allies itself with the largest British union, Unite; the alliance, which will operate under an umbrella government led by the heads of each union, will be known as Workers Uniting.

3 Roman A. Abramovich, a billionaire investor and association football (soccer) club owner, resigns as governor of Russia's autonomous district of Chukchi.

A yearlong celebration of the 400th anniversary of the founding of Canada's Quebec City comes to a climax. *(Photo left.)*

Jacques Boissinot—The Canadian Press/AP

4 Shots are exchanged between Georgian troops and militia members of the country's separatist province of South Ossetia; at least two people are killed.

The first weekend charter flight from China carries tourists across the Taiwan

Strait to Taiwan; the flights are expected to expand to carry some 3,000 travelers a day.

•

A special issue of the journal *Science* is devoted to the new information learned about the planet Mercury from the January 14 flyby of the Messenger space probe; it includes the geologic history of the Caloris impact basin and the fact that Mercury's core may be actively generating the planet's magnetic field.

5 An altercation takes place in a prison outside Damascus in which military police kill at least nine Islamist inmates and other military police and prison officials are taken hostage.

•

American Venus Williams defeats her sister Serena Williams to take her fifth All-England (Wimbledon) women's tennis championship; the following day Rafael Nadal of Spain wins the men's title for the first time when he defeats five-time champion Roger Federer of Switzerland.

6 A suicide bomber detonates his weapon next to a group of police officers in a crowd at the Lal Masjid (Red Mosque) in Islamabad, Pak.; at least 18 people are killed.

•

A bomb goes off in a café in Gali, in the separatist region of Abkhazia in Georgia; four people are killed.

•

In Mogadishu, Som., gunmen kill Osman Ali Ahmed, leader of the United Nations Development Programme for Somalia.

7 A suicide car bomb kills at least 41 people outside the Indian embassy in Kabul.

•

In York, Eng., the General Synod of the Church of England votes to allow the appointment of women as bishops; though some other branches of the Anglican Communion had taken the step several years earlier, the move is controversial.

•

Mirko Cvetkovic takes office as prime minister of Serbia after his government is approved by the National Assembly.

•

The computer software company Microsoft announces its renewed interest in purchasing the search engine company Yahoo!, provided that Yahoo! replaces its board of directors; the investor Carl Icahn is simultaneously fighting a proxy battle against the board.

8 The leaders of the Group of Eight industrialized countries, meeting in Japan, release a document agreeing to cut greenhouse gas emissions in half by 2050; environmentalists complain that the agreement fails to include targets for the nearer future.

•

The chief of police in Mexico City resigns after a police raid on a disco resulted in the smothering deaths of nine patrons and three officers.

•

American oil billionaire T. Boone Pickens unveils a plan to significantly decrease U.S. dependence on foreign oil, beginning with a $2 billion investment in a planned enormous wind farm in Pampa, Texas.

9 The U.S. Senate gives final approval to a bill that affirms the authority of the Foreign Intelligence Surveillance Act (FISA) court but grants the government latitude in conducting wiretaps outside the court's authority and provides legal immunity to telecommunication companies that complied with earlier wiretapping efforts.

•

Gunmen attack the U.S. consulate in Istanbul; three of the police officers guarding the diplomatic mission are killed, as are three attackers.

•

Tillman Thomas is sworn in as prime minister of Grenada the day after his National Democratic Congress decisively won legislative elections; the defeated New National Party had held power for 13 years.

10 After a Russian military jet flies over Georgia's separatist province of South Ossetia, Georgia recalls its ambassador to Russia.

•

Six-country talks over North Korea's nuclear program resume after a nine-month hiatus.

•

Thailand's foreign minister, Noppadon Pattama, resigns after being censured for reaching an agreement with Cambodia over a 900-year-old Hindu temple sitting on the border between the two countries.

•

The Japanese automaker Toyota announces that it will scale back on the production of trucks and SUVs in the U.S. and, beginning in 2010, will make Prius hybrid cars in a new plant in Mississippi.

11 South Korean Pres. Lee Myung-bak suggests a resumption of bilateral talks with North Korea and offers humanitarian aid; on the same day, a South Korean tourist who entered a forbidden military zone in North Korea is shot dead.

•

Lebanese Prime Minister Fouad Siniora introduces a new 30-member cabinet; it is the country's first full government since November 2006.

•

After the announcement of massive layoffs by IndyMac Bancorp prompts a run on the bank by its customers, federal bank regulators seize the California-based bank.

12 American tennis player Michael Chang, the late sports marketer Mark McCormack, and Gene Scott, the late publisher of *Tennis Week* magazine, are inducted into the International Tennis Hall of Fame in a ceremony in Newport, R.I.

13 The U.S. Federal Reserve announces an emergency short-term loan to shore up the mortgage finance companies Fannie Mae and Freddie Mac, while Pres. George W. Bush asks Congress to approve a larger rescue package.

•

In Paris the 43-member Union for the Mediterranean is inaugurated, with Pres. Nicolas Sarkozy of France serving as its first northern co-president and Pres. Hosni Mubarak of Egypt as its southern co-president; the union is intended to unify policies on the environment, transportation, immigration, and security.

•

An assault by Taliban insurgents on a newly established NATO military base in Afghanistan's Kunar province leaves nine U.S. soldiers dead.

•

The American beer company Anheuser-Busch agrees to be acquired by the Belgian-Brazilian brewer InBev; the new company will be called Anheuser-Busch Inbev.

14 Luis Moreno-Ocampo, the prosecutor of the

International Criminal Court, formally requests that the court issue a warrant for the arrest of Sudanese Pres. Omar Hassan al-Bashir on charges of genocide, war crimes, and crimes against humanity relating to the conflict in the Darfur region of The Sudan.

•

David Hiller announces his resignation as publisher of the *Los Angeles Times*, and Ann Marie Lipinski resigns as editor of the *Chicago Tribune;* both companies are owned by the Tribune Co., which is asking for major downsizing and redesigns in the newspapers.

15 Two suicide bombers kill at least 33 people at an Iraqi army recruiting centre in Ba'qubah.

•

After failing to achieve agreement for a package of constitutional reforms, Belgian Prime Minister Yves Leterme offers his resignation; the offer is rejected by King Albert II two days later.

16 A car bomb explodes in a Shi'ite neighbourhood in Tal Afar, Iraq; some 20 people are killed.

•

Malaysian opposition leader Anwar Ibrahim is arrested on charges of sodomy; his 1998 conviction for sodomy was later overturned.

17 Argentina's Senate narrowly rejects a tax system imposed in March by Pres. Cristina Fernández de Kirchner on soybean profits to hold down food prices that had roused the opposition of farmers; the following day Fernández de Kirchner rescinds the tax.

•

As the benchmark stock index in Pakistan falls for the 15th trading day in a row, distraught investors go on a rampage at the Karachi Stock Exchange; protests also take place in other cities.

•

Kuwait names an ambassador to Iraq for the first time since it closed its embassy in Baghdad after the Iraqi invasion of Kuwait in 1990.

•

James H. Billington, the American librarian of Congress, names Kay Ryan the country's 16th poet laureate; Ryan succeeds Charles Simic.

18 The World Trade Organization rules that China's policy of levying punishing tariffs on carmakers operating in the country unless they use locally made parts violates international trade rules.

•

The much-anticipated movie *The Dark Knight,* the sequel to *Batman Begins,* opens across the U.S. at midnight; cinemas in some cities schedule round-the-clock showings to meet demand.

19 Iran rejects an international proposal that calls for it to freeze its nuclear program and for the international community to refrain from adding new sanctions as a starting point for negotiations, leaving the talks deadlocked.

•

The Sunni political bloc the Iraqi National Accord rejoins the Iraqi national government, with six of its members given cabinet posts; the bloc had been boycotting the government since August 2007.

20 In Canterbury, Eng., the Lambeth Conference of the Anglican Communion, held every 10 years, opens with a church service; more than 200 of the 880 bishops and archbishops invited do not attend, and many of the absentees became founding members of the dissident Fellowship of Confessing Anglicans on June 29.

•

In western Afghanistan, U.S. and Afghan forces mistakenly call in air strikes against Afghan police officers, and nine of them are killed; the previous day NATO mortars gone astray killed at least four civilians.

•

Padraig Harrington of Ireland wins the British Open golf tournament at the Royal Birkdale Golf Club in Southport, Lancashire, Eng., defeating English golfer Ian Poulter by four strokes; Harrington is the first European to have won two consecutive British Opens in over 100 years.

21 Radovan Karadzic, who was indicted by the UN war crimes tribunal on July 24, 1995, for his part in the massacre of some 8,000 Muslims in Srebrenica, Bosnia and Herzegovina, earlier that year, is arrested in Belgrade, Serbia, where he had been living in disguise.

•

In Harare, Zimb., Pres. Robert Mugabe and opposition leader Morgan Tsvangirai sign an agreement to negotiate for a new government.

•

Nepal's constituent assembly elects as the country's first president Ram Baran Yadav, who is not a member of the majority Maoist party.

•

Russian Prime Minister Vladimir Putin orders the Czech Republic's oil supply restored to its former level; the day after the Czech Republic signed a missile defense agreement with the U.S., oil supplies from Russia had dropped by about 40%.

•

Two bombs explode on buses during the morning rush hour in Kunming, the capital of China's Yunnan province; two people are killed.

22 The government of India handily wins a confidence vote called for by Prime Minister Manmohan Singh.

•

New York City Mayor Michael Bloomberg orders all city services to be made available in Spanish, Chinese, Russian, Korean, Italian, and French Creole as well as English; these are the languages most commonly spoken in the city.

23 The U.S. Geological Survey releases an assessment that the Arctic may contain as much as 90 billion bbl of undiscovered oil and 47.29 trillion cu m (about 1.67 quadrillion cu ft) of natural gas, most of it in coastal areas under territorial sovereignty, much of it in Russia.

•

Cape Verde becomes the 153rd member of the World Trade Organization.

24 Taliban insurgents attack an Afghan army convoy south of Kabul; 35 of the attackers are reportedly killed in the ensuing firefight.

•

Robert Dudley, the president of the joint British-Russian oil venture TNK-BP, is denied a work visa and forced to leave Russia.

•

A British judge awards £60,000 (about $110,000) in damages to Max Mosley, president of the governing body of Formula 1 automobile racing, in his lawsuit against a tabloid newspaper

Stefano Paltera/AP

that had printed pictures from a video of a sado-masochistic sex gathering Mosley had participated in and that said it had a Nazi theme; the judge ruled that no such theme was apparent and that there was no good reason to expose Mosley's private life.

25 Fighting breaks out between Sunnis and Shi'ites in the Lebanese city of Tripoli; at least six people are killed.

•

The U.S. Office of the Special Inspector General for Iraq Reconstruction reports that oil exports through the country's northern pipeline have increased from 1 million to more than 13 million bbl a month since 2007.

•

In Mata'utu, the capital of the French overseas territory of Wallis and Futuna, Kapiliele (Gabriel) Faupala is crowned king of Wallis; he replaces Tomasi Kulimoetoke, who died in May 2007.

26 Some 22 small bombs explode in crowded neighbourhoods in Ahmedabad, India, killing at least 42 people.

27 In legislative elections in Cambodia, the ruling Cambodian People's Party wins 90 of the 123 seats, followed by the Sam Rainsy Party, with 26.

•

Two bombs go off in rapid succession in a residential area of Istanbul; at least 15 people die.

•

Spanish cyclist Carlos Sastre wins the Tour de France, completing the race 58 seconds faster than Cadel Evans of Australia.

•

The National Baseball Hall of Fame in Cooperstown, N.Y., inducts pitcher Rich ("Goose") Gossage, managers Dick Williams and Billy Southworth, owners Barney Dreyfuss and Walter O'Malley, and former commissioner Bowie Kuhn.

28 In Baghdad, three women bombers kill 43 Shi'ite pilgrims celebrating a festival, and in Kirkuk, Iraq, a female suicide bomber kills at least 17 people in a crowd of Kurds protesting government legislation; the latter attack triggers a surge of violence against Turkmen residents and police, who fire on the rioting Kurds, killing 12.

•

An official for the opposition Movement for Democratic Change in Zimbabwe says that power-sharing talks with Pres. Robert Mugabe have become deadlocked.

•

In California, Virgin Galactic head Richard Branson unveils WhiteKnightTwo, the prototype of the booster ship that will carry the company's commercial rocket into space. *(Photo above.)*

29 The Doha round of world trade talks, begun in 2001, reaches an impasse in Geneva as participants are unable to compromise on protections for farmers in less-developed countries.

•

The price of a barrel of oil closes at $122.19, down from a record high of $145.29 on July 3; the prices of natural gas and of gasoline are also lower.

•

The Metromedia Restaurant Group, based in Texas, files for bankruptcy protection, and its national chains of restaurants, Bennigan's and Steak & Ale, abruptly close.

•

Scrabulous, an unauthorized online version of Scrabble that is a popular application on the social networking site Facebook.com, is removed from the site; Hasbro, owner of the North American copyright to Scrabble, had filed suit on July 24 against the creators of Scrabulous.

30 Israeli Prime Minister Ehud Olmert announces that because of an ongoing corruption investigation, he will resign after his party chooses a new leader in September.

•

Turkey's Constitutional Court issues a ruling that the governing Justice and Development Party has not violated secular principles of the country to the point that it should be banned but that it has veered too far in an Islamic direction and therefore its public funding must be cut in half.

•

Zimbabwe's central bank announces that the country's currency will be devalued by dropping 10 zeros, so that a 10-billion-dollar note will become a one-dollar note; on July 16 the inflation rate officially reached 2,200,000%.

31 Michèle Pierre-Louis is ratified as Haiti's new prime minister; she replaces Jacques-Édouard Alexis, who was dismissed in April.

•

Siaosi (George) Tupou V is ceremonially installed as king of Tonga; the coronation takes place the following day.

•

NASA scientists announce that the Phoenix Mars lander has tested Martian soil and, for the first time, has proved conclusively that it contains water ice.

•

Massachusetts Gov. Deval Patrick signs a bill that will allow same-sex couples living in states that do not permit same-sex marriage to marry in Massachusetts.

August

War has started.

Russian Prime Minister Vladimir Putin
on Russia's invasion of Georgia in support of South Ossetia, August 8

1 Georgian troops enter the separatist province of South Ossetia, and six people die in the fighting between the soldiers and the rebel militia.

An agreement is made for the International Atomic Energy Agency to inspect nuclear reactors in India, which possesses atomic weapons but is not a signatory to the Nuclear Non-proliferation Treaty.

It is reported that on July 29 microbiologist Bruce Ivins of the U.S. Army Medical Research Institute of Infectious Diseases, who was about to be indicted on charges relating to the anthrax attacks in the autumn of 2001, died by his own hand.

On the Himalayan mountain K2, the unexpected collapse of an ice sheet at an altitude of 8,200 m (26,000 ft) contributes to the deaths of 11 climbers; it is the highest single-day death toll to have occurred on the 8,611-m (28,251-ft) peak.

2 Hamas police attack a clan affiliated with the Fatah party in Gaza City; at least 11 people are killed, and Israel allows 188 Fatah members to enter the country.

Bobby Bank—WireImage/Getty Images

Bookstores throughout the U.S. hold midnight parties as the fourth novel of the popular Twilight vampire series by Stephenie Meyer, *Breaking Dawn*, goes on sale. *(Photo above.)*

3 At the conclusion of the Lambeth Conference in Canterbury, Eng., Anglican Archbishop Rowan Williams announces an agreement to negotiate a new covenant between the member churches; in the meantime, liberal members are enjoined to refrain from ordaining gay clergy and blessing same-sex unions, and conservative members are asked not to leave their churches.

The towering Russian literary figure Aleksandr Solzhenitsyn dies at the age of 89 near Moscow.

Women cleaning a street in Mogadishu, Som., accidentally set off a large roadside bomb; at least 15 of them perish.

South Korean golfer Shin Ji Yai captures the Women's British Open golf tournament; at age 20 years 3 months 6 days, she is the youngest to have won the title.

National Football League commissioner Roger Goodell officially reinstates longtime Green Bay Packers quarterback Brett Favre, who had earlier requested that his March retirement be overturned.

4 Chinese state media report that two Uighur separatists rammed a truck into a brigade of border-patrol officers outside their barracks in Kashgar, Xinjiang state, and then attacked the officers with knives and by throwing several bombs, killing at least 16 of them.

Italian troops are stationed in cities throughout the country around embassies, subway and railway stations, and centres of illegal immigrants in an attempt to combat violent crime.

The U.S. Preventive Services Task Force issues guidelines recommending that doctors not perform tests for prostate cancer in men over the age of 74, as the disease is unlikely to affect such men during the remainder of their lifetime.

5 The U.S. Government Accountability Office reveals that Iraq has a budget surplus of some $79 billion, very little of which is being used in the rebuilding of the country's infrastructure; those costs are largely financed by the U.S.

•

Iowa state investigators find that the Agriprocessors kosher meat-packing plant in Postville, which was the subject of a large immigration raid in May, employed at least 57 underage workers.

•

The Wildlife Conservation Society reports to the International Primatological Society Congress in Edinburgh its discovery of some 125,000 western lowland gorillas in the northern area of the Republic of the Congo; the gorillas, as well as other primates, are coming under increasing pressure in most parts of the world.

6 A group of military officers take over the presidential palace in Nouakchott, Mauritania, and arrest Pres. Sidi Mohamed Ould Cheikh Abdallahi and Prime Minister Yahya Ould Ahmed El Waghef.

•

Iraq's legislature, before beginning its summer recess, fails to pass election laws that would enable the holding of provincial elections.

•

The U.S. mortgage finance giant Freddie Mac posts figures for the second quarter that reflect a much deeper loss than had been expected, as does the large insurer American International Group (AIG).

•

In the first military commission trial of a detainee at the U.S. military base at Guantánamo Bay, Cuba, Salim Ahmed Hamdan, a former driver for Osama bin Laden, is convicted of having provided material support to a terrorist group but acquitted of having been a willing participant in a terrorist conspiracy; the following day he is sentenced to five and a half years in prison, including time served.

7 Nawaz Sharif and Asif Ali Zardari, the heads of Pakistan's ruling coalition, announce that they intend to impeach Pres. Pervez Musharraf.

•

Georgian troops take control of several villages in the separatist province of South Ossetia; some 10 people die in the fighting.

•

Pres. Maumoon Abdul Gayoom of Maldives ratifies the country's new constitution, which reduces the powers of the president and increases those of the legislature and judiciary.

8 Russian troops join the battle in Georgia's separatist province of South Ossetia, fighting against Georgia; also, a Russian air strike hits the Georgian port of Poti.

•

A spectacular opening ceremony featuring some 15,000 performers directed by filmmaker Zhang Yimou marks the start of the Olympic Games in Beijing.

9 Russian troops enter the separatist province of Abkhazia in Georgia as they continue to pour into South Ossetia and to drop bombs on other parts of Georgia; Georgian Pres. Mikheil Saakashvili asks the outside world for help.

10 A proposal to recall Pres. Evo Morales of Bolivia is resoundingly defeated in a voter referendum.

•

Bomb attacks on several government and other buildings in Kuqa in China's Xinjiang province are reported; a number of the militants and a security guard are said to have been killed.

•

Taliban forces dig in after having successfully repelled Pakistani troops from the Bajaur region of Pakistan's Federally Administered Tribal Areas.

•

At the Oakland Hills Country Club in Bloomfield Hills, Mich., Padraig Harrington of Ireland defeats Sergio García of Spain and American Ben Curtis by two strokes to become the first European since 1930 to win the Professional Golfers' Association championship.

•

The 49th Edward MacDowell Medal for outstanding contribution to the arts is awarded to American architect Thom Mayne at the MacDowell Colony in Peterborough, N.H.

11 When traders and growers of apples, the main cash crop of the Kashmir valley, attempt to circumvent a Hindu blockade of roads to the south in Indian-administered Kashmir by going through Pakistan-administered Kashmir, Indian security forces fire on those marching toward the border, killing six people, including Kashmiri separatist leader Sheikh Abdul Aziz.

•

Philippine officials say that some 130,000 people have fled the violence in North Cotabato province in Mindanao since a Supreme Court ruling halting the signing of an agreement between the Philippine government and the Moro Islamic Liberation Front caused an outbreak of fighting between rebel and government forces.

•

Former Thai prime minister Thaksin Shinawatra and his wife, Pojaman Shinawatra, who are wanted in Thailand on corruption charges, on some of which Pojaman has been convicted, flee to London from Beijing, where they were attending the Olympic Games.

•

In Beijing, Abhinav Bindra wins India's first-ever individual Olympic gold medal when he places first in the 10-m air rifle competition.

12 A Taliban attack on a minibus carrying Pakistani soldiers leaves at least 13 of the troops dead; the soldiers are part of Pakistan's strong military response to Taliban aggressiveness in Bajaur in the Tribal Areas.

•

In Indian-administered Kashmir, people protesting a curfew intended to stem violence clash with Indian security forces; 13 people are killed.

•

The American drugstore chain CVS Caremark announces a $2.54 billion deal to acquire Longs Drugs Stores, which operates primarily in western states, including Hawaii.

13 Lebanon and Syria announce that they will, for the first time since independence, establish diplomatic relations, but the news is overshadowed by a bomb explosion that destroys a bus in Tripoli, Leb., killing 15 people, 9 of them soldiers heading to their posts.

•

At the Olympic Games in Beijing, Australian swimmer Stephanie Rice sets a new world record in the women's 200-m individual medley (IM), three days after she broke the 400-m IM record.

14 Mohamed Ould Abdel Aziz, the leader of the mili-

tary junta that has taken over the government of Mauritania, names Moulaye Ould Mohamed Laghdaf prime minister two days after assuming presidential powers.

•

The U.S. reaches an agreement with Poland that will allow placement of an American missile-defense base in the European country.

•

Nigeria officially cedes the potentially oil-rich Bakassi Peninsula to Cameroon in compliance with a 2002 ruling by the International Court of Justice.

•

A female suicide bomber detonates her weapon in a tent full of resting Shi'ite pilgrims in Iskandariyah, Iraq; at least 26 people are killed.

15 Prachanda, leader of the former Maoist insurgency, is elected prime minister of Nepal.

•

The journal *Science* publishes a study describing the rapid growth of marine dead zones, areas starved of oxygen because of nitrogen from fertilizer runoff in oceanic coastal areas; such zones, frequently in fishing grounds, have doubled every decade since the 1960s.

•

Russian-born American gymnast Nastia Liukin wins the Olympic gold medal in the women's all-around competition.

16 Russian Pres. Dmitry Medvedev signs a revised cease-fire agreement with Georgia, but Russian troops continue operations in Georgia.

•

Opposition politician Alyaksandr Kazulin is released from prison in Belarus; he was imprisoned in 2006, and the U.S. and the European Union have long sought his release.

•

At the Olympics, Usain Bolt of Jamaica sets a new world record of 9.69 sec in the men's 100-m sprint.

17 A suicide bomber in Baghdad kills at least 15 people, many of them members of Sunni Awakening Councils.

•

Iran reports that it has successfully test-fired a rocket that could place a satellite in orbit.

•

At the Olympics in Beijing, American swimmer Michael Phelps wins a record eighth gold medal, passing the previous record for a single Olympiad of seven gold medals won by Mark Spitz in 1972; Phelps has also set four individual world records and one Olympic record and participated in three relays that set world records.

18 Pres. Pervez Musharraf of Pakistan announces his resignation in a nationally televised speech.

•

An attack by members of the Moro Islamic Liberation Front against several villages in Mindanao in the Philippines leaves at least 28 people, mostly civilians, dead.

•

The government of Peru declares a state of emergency in response to 10 days of occupation of oil facilities and a hydroelectric plant in the Amazon basin by indigenous people fighting development.

19 Pres. Levy Mwanawasa of Zambia dies in France at the age of 59; he suffered a stroke in June.

•

In Isser, Alg., a suicide car bomber kills at least 48 people, many of whom had been waiting in line to take an examination at a police academy.

•

At the UN headquarters, the Daedalus Quartet performs *Song Without Borders*, composed by Steve Heitzeg to commemorate the 22 UN workers who died five years earlier in an attack on the UN embassy in Baghdad.

20 Negotiators for the U.S. and Iraq reach a draft agreement on security arrangements, primarily regarding the role of U.S. troops, in Iraq after the end of the year.

•

Algeria endures its second bombing in as many days as two bombs go off in Bouira, one of which damages a military compound and the other of which kills at least 12 people on a bus transporting construction workers.

•

Jamaican sprinter Usain Bolt runs the men's 200-m race in 19.30 sec at the Olympics, breaking the world record by an astonishing two-hundredths of a second.

21 In Wah, Pak., outside Pakistan's largest weapons-manufacturing compound, two suicide bombers kill at least 64 people; two days earlier a suicide attack in a hospital emergency room in Dera Ismail Khan left 32 people dead.

•

The U.S. Food and Drug Administration announces that it has approved the sale of iceberg lettuce and spinach that has been irradiated in order to kill pathogens.

22 Aerial bombing in Afghanistan's Herat province by U.S.-led coalition forces after a battle against Taliban insurgents is reported by Afghanistan to have killed 76 civilians, though the coalition forces say that 30 militants were killed; the next day the civilian death toll is raised to 95.

•

After two days of fighting in which at least 70 people have died, Islamist militants take control of the port city of Kismaayo in Somalia.

•

Health officials in Canada confirm a third death from an outbreak of listeriosis that has been traced to lunch meats produced by Maple Leaf Foods, which recently recalled 540,000 kg (1.2 million lb) of the products made at its plant in Toronto.

23 In Kirkuk, Iraq, a suicide bomber kills at least five people, including an Awakening Council leader.

•

South Korea defeats Cuba 3–2 in a stunning upset to win the gold medal in baseball at the Olympic Games in Beijing.

24 Pres. Nicolas Sarkozy of France calls an emergency meeting of the European Union to address relations with Russia and support for Georgia in light of the fact that Russia has failed to comply with the terms of the cease-fire agreement.

•

At a large dinner party west of Baghdad to celebrate the release from U.S. custody of a family member of the host, a suicide bomber detonates his weapon among the guests, killing at least 25 people.

In the town of Singur, India, some 40,000 protesters surround a Tata Motors factory being built to produce the new $2,500 Nano automobiles, demanding that the land be returned to the local farmers from whom it was taken.

The Waipio team from Waipahu, Hawaii, defeats the Matamoros team from Mexico 12–3 to win baseball's 62nd Little League World Series. *(Photo below.)*

The Games of the XXIX Olympiad close in Beijing.

25 Pres. Robert Mugabe of Zimbabwe unilaterally convenes the legislature, in contravention of the agreement governing power-sharing negotiations; Lovemore Moyo of the Movement for Democratic Change is nonetheless elected to the powerful post of speaker.

The Pakistan Muslim League-N, led by Nawaz Sharif, leaves Pakistan's ruling coalition government.

A government attack on Kalma, a large camp housing some 90,000 internal refugees in the Darfur region of The Sudan, kills dozens of people.

Archaeologists in Turkey report that they have uncovered parts of a large marble statue of the Roman Emperor Marcus Aurelius in a Roman-era bath in Sagalassos.

26 Russia officially recognizes the independence of the Georgian provinces of South Ossetia and Abkhazia.

Gene J. Puskar/AP

North Korea announces that it has ceased disabling its main nuclear complex at Yongbyon because it has not been removed from a U.S. terrorism blacklist.

In India's Orissa state, escalating religious violence between Hindus and Christians leaves at least 6 people dead; by August 28 the death toll has risen to 10, with some 5,000 Christians reported burned out of their homes.

The UN mission in Afghanistan says that a UN team found that the U.S.-led air strikes in Herat province on August 22 killed at least 90 civilians, 60 of them children; the U.S. military maintains that it killed 25 militants and 5 noncombatants.

Some 30,000 protesters in Bangkok demanding the resignation of Thai Prime Minister Samak Sundaravej surround government buildings and enter the grounds of the Government House, where the prime minister's offices are located.

In a U.S. federal copyright lawsuit, a jury awards the toymaker Mattel $100 million in its suit against MGA Entertainment, maker of the popular Bratz dolls.

27 Democratic Party delegates, meeting at their national convention in Denver, nominate Barack Obama, senator from Illinois, and Joe Biden, senator from Delaware, as the party's candidates for president and vice president, respectively.

28 Iraq signs an agreement with the China National Petroleum Corp. for the development of the Ahdab oil field.

Chinese state media publicize a report from the country's top auditor that says several government departments "misused or embezzled" some $660 million in the past year; 104 public employees have been punished for the misuse of funds.

29 Georgia and Russia mutually sever diplomatic relations.

Antigovernment protesters in Thailand expand their blockade of government buildings and begin blocking trains and airplanes at provincial airports as well.

The state-owned airline Alitalia files for bankruptcy protection in Italy.

30 Italy signs an agreement with Libya to provide $5 billion in aid and projects as compensation for Italy's 1911–42 occupation of Libya; in return, Libya is to take steps to prevent illegal immigration to Italy from Libya.

Egypt allows a temporary opening of its border crossing with the Gaza Strip at Rafah.

31 After three weeks of an aerial campaign against Taliban militants in the Tribal Areas, Pakistan begins a unilateral cease-fire for Ramadan.

As the intermittently strengthening Hurricane Gustav, having caused destruction in Hispaniola, Jamaica, and Cuba, heads toward the Gulf Coast in the U.S., some two million people in Texas, Mississippi, Louisiana, and Alabama evacuate.

September

The idea of the all-powerful market which wasn't to be impeded by any rules or political intervention was a mad one. The idea that the markets are always right was mad.

Pres. Nicolas Sarkozy of France in a nationally televised speech on the global economic difficulties, September 25

1 Japanese Prime Minister Yasuo Fukuda unexpectedly announces his resignation.

•

U.S. and Iraqi military officials announce that responsibility for paying and commanding Sunni Awakening Councils in Baghdad and the surrounding area will be taken over by Iraq's government beginning next month, and the U.S. military formally hands over control of once-violent Anbar province to Iraqi armed forces.

•

As government supporters clash violently with antigovernment demonstrators in Bangkok, public-sector union leaders call for a general strike; the next day Thailand declares a state of emergency.

•

Bolivia's National Electoral Court annuls a presidential decree mandating that a referendum on a proposed new constitution be held on December 7.

2 The Indian car manufacturer Tata Motors announces that because of political protests over land in the Singur area of West Bengal state where Tata planned to build a plant to produce the ultracheap Nano car, it has halted building on the plant.

•

In Egypt the politically connected real-estate tycoon Hisham Talaat Moustafa is arrested and charged with having hired a former police officer to kill Lebanese pop star Suzanne Tamim, who was found murdered in Dubai, U.A.E., in late July.

•

The U.S. Library of Congress announces that Stevie Wonder is the winner of the Gershwin Prize for Popular Song and that in conjunction with the prize it has commissioned a song from him; the prize will be presented in February 2009.

•

Louise Glück is named the winner of the 2008 Wallace Stevens Award from the Academy of American Poets.

3 At the Republican national convention in St. Paul, Minn., John McCain, senator from Arizona, and Gov. Sarah Palin of Alaska are nominated as the party's candidates for president and vice president in the upcoming election in November.

•

It is widely reported that North Korea has begun rebuilding its nuclear plant at Yongbyon.

•

Pres. Dimitris Christofias of Cyprus and Turkish Cypriot leader Mehmet Ali Talat meet in Nicosia for talks on reunification of the country.

4 For the second consecutive day, thousands of demonstrators march in Mbabane, Swaz., demanding democracy, but protests turn violent.

•

The journal *Nature* publishes a study suggesting that the most powerful hurricanes and typhoons, particularly in the Atlantic and Indian oceans, have become stronger over the past 25 years.

•

Mayor Kwame M. Kilpatrick of Detroit pleads guilty to obstruction of justice and agrees to resign from office and serve 120 days in prison.

5 Legislative elections are held in Angola (the voting is extended by a day in Luanda); the ruling Popular Movement for the Liberation of Angola (MPLA) wins more than 80% of the vote.

•

Komlan Mally resigns as prime minister of Togo; he is replaced two days later by Gilbert Houngbo.

•

U.S. Secretary of State Condoleezza Rice meets with Libyan leader Muammar al-Qaddafi in his compound in Tripoli; it is the first visit to the country by a current U.S. secretary of state in more than 50 years.

•

The U.S. National Snow and Ice Center reports that for the first time since recordings began being taken in the area, both the Northwest Passage in Arctic waters above North America and the Northern Sea Route over Europe and Asia were open during the summer, providing a ring of navigable waters in the Arctic.

•

Quentin Bryce takes office as governor-general of Australia.

Electronic Arts releases Spore, a complex computer game inspired by evolutionary biology and designed by Will Wright, creator of the popular 2000 game Sims.

The Naismith Memorial Basketball Hall of Fame in Springfield, Mass., inducts as members National Basketball Association players Adrian Dantley, Patrick Ewing, and Hakeem Olajuwon and coach Pat Riley, women's college coach Cathy Rush, and broadcaster Dick Vitale.

6 Pakistan's two legislative houses and four provincial assemblies elect Asif Ali Zardari president of the country.

Hurricane Ike slams into the Turks and Caicos Islands as a category 4 storm; the infrastructure of the Caribbean territory is largely destroyed.

Turkish Pres. Abdullah Gul attends an association football (soccer) match in Armenia after an invitation by Armenian Pres. Serzh Sarkisyan; he is the first Turkish head of state to visit the country.

7 The U.S. government takes over the mortgage finance companies Fannie Mae and Freddie Mac in a rescue package that will all but wipe out their shareholders' stake but will guarantee the corporate debt.

Canadian Prime Minister Stephen Harper dissolves Parliament and calls for an election to be held on October 14.

Serena Williams of the U.S. defeats Jelena Jankovic of Serbia to win the women's U.S. Open tennis championship; the following day Roger Federer of Switzerland defeats Andy Murray of Scotland to win the men's title for the fifth straight year.

With his second-place finish in the Indy 300 race in Joliet, Ill., New Zealand driver Scott Dixon wins the overall IndyCar drivers' championship.

The musical *Rent* closes after a Broadway run of close to 13 years.

8 Russia agrees to withdraw its troops from Georgia but maintains that Russian troops will remain in the separatist regions of South Ossetia and Abkhazia; it also agrees that observers from the European Union may monitor the agreement.

A U.S. missile attack on a Taliban leader's compound in the North Waziristan area of Pakistan kills 23 people, most of them reported to be members of the Taliban leader's family.

9 Thailand's Constitutional Court rules that Prime Minister Samak Sundaravej's acceptance of payments for hosting the TV cooking show *Tasting and Complaining* violates the country's constitution; he is forced from office.

North Korean leader Kim Jong Il is conspicuously absent from the celebration of the 60th anniversary of the country's founding; rumours suggest that he is in poor health.

American investment bank Lehman Brothers, which is expected to announce a large quarterly loss, sheds nearly half its value on the stock market; two days later the bank puts itself up for sale.

10 CERN's Large Hadron Collider, which is intended to create conditions identical to those immediately after the big bang and is the largest particle collider in the world, is activated outside Geneva.

The U.S. Library of Congress presents its first Award for Lifetime Achievement in the Writing of Fiction to novelist Herman Wouk.

11 Pres. Hugo Chávez of Venezuela expels the U.S. ambassador and recalls the Venezuelan ambassador from Washington, D.C.

Supporters of Bolivian Pres. Evo Morales are ambushed in Pando department; at least 15 people are killed, and some 100 others are unaccounted for.

12 A truck bomb explodes in the town centre in Dujail, Iraq, killing at least 31 people.

A High Court judge in South Africa dismisses corruption charges against Jacob Zuma, leader of the African National Congress (ANC), citing procedural errors in the case. *(Photo below.)*

13 Five bombs explode in various crowded markets and streets in New Delhi; at least 21 people are killed, and dozens are injured.

Hurricane Ike goes ashore in Texas, flooding Galveston and Orange and causing considerable damage in Houston; some 51 people are killed throughout the region, 20 of them in Texas.

New Zealand defeats Australia to win the Tri-Nations Rugby Union title.

14 The American investment firm Merrill Lynch sells itself to Bank of America for about $50 billion.

The video game company Electronic Arts withdraws its unsolicited offer to buy Take Two Interactive, publisher of the Grand Theft Auto series of games.

In Madrid, Russia defeats Spain four games to none to win the Fed Cup in tennis.

15 In Zimbabwe, Pres. Robert Mugabe signs a power-sharing agreement

Themba Hadebe/AP

with opposition leader Morgan Tsvangirai that makes Tsvangirai prime minister and envisions an even division of power, though many important details remain to be worked out.

•

As widely expected, the venerable investment bank Lehman Brothers, which received no help from the U.S. government and was unable to find a buyer, files for bankruptcy protection; it is the biggest bankruptcy filing in the country's history.

•

In a sudden change of monetary policy, China's central bank cuts interest rates and relaxes bank lending rules.

16 The U.S. government takes over the giant insurer American International Group (AIG), fearing that the company's imminent collapse would send economies worldwide into a tailspin.

•

The governing coalition in Ukraine collapses, obliging the government to seek a new coalition.

•

Lieut. Gen. Ray Odierno takes over command of U.S. forces in Iraq from Gen. David Petraeus in a ceremony presided over by U.S. Secretary of Defense Robert Gates.

•

Army troops in Bolivia arrest Gov. Leopoldo Fernández of Pando department, accusing him of having been involved in the September 11 massacre of peasants.

17 Somchai Wongsawat is chosen as Thailand's new prime minister; protesters at Government House in Bangkok oppose the choice.

•

Foreign Minister Tzipi Livni is elected leader of Israel's ruling Kadima party.

www.kostenuk.com

•

In Nalchik, Russia, Aleksandra Kostenyuk of Russia becomes the Fédération Internationale des Échecs (FIDE) women's world chess champion after defeating Hou Yifan of China 2.5–1.5 in the final round of the three-week tournament. *(Photo above.)*

18 In an effort to contain the global credit crisis, the U.S. Federal Reserve joins with the European Central Bank, the Bank of England, and the Bank of Japan as well as the central banks of Canada and Switzerland to make $180 billion in currency exchanges available.

•

Russian Pres. Dmitry Medvedev announces that the government will invest as much as $20 billion into domestic stocks in an effort to stop the rapid sinking of the country's stock markets, which were shut down the previous day.

•

In Zimbabwe negotiations between Pres. Robert Mugabe and Prime Minister Morgan Tsvangirai break down over the division of control over ministries.

•

The Dow Jones Industrial Average replaces the American International Group (AIG) with Kraft Foods on its listing.

19 North Korea declares that it no longer is interested in being removed from the U.S. government's list of state sponsors of terrorism.

•

A bomb largely destroys a religious school in Quetta, Pak.; at least five people are killed.

20 A large truck bomb explodes outside the Marriott Hotel, a landmark in Islamabad, Pak.; at least 40 people are killed.

•

Pres. George W. Bush formally proposes a bailout bill that would give the Treasury Department unlimited authority to buy and sell up to $700 billion in mortgage-related assets; the plan contains few details.

•

Chief Adviser Fakhruddin Ahmed, the head of Bangladesh's government, announces that elections will take place on December 18; the last scheduled elections in the country in January 2007 were canceled.

•

CERN scientists announce that the Large Hadron Collider will be shut down for at least two months; later they indicate that it will be started up again in April 2009.

21 Pres. Thabo Mbeki of South Africa in a publicly televised address gives up the office of president, in accordance with the wishes of the ruling African National Congress (ANC) party.

•

Ehud Olmert resigns as prime minister of Israel.

•

The U.S. Federal Reserve approves the requests of investment banks Goldman Sachs and Morgan Stanley to convert themselves into bank holding companies.

•

The Emmy Awards are presented in Los Angeles; winners include the television shows *30 Rock* and *Mad Men* and the actors Alec Baldwin, Bryan Cranston, Tina Fey, Glenn Close, Jeremy Piven, Zeljko Ivanek, Jean Smart, and Dianne Wiest.

•

In golf's Ryder Cup competition in Louisville, Ky., the U.S. defeats Europe for the first time since 1999 with a 16½–11½ margin of victory.

22 Li Changjiang, the head of China's food and product quality agency, is dismissed in the scandal in which melamine-tainted infant formula has made tens of thousands of babies ill throughout China.

23 The U.S. House of Representatives passes legislation that is intended to prevent the waters of the

Great Lakes from being diverted outside the basin and requires conservation measures from the states bordering the lakes; Pres. George W. Bush signs the bill into law the following month.

•

A 22-year-old student at the Kauhajoki School of Hospitality, a trade school in western Finland, opens fire in a classroom of students taking an exam; he kills 10 people before shooting himself.

•

The world's first wave farm, in which the power of the ocean's waves is harnessed to generate electrical power, begins operation off Agucadora, Port.

•

Google and T-Mobile introduce their mobile telephone G1, the first phone powered by Google's Android operating system; it is meant to encourage people to develop programs to run on it.

24 Taro Aso takes office as the new prime minister of Japan.

•

U.S. Pres. George W. Bush makes a nationally televised speech to ask for the country's support for a $700 billion bailout plan to avert financial catastrophe and invites presidential candidates John McCain and Barack Obama to Washington, D.C., to join negotiations on the plan.

•

Iraq's Council of Representatives passes a law to prepare for provincial elections to be held in 2009.

25 In the biggest bank failure in American history, the U.S. government takes over the savings and loan bank Washington Mutual and arranges its sale to financial services giant JPMorgan Chase.

•

Cooperation between and swift action by bank regulators, bank officers, and tycoon Li Ka-shing quickly end a run on the Bank of East Asia in Hong Kong within a day after it began.

•

After being elected by the legislature, Kgalema Motlanthe takes office as president of South Africa; he immediately replaces the discredited Manto Tshabalala-Msimang as minister of health with Barbara Hogan.

•

Antoine Gizenga resigns as prime minister of the Democratic Republic of the Congo.

•

French Pres. Nicolas Sarkozy makes a speech in which he asserts that the world's monetary system needs to be overhauled and that, though the economic crisis in the U.S. is having an effect in France, the French government will act to protect bank deposits and taxpayers.

•

Somali pirates in the Indian Ocean seize the *Faina*, a Ukrainian ship carrying millions of dollars of military weaponry; by the following day the U.S. and Russia have sent naval ships in pursuit.

26 Turkmenistan adopts a new constitution that, among other things, replaces a 2,500-member appointed legislature with a 125-member popularly elected one and sets the presidential term at five years; legislative elections are set for December.

•

The Global Carbon Project issues an update saying that worldwide emissions of carbon dioxide, a greenhouse gas, had an annual increase in 2000–07 that was nearly four times the rate in the 1990s, largely because of economic growth in less-developed countries.

•

The 2008 Albert Lasker Medical Research Awards are presented: winners are Victor Ambros, David Baulcombe, and Gary Ruvkun for their revelations about tiny ribonucleic acids; Akira Endo for his discovery of statin drugs, which lower LDL cholesterol; and Stanley Falkow for his career of researching how microbes cause disease and for his service as a teacher.

•

The Jerome Robbins Award for excellence in dance is presented to choreographer Twyla Tharp and to the San Francisco Ballet; each award is worth $100,000.

27 A large car bomb explodes at a busy intersection in Damascus, killing at least 17 people.

•

Astronaut Zhai Zhigang of China successfully performs the Chinese space program's first spacewalk, floating outside the orbital module for 18 minutes.

•

In the Australian Football League Grand Final in Melbourne, the Hawthorn Hawks defeat the heavily favoured Geelong Cats 18.7 (115) to 11.23 (89).

28 Voters in Ecuador approve a new constitution that, among other things, gives more power to the president but also includes many popular social protections.

•

In legislative elections in Austria, the ruling Social Democratic Party loses ground but retains the highest number of seats; the right-wing anti-immigrant Freedom Party and Alliance for Austria's Future post gains.

•

Supporters of Pres. Alyaksandr Lukashenka win all 110 seats in legislative elections in Belarus.

•

Haile Gebrselassie of Ethiopia shatters the world marathon record that he set in 2007 as he wins the Berlin Marathon with a time of 2 hr 3 min 59 sec; Irina Mikitenko of Germany is the fastest woman, with a time of 2 hr 19 min 19 sec.

29 The U.S. House of Representatives rejects the $700 billion bailout bill supported by U.S. Pres. George W. Bush; as countries around the world struggle to save large banks, the Dow Jones Industrial Average falls nearly 7%, and global stock markets also lose value.

•

The U.S. Department of Health and Human Services reports that more than 90% of nursing homes in the U.S. have been found to have violated health and safety standards and that for-profit institutions were cited more often for such violations than government or not-for-profit homes.

•

The World Institute for Nuclear Security is inaugurated in Vienna, with Roger Howsley of Great Britain serving as its director; the organization seeks to prevent nuclear weapons from falling into the hands of terrorists.

30 On the first day of a nine-day festival devoted to the Hindu goddess Durga, a stampede caused by pilgrims slipping on coconut milk from offerings causes at least 147 people to be trampled to death in Jodhpur in Rajasthan state, India.

•

London's High Court rules that Nepalese Gurkhas who have served with the British army have the right to live in the U.K.

October

Iceland is bankrupt. The Icelandic krona is history. The only sensible option is for the IMF to come and rescue us.

University of Iceland professor Arsaell Valfells,
on the collapse of Iceland's economic system, October 9

1 The U.S. Congress ratifies a nuclear trade agreement made with India in 2005.

•

Investor Warren Buffett announces that his holding company, Berkshire Hathaway, will purchase $3 billion of stock in General Electric.

•

In Sweden the Right Livelihood Awards are granted to Krishnammal and Sankaralingam Jagannathan of India and their organization LAFTI (Land for Tillers' Freedom) for their work for social justice and sustainable development, to American journalist Amy Goodman for her syndicated radio and television program *Democracy Now!* and its independent coverage of underreported stories, to Asha Hagi of Somalia for her work to politically empower women, and to Swiss-born gynecologist Monika Hauser for her work for sexually abused women in war-torn places.

2 The Sri Lankan air force bombs the main political offices of the Liberation Tigers of Tamil Eelam in Kilinochhi.

•

In Baghdad a car bomb kills at least 14 people at one Shi'ite mosque, and a suicide bomber kills some 10 people at a second Shi'ite mosque.

3 The government of The Netherlands takes over the Dutch operations of the Belgian-Dutch Fortis Bank, which includes ABN AMRO.

•

The U.S. House of Representatives passes a revised version of the $700 billion financial bailout bill that was rejected in September, and U.S. Pres. George W. Bush signs it into law.

•

A car loaded with explosives blows up in Tskhinvali, the capital of Georgia's separatist province of South Ossetia, killing seven Russian soldiers, as well as the two men in the car.

4 Turkish officials report that an attack the previous night by Kurdish insurgents on a border post in a district that borders Iraq and Iran left 15 Turkish soldiers and 23 attackers dead.

•

North Korea's state news agency reports that the country's leader, Kim Jong Il, appeared in public to watch an association football (soccer) game; his last reported public appearance was in August.

•

Tyler Perry Studios, featuring five soundstages for television and film work, opens in Atlanta; it is the first major film and television studio owned by an African American producer.

5 A magnitude-6.6 earthquake strikes Kyrgyzstan, killing at least 72 people and flattening the village of Nura.

•

Violence takes place for the second straight day in India's Assam state between Bodo people and Bangladeshi immigrants, prompting police to open fire on rioters; 33 people die in the fighting, including 8 killed by police fire.

•

The Detroit Shock defeats the San Antonio Silver Stars 76–60 to win its third Women's National Basketball Association championship in a three-game sweep.

6 The Russian stock market declines by 19.1%, indexes in London and Frankfurt, Ger., drop more than 7%, Paris stocks lose 9%, and the Dow Jones Industrial Average finishes below 10,000 points for the first time since 2004.

•

NASA's *Messenger* spacecraft makes its second flyby of Mercury.

•

The Nobel Prize for Physiology or Medicine is awarded to Françoise Barré-Sinoussi and Luc Montagnier of France for their discovery of HIV, the virus that causes AIDS, and to Harald zur Hausen of Germany for his discovery of the human papillomavirus, a major cause of cervical cancer.

7 The government of Iceland takes control of Landsbanki, the country's second largest bank, and pegs the national currency to a basket of

other currencies in an effort to stave off national bankruptcy.

•

Protesters in Bangkok surround the Parliament building, trapping legislators inside for several hours until police arrive to disperse the demonstrators; fighting breaks out in which 2 people are killed and some 400 are hurt. *(Photo right.)*

Sukree Sukplang—Reuters/Landov

•

The UN Food and Agriculture Organization releases a report calling for governments to review their policies supporting biofuels, saying that they have contributed to rising hunger in poor countries.

•

In Stockholm the Nobel Prize for Physics is awarded to Yoichiro Nambu of the U.S. and to Makoto Kobayashi and Toshihide Maskawa of Japan for their work searching for hidden symmetries among elementary particles.

8 British Prime Minister Gordon Brown announces a financial plan to offer recapitalization funds to troubled banks in return for ownership stakes and to provide government guarantees to help banks refinance debt; the government will provide £50 billion ($75 billion) in this initiative.

•

The U.S. Federal Reserve, the European Central Bank, and the central banks of the U.K., Canada, Switzerland, and Sweden all cut their benchmark interest rates by half a point in concert.

•

The first multiparty presidential elections ever held in Maldives result in the need for a runoff.

•

The Nobel Prize for Chemistry is awarded to Osamu Shimomura of Japan and to Martin Chalfie and Roger Y. Tsien of the U.S. for their research on the green fluorescent protein produced by the jellyfish *Aequorea victoria* and its use as a marker for observing cells in other animals.

9 Iceland takes over Kaupthing Bank, the last of the country's three major banks to be nationalized, shuts down the stock market, and ceases to support its currency, the krona.

•

Pres. Viktor Yushchenko of Ukraine dissolves Parliament, ordering that new legislative elections be held on December 7.

•

Zimbabwe publishes official statistics showing that the national rate of inflation rose from 11,000,000% in June to 231,000,000% in July.

•

The banking giant Citigroup abandons its plan to acquire Wachovia Corp., allowing it to be acquired by Wells Fargo, which had made a surprise offer at a higher price.

•

The Nobel Prize for Literature is awarded to French writer Jean-Marie Gustave Le Clézio.

10 Near a meeting of elders in the Orakzai tribal area of Pakistan, a truck bomb kills some 100 people.

•

Faced with a corruption scandal, Pres. Alan García of Peru dismisses his cabinet, including Prime Minister Jorge del Castillo; the next day Yehude Simon is named prime minister.

•

The Nobel Peace Prize is awarded to former Finnish president and international mediator Martti Ahtisaari.

11 Pres. Robert Mugabe of Zimbabwe declares that his party will control the Ministries of Defense, Home Affairs, Foreign Affairs, and Justice, giving him effective control over the military and police; a day earlier he agreed with opposition leader Morgan Tsvangirai to request the mediation of Thabo Mbeki of South Africa.

•

U.S. Pres. George W. Bush announces that North Korea is to be removed from the list of state sponsors of terrorism; the following day North Korea indicates that it will resume dismantling its Yongbyon nuclear complex.

12 Leaders of European countries and organizations in the euro zone meeting in Paris agree to inject capital into troubled banks and to guarantee certain bank debt, and bank deposits are guaranteed by the governments of Australia and New Zealand.

•

Iraqi Prime Minister Nuri al-Maliki orders national police forces to protect Christian churches and residents in Mosul after two weeks in which 11 Christians were killed and nearly 500 Christian families fled for safety.

•

A strike in protest against a planned sales tax in Iran expands from shop owners in traditional bazaars to include textile and carpet merchants, although the proposal has been suspended.

•

The Chicago Marathon is won by Evans Cheruiyot of Kenya with a time of 2 hr 6 min 25 sec; the women's victor is Lidiya Grigoryeva of Russia with a time of 2 hr 27 min 17 sec.

13 The U.S. government announces a plan to invest as much as $250 billion in stock in banks in a recapitalization attempt similar to what is being undertaken in Europe; the banks include Bank of America, Citigroup, and JPMorgan Chase.

•

The Dow Jones Industrial Average gains 936 points, its

largest-ever point gain and an increase of 11.1%; the Standard & Poor's 500 index and the Nasdaq composite also rise over 11%.

•

The Nobel Memorial Prize in Economic Sciences goes to American Paul Krugman for his work elucidating patterns in world trade and locations of economic activity.

14 In legislative elections in Canada, the ruling Conservative Party wins the highest percentage of the vote, and party leader Stephen Harper remains prime minister.

•

Iceland uses swap lines to obtain €200 million ($267 million) each from the central banks of Denmark and Norway, and its benchmark stock index loses nearly 80% of its value.

•

The Man Booker Prize for Fiction goes to Indian writer Aravind Adiga for his first novel, *The White Tiger*.

15 Ilham Aliyev wins reelection as president of Azerbaijan with about 89% of the vote; there are no credible opposition candidates.

•

The Dow Jones Industrial Average drops a stunning 733 points, losing 7.9% of its value.

•

The price of a barrel of light, sweet crude oil falls to $74.54, the first time since August 2007 that it has fallen below $75.

•

In Tokyo the Japan Art Association awards the Praemium Imperiale to Indian conductor Zubin Mehta, Russian installation artists Ilya and Emiliya Kabakov, Swiss architect Peter Zumthor, Japanese kabuki actor Tojuro Sakata, and British artist Richard Hamilton.

16 Hungary arranges to borrow as much as €5 billion ($6.7 billion) from the European Central Bank; the collapse of credit markets is endangering Hungary's economy.

•

The Tribune Co., which owns the *Chicago Tribune* and the *Los Angeles Times*, ends its subscription to the Associated Press wire service, citing the need to cut costs.

•

NASA reports that the Fermi Gamma-ray Space Telescope has made a discovery in the constellation Cepheus of a previously unknown type of pulsar that emits only gamma rays.

17 The Independent Electoral Commission in Côte d'Ivoire announces that a presidential election scheduled for November 30 will be postponed until 2009.

•

A battle between African Union peacekeepers and Islamic insurgents who attacked them in Mogadishu, Som., leaves at least 14 people dead.

•

Japan, Austria, Turkey, Mexico, and Uganda are elected to two-year nonpermanent seats on the UN Security Council.

18 A demonstration against the proposed status-of-forces security agreement between Iraq and the U.S. by followers of Shi'ite cleric Muqtada al-Sadr takes place in Baghdad.

•

Thai Prime Minister Somchai Wongsawat says that he wishes to have face-to-face talks with Cambodian Prime Minister Hun Sen in an attempt to resolve the dispute over a 900-year-old temple on the border between the countries; a firefight on October 15 left three Cambodian soldiers dead.

19 China announces a rural-reform policy that will allow farmers to lease or exchange land-use grants.

•

South Korea announces a financial package in which it will guarantee up to $100 billion in foreign debt held by banks, offer dollar liquidity to banks, and give tax incentives to long-term stock investors.

•

The government of The Netherlands agrees to fund the ING Group with €10 billion ($13 billion) in exchange for an 8.5% share in the bank.

•

At the world open squash championships in Manchester, Eng., Ramy Ashour of Egypt wins the men's competition and Nicol David of Malaysia the women's title.

20 In Silivri, Tur., a trial gets under way against 86 people, many prominent, who in a 2,455-page indictment have been accused of belonging to a secret nationalist group called Ergenekon, which seeks to use violence and destabilization to take over the government.

•

The genomes and phenotypes of 10 volunteers are made publicly available on www.personalgenomes.org as part of the Personal Genome Project, which seeks to increase medical knowledge by making this information easily available; the project founders hope to supply the data on 100,000 volunteers.

•

Festus Mogae, who was president of Botswana from 1998 until April 2008, wins the Mo Ibrahim Prize for Achievement in African Leadership.

21 The inaugural Steinberg Distinguished Playwright Award, which carries an unusually generous prize of $200,000, is presented to Tony Kushner.

•

Bolivia's legislature passes a bill to allow a national referendum on a proposed new constitution to take place on Jan. 25, 2009.

•

For the first time, trade takes place between India and Pakistan across the Line of Control in Kashmir as 16 Indian trucks carrying apples and walnuts cross into Pakistan; Pakistani trucks loaded with rice and raisins later travel into India.

•

The U.S. Federal Reserve announces a new $540 billion program to back up the value of money-market mutual funds.

22 Pakistan asks the International Monetary Fund for assistance in repaying loans; the IMF has also been approached by Iceland, Hungary, Serbia, and Ukraine.

•

India launches *Chandrayaan-1*, an unmanned spacecraft that will orbit the Moon, gathering information to create a three-dimensional atlas and searching for mineral resources, particularly uranium; it is India's first scientific spacecraft.

23 A suicide car bomber targeting Iraq's minister of labour and social affairs kills 11 people in Baghdad; the minister, Mahmoud Muhammad al-Radhi, is uninjured.

•

Greece's minister of state and government spokesman, Theodoros Roussopoulos, resigns in a government scandal in which valuable

land was exchanged for less-desirable property belonging to a monastery on Mt. Athos.

•

The European Parliament names jailed Chinese human rights activist Hu Jia the winner of the Sakharov Prize for Freedom of Thought.

24 The International Monetary Fund tentatively agrees to grant Iceland a $2 billion loan over two years to help it rebuild its economy; the last time the IMF made a loan to a Western country was in 1976.

•

As oil drops to $64.15 a barrel, OPEC plans to reduce output to 1.5 million bbl a day.

•

The UN reports that a quickly spreading cholera outbreak in Guinea-Bissau has infected some 12,000 people, 200 of whom have died.

•

National City Bank merges with PNC Financial, which receives $7.7 billion of U.S. federal bailout money to expedite the merger, and insurance companies and car manufacturers lobby to receive government largesse.

25 Hong Kong's Centre for Food Safety reports that it found eggs from northeastern China to be heavily contaminated with melamine, suggesting that the toxic substance has been deliberately added to animal feed.

•

The Breeders' Cup Classic Thoroughbred horse race is won by Raven's Pass at Santa Anita Park in Arcadia, Calif.; favourite Curlin finishes fourth.

26 Israeli Foreign Minister Tzipi Livni, the leader of the Kadima political party, asks Pres. Shimon Peres to set early elections.

•

A U.S. Predator drone launches a missile attack on a compound in the village of Manduta in Pakistan's South Waziristan province, killing 20 people; among the dead are two Taliban leaders who were responsible for attacks against U.S. personnel in Afghanistan.

•

The 21st annual Thelonious Monk International Jazz Competition in Los Angeles is won by alto saxophonist Jon Irabagon. *(Photo above.)*

Charley Gallay/Getty Images for Thelonious Monk Institute

27 As forces led by insurgent leader Laurent Nkunda advance toward Goma, Dem. Rep. of the Congo, protesters attack the compound of UN peacekeepers in anger that they have not stopped the insurgents, and the newly appointed head of the UN force quits in frustration over its lack of strategy and resources.

•

Pres. Mikheil Saakashvili of Georgia dismisses Prime Minister Lado Gurgenidze and names Grigol Mgaloblishvili as his replacement.

•

South Korea's central bank holds an emergency meeting and lowers its key interest rate by three-quarters of a percentage point; elsewhere, the Bank of Israel lowers its rate by one-quarter point, and Australia's central bank buys Australian dollars to improve the exchange rate.

•

The Community Court of Justice, a regional court established by the Economic Community of West African States, rules that Niger failed to enforce its laws against slavery in allowing a 12-year-old girl to be sold into slavery and kept in that state for more than 10 years and awards her $19,000.

•

Sen. Ted Stevens of Alaska is convicted in the District of Columbia on seven felony counts for having failed to report some $250,000 in gifts and services he had received; Stevens is running for his seventh term of office.

28 In runoff presidential elections in Maldives, Mohamed Nasheed defeats Maumoon Abdul Gayoom, who had been president since 1978.

•

Iran announces that it has opened a new naval base in the port of Jask on the Gulf of Oman.

29 Ukraine's legislature gives initial approval to financial changes required by the IMF before it releases a $16.5 billion loan to the country; the Ukrainian currency, the hryvnia, loses some 14% of its value.

•

Suicide car bombers attack the presidential palace in Hargeysa, the capital of Somalia's semi-independent and peaceful region of Somaliland, killing at least 20 people; other car bombs explode in Bosasso in the semiautonomous region of Puntland.

•

The U.S. Federal Reserve cuts its benchmark interest rate half a point, to 1%.

•

Pakistan formally protests U.S. attacks against Taliban and al-Qaeda militants on its soil and demands a stop to the incursions.

•

In the World Series, the Philadelphia Phillies defeat the Tampa Bay Rays 4–3 in the final three and a half innings of the fifth game, which began on October 27 and was suspended for two days, owing to the weather, to win the Major League Baseball championship.

30 In India's Assam state, bombs go off in four towns, including the state capital; at least 64 people are killed all told.

•

The first copies of *Bhutan Today*, the first daily newspaper published in Bhutan, roll off the presses in Thimphu.

•

Rupiah Banda wins the presidential election in Zambia; he had been acting president since the death of Pres. Levy Mwanawasa.

•

The oil company Exxon Mobil reports a record $14.8 billion in profit in its most recent fiscal quarter.

31 A missile attack believed to have been launched by a U.S. drone hits two villages in Pakistan, killing 27 people, one of them said to be an al-Qaeda operative.

•

U.S. Gen. David Petraeus takes over the Central Command, which oversees military operations in Iraq, Afghanistan, and much of the Middle East, Central Asia, and South Asia.

November

I ran into the hotel kitchen, and then we were shunted into a restaurant in the basement. We are now in the dark in this room, and we have barricaded all the doors. It's really bad.

European Parliament member Sajjad Karim
describing his ordeal during the terrorist siege of his hotel
in Mumbai (Bombay), November 26

1 A group of 6,400 dissident members of the African National Congress (ANC) party meet in Johannesburg to discuss the formation of a new political party.

2 With a fifth-place finish at the Brazilian Grand Prix, which is won by Felipe Massa of Brazil, British driver Lewis Hamilton at 23 years of age becomes the youngest person to have won the Formula 1 automobile racing drivers' championship.

•

Sébastien Loeb of France secures a record fifth successive world rally championship automobile racing drivers' title with a third-place finish in the Rally of Japan.

•

Marilson Gomes dos Santos of Brazil wins the New York City Marathon with a time of 2 hr 8 min 43 sec, while Britain's Paula Radcliffe is the fastest woman, with a time of 2 hr 23 min 56 sec.

3 The U.S. Department of Commerce releases figures showing that the sales of new cars and trucks in October had fallen to levels not seen since the early 1980s, with figures down almost 32% compared with sales in October 2007.

•

A $10.9 billion fiscal stimulus package is announced by the government of South Korea, while Spain declares a program that will allow unemployed homeowners to defer mortgage payments.

•

In a complicated spy and bribery case known as "Suitcasegate"—for the suitcase full of cash found in the airport in Buenos Aires in August 2007 that began the scandal—Venezuelan businessman Franklin Durán is convicted by a court in Miami of having acted as a foreign "unregistered agent" in the U.S.

4 Gen. Mario Montoya resigns as head of Colombia's army in a spreading scandal about the apparently pervasive practice of the armed forces' killing of civilians in an attempt to inflate the figures of insurgents killed by security forces.

•

China and Taiwan sign an agreement that will greatly increase transportation connections as well as trade opportunities between the two entities.

•

A Mexican government jet crashes into a business district in Mexico City; all nine people aboard, including Minister of the Interior Juan Camilo Mouriño, and at least five people on the ground are killed.

•

For the third day in a row, rioting over the high price of fuel takes place in Conakry, Guinea, as armed forces use violence against the demonstrators.

•

It is reported that beginning in January 2009, the weekly newsmagazine *U.S. News & World Report* will publish only once a month.

•

In a historic presidential election in the U.S., Democratic candidate Barack Obama wins with 52.9% of the popular vote and 365 electoral votes, against Republican candidate John McCain's 45.7% and 173 electoral votes; Obama celebrates his victory with a rally in Grant Park in Chicago. *(Photo right.)*

5 Officials in Afghanistan complain that a U.S. air strike two days earlier killed at least 40 civilians at a wedding party in Kandahar province.

6 The heads of the automobile companies General Motors, Ford, and Chrysler and the leader of the United Automobile Workers union travel to Washington, D.C., to ask for a second time for government help to prevent the collapse of their industry.

•

In northwestern Pakistan, at a gathering of tribesmen

opposed to the Taliban, a suicide bomber kills at least 17 people.

7 U.S. government figures show that 240,000 jobs were lost in October as the unemployment rate rose to 6.5%, its highest level in 14 years.

•

In Pétionville, outside Port-au-Prince, Haiti, a church-run school that is adding a third story collapses into rubble; at least 91 schoolchildren and teachers are killed.

•

A court in Malaysia orders the release of Raja Petra Kamarudin, a popular blogger who has been held without trial since September 12 under the Internal Security Act; his blog is frequently critical of the government.

8 Iraq's executive council ratifies a law setting the composition of provincial councils; the law allots only six seats on the councils to members of religious minorities, just half of what the United Nations recommended.

•

In legislative elections in New Zealand, the opposition National Party wins 45.5% of the vote, against the ruling Labour Party's 33.8%.

•

Latvia assumes control of Parex Banka AS, the country's second largest bank, to prevent its collapse.

9 At an emergency summit meeting of the Southern African Development Community in Johannesburg, participants call for a cease-fire in the eastern region of the Democratic Republic of the Congo and agree to send military advisers to assist the government.

•

At an American Heart Association convention, researchers present a large study that found that people who did not have high cholesterol or a history of heart disease but did have high levels of C-reactive protein were far less likely to suffer strokes or heart disease if treated with statins.

10 A coordinated triple bombing involving two car bombs and a suicide bomber kills at least 28 people in Baghdad.

•

The European Union member countries agree to resume negotiations on forging a partnership with Russia; the talks were stopped on September 1 after Russian troops refused to withdraw from Georgia.

•

The credit card company American Express Co. receives approval from the U.S. Federal Reserve to become a bank holding company.

•

The American electronics retailer Circuit City files for bankruptcy protection.

•

Deutsche Post, the parent of the shipping company DHL, announces plans to eliminate domestic delivery in the U.S., cutting 9,500 jobs.

•

The 11th annual Mark Twain Prize for American Humor is awarded posthumously to comic George Carlin in a ceremony at the John F. Kennedy Center for the Performing Arts in Washington, D.C.

11 Police in India announce the arrest of nine people whom they believe to be members of a radical Hindu terrorist cell that was responsible for a bomb attack in the city of Malegaon in September.

•

Former Taiwanese president Chen Shui-bian is arrested on charges of corruption and money laundering.

•

Food inspectors in Hong Kong report finding high levels of the toxic chemical melamine in fish feed from China.

•

Peter Eastgate of Denmark wins the World Series of Poker; at 22, he is the youngest winner of the card game tournament.

12 Algeria's legislature overwhelmingly agrees to overturn the constitutional provision that presidents may serve no more than two consecutive terms; Pres. Abdelaziz Bouteflika is serving his second term of office.

•

U.S. Secretary of the Treasury Henry Paulson announces that the government no longer plans to use the $700 billion bailout package to buy bad assets but will rather try to use the money to capitalize banks and to help companies make loans.

•

Islamist militants in Somalia easily take control of the port city of Marca and the following day seize the town of Elasha Biyaha, 18 km (11 mi) from Mogadishu.

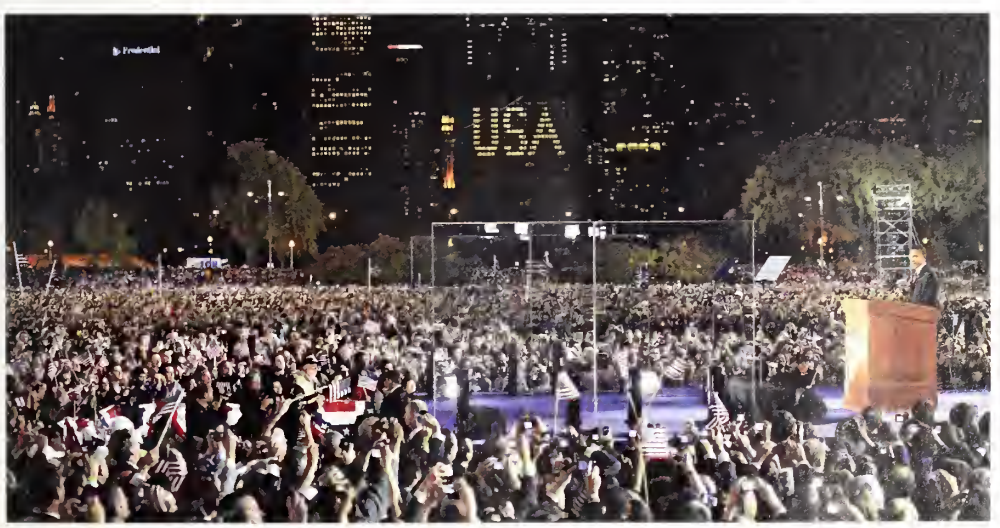
•

The 2008 Dorothy and Lillian Gish Prize is awarded to film actor and director Robert Redford.

13 The United Nations Environment Programme releases a report on noxious "brown clouds" of pollution, composed of soot, smog, and chemicals from the burning of coal, wood, and fossil fuels; they occur most frequently in Asia and cause, among other things, reduced crop yields, health problems, and altered weather patterns.

•

At the Latin Grammy Awards in Houston, Colombian rock musician Juanes wins five awards, including



Pat Benic—UPI Photo/Landov

album of the year for *La vida . . . es un ratico* and both song and record of the year for "Me enamora."

14 With a European Union report showing that the economy of the 15-country euro zone shrank 0.2% in the third quarter, the euro zone is officially in recession.

•

Hamas militants in the Gaza Strip fire a barrage of rockets into Israel; 18 people are hurt.

•

The enlarged Art Gallery of Ontario, renovated by architect Frank Gehry, reopens in Toronto.

15 Leaders of the Group of 20 countries meet in Washington, D.C., to discuss the global financial crisis.

•

California Gov. Arnold Schwarzenegger declares a state of emergency in Los Angeles county as several wildfires, driven by Santa Ana winds, burn hundreds of houses and compel the evacuation of more than 10,000 residents.

16 Iraq's cabinet approves a status-of-forces agreement negotiated with the U.S.; the pact, which must also be approved by the legislature, begins restricting the scope of U.S. combat operations starting on Jan. 1, 2009, and calls for a complete U.S. withdrawal by the end of 2011.

•

After the final auto race of the season, Jimmie Johnson is crowned winner of the NASCAR drivers' championship for the third year in a row.

•

The final episode of *TRL*, the once-important pop-music video-countdown television show on MTV, is aired in a three-hour celebration; the show debuted in 1998.

17 The Taliban responds to an offer of peace talks with Afghan Pres. Hamid Karzai by setting the condition that all foreign troops must leave Afghanistan for such negotiations to take place.

•

New figures in Japan reveal that the country's economy shrank for the second consecutive quarter, putting Japan officially in recession.

•

The banking corporation Citigroup announces that it will eliminate 52,000 jobs worldwide, reducing its workforce by 14%.

•

The Saudi-owned supertanker *Sirius Star* is seized by pirates some 450 nautical miles southeast of Mombasa, Kenya, far from the usual area menaced by pirates.

•

Jerry Yang discloses his intention to resign as CEO of the computer company Yahoo!

18 A court in Egypt rules that a contract to provide natural gas to Israel signed in 2005 should have been approved by the legislature and because it was not should not be honoured.

•

Iraq's cabinet sets provincial elections for Jan. 31, 2009, in all provinces except four in and around Kurdistan.

19 For the second straight day, fighting takes place in Managua, Nic., between supporters of the government and opposition allies who believe that municipal elections on November 9 were rigged.

•

John Key is sworn in as prime minister of New Zealand.

•

The U.S. Department of Labor reports that the consumer price index for October dropped by 1%, the biggest one-month drop ever measured, and the Dow Jones Industrial Average falls below 8,000 for the first time since 2003.

•

The heads of the three major American automobile manufacturers leave Washington, D.C., having failed to persuade Congress to grant the industry a financial bailout.

•

The U.S. Food and Drug Administration opens a branch in Beijing to screen food and drugs that will be exported to the U.S.; it is intended to be the first of several overseas offices.

•

In an act of mass reforestation, thousands of people in Macedonia undertake to plant six million new trees in a single day.

20 At the first habeus corpus hearing on the U.S. government's reasons for holding six detainees at the military detention camp in Guantánamo Bay, Cuba, Judge Richard J. Leon of the Federal District Court in Washington, D.C., rules that five of the men have been illegally held for almost seven years and should be released immediately.

•

The IMF agrees to lend Iceland $2.1 billion, and Denmark, Finland, Norway, and Sweden provide an additional $2.5 billion in loans.

•

Nature magazine publishes a report by researchers studying cosmic rays impacting the Earth; their research revealed an unexpectedly large number of high-energy electrons among the rays.

•

The price of a barrel of oil falls below $50.

21 Russia's State Duma (lower legislative house) approves a change to the constitution that would extend the presidential term of office from four years to six years.

•

The World Health Organization reports that a cholera epidemic that broke out in August in Zimbabwe and has accelerated in November has so far killed 294 people.

•

The director of Virunga National Park in the Democratic Republic of the Congo, the headquarters of which was seized by insurgent fighters on October 26, declares that the park rangers are returning from refugee camps to protect the mountain gorillas of the reserve.

•

After an emergency session, the state legislature of Nebraska revises a safe-haven law to allow only infants up to the age of 30 days to be legally abandoned at hospitals; as originally written, the law had said that all children could be safely abandoned, and since it went into effect on September 1, 35 older children, several from outside Nebraska, had been left at Nebraska hospitals.

22 A conference of nearly 600 Tibetan exiles in Dharmshala, India, concludes that the Dalai Lama's approach of seeking autonomy rather than independence from China should be continued but that negotiations should be suspended until China appears willing to consider change.

•

On a man-made island in Doha, Qatar, the stepped five-story Museum of Islamic

Art celebrates its grand opening in a ceremony attended by heads of state and other luminaries; it will open to the public on December 1.

New Zealand defeats Australia 34–20 to win the Rugby League World Cup final in an astonishing upset.

23 Rebellious soldiers invade the home of Pres. João Bernardo Vieira of Guinea-Bissau in an apparent coup attempt but are repelled by guards.

Spain defeats Argentina 3–1 to win the Davis Cup in international team tennis.

After 17 years in production, the album *Chinese Democracy* by the hard-rock band Guns N' Roses is released; the only original member of the band is Axl Rose.

The Columbus Crew wins the Major League Soccer title with a 3–1 victory over the New York Red Bulls in the MLS Cup in Carson, Calif.

The Calgary Stampeders capture the 96th Canadian Football League Grey Cup, defeating the Montreal Alouettes 22–14.

24 Antigovernment protesters in Bangkok surround the legislative building and cut off its electricity and march on the domestic airport where the government has been meeting since protests began in August.

North Korea announces plans to ban South Korean tourists, to expel South Korean workers from the joint Kaesong Industrial Park, and to end train service between the countries.

The U.K. announces a plan to cut taxes and increase spending in spite of a large budget deficit in an attempt to stimulate the troubled economy.

Three bomb attacks in Baghdad leave at least 18 people dead.

The U.S. Treasury agrees to inject $20 billion into the funds of the banking giant Citigroup and to pay for losses on bad assets; it is the second rescue plan from the government for the bank.

25 Voters in Greenland overwhelmingly approve a new law to increase the dependency's autonomy from Denmark, in particular giving it greater rights to profit from local oil resources.

Thousands of protesters invade Bangkok's international airport, shutting it down. *(Photo right.)*

The IMF approves a loan of $7.6 billion to Pakistan, with $3.1 billion to be released immediately.

Atlantic Records, a label owned by Warner Music Group, says that it has become the first label to have more than half of its music sales come from digital products, such as MP3 downloads and ringtones.

26 In a brazen strike in Mumbai (Bombay), terrorists attack several public sites, among them train stations, hospitals, and a restaurant, and then take over two luxury hotels and a Jewish community centre; at least 82 people are initially reported killed in the siege.

China announces an unusually large interest rate cut, and the European Commission proposes a €200 billion (about $258 billion) stimulus plan to be undertaken by the EU's member countries.

Sukree Sukplang—Reuters/Landov

In Alto Minho in northern Portugal, a wind farm made up of 120 wind turbines and five substations officially opens; it is the largest wind farm in Europe.

27 Iraq's legislature ratifies the Status of Forces Agreement that mandates the end of U.S. military occupation of Iraq by the end of 2011.

The Perimeter Institute for Theoretical Physics in Ontario announces that physicist Stephen Hawking will hold its first distinguished research chair.

28 Authorities in Mumbai (Bombay) succeed in regaining control of the two luxury hotels and the Jewish centre that were attacked by terrorists, ending the siege; at least 174 people are believed to have been killed.

The British government takes majority control of the Royal Bank of Scotland.

Carlos Menem, who was president of Argentina in 1989–99, is formally charged by a panel of judges in Buenos Aires with having trafficked in arms.

On the day after Thanksgiving Day, a major shopping day in the U.S., throngs of shoppers force their way into a Wal-Mart store in Valley Stream, N.Y., five minutes before its scheduled opening, trampling an employee to death.

29 Two days of ferocious ethnic and religious violence between Muslims and Christians in Jos, Nigeria, end with the imposition of a curfew; at least 400 people died in fighting.

30 In a referendum in Switzerland, voters choose to make permanent a program that gives heroin to addicts under controlled circumstances and that has been credited with reducing crime; they also reject an initiative that would have decriminalized the use of marijuana.

The space shuttle *Endeavour* lands in California after a successful mission to enlarge the capacity of the International Space Station; among those aboard are the space station's outgoing flight engineer, Gregory E. Chamitoff, who had spent six months at the station.

December

This terrible massacre would not have happened if the Palestinian people were united behind one leadership, speaking in one voice.

Prince Saud al-Faisal of Saudi Arabia, speaking at an emergency Arab League summit, December 31

1 The National Bureau of Economic Research reports that the U.S. economy has been in recession since December 2007; this is an unusually long recession, and analysts expect it to continue for some time.

•

The Dow Jones Industrial Average falls 680 points, losing 7.7% of its value, while the Standard & Poor's 500 index drops by 8.9% and the Nasdaq composite loses 9%.

•

It is reported that, because Zimbabwe has run out of chemicals to keep the water supply safe, water supplies to Harare have been cut off.

•

Two suicide bombings at a police training school in Baghdad kill at least 15 people, and in Mosul another suicide bombing leaves at least 17 people dead.

•

High winds on the Adriatic Sea cause the tide in the Venice Lagoon to rise to 156 cm (61 in), flooding Venice; it is the fourth highest tide ever recorded there and the worst flooding in the city since 1986.

Ian West—PA Photos/Landov

•

Britain's Turner Prize is presented in London to artist Mark Leckey; his work includes the multimedia exhibition *Industrial Light & Magic*, which contains images of the animated characters Felix the Cat and Homer Simpson. *(Photo above.)*

2 Thailand's Constitutional Court rules that vote buying has taken place and disbands the ruling People Power Party, banning Prime Minister Somchai Wongsawat from political activity for five years; antigovernment protesters rejoice.

•

A new coalition government led by Chancellor Werner Faymann is inaugurated in Austria.

•

Nigeria's National Agency for Food and Drug Administration and Control reports that 34 babies have died as a result of using teething powder that was contaminated with diethylene glycol, an industrial solvent.

•

The Women's National Basketball Association (WNBA) shuts down the Houston Comets, unable to afford to keep the franchise going or to find a buyer.

3 A group of conservative Episcopal bishops announce that they are forming a new province within the Anglican Communion to serve as an alternative to the Episcopal Church (U.S.); the new province is to be called the Anglican Church in North America.

•

Against the preferences of the U.S., Afghan Pres. Hamid Karzai decides to sign the Convention on Cluster Munitions, banning the use of cluster bombs; he participates along with more than 90 other countries' delegates in a signing ceremony in Oslo.

4 Unable to pass a budget and facing a no-confidence vote, Canadian Prime Minister

Stephen Harper prorogues Parliament, suspending it until Jan. 26, 2009.

•

The Bank of England cuts its key interest rate a full point, to 2%, while the European Central Bank lowers its rate by three-quarters of a point, to 2.5%, and the Swedish Riksbank drops its key rate by 1.75 points, to 2%.

•

Zimbabwe declares its cholera epidemic a national emergency and appeals for international assistance.

•

The telecommunications company AT&T declares that it plans to lay off 12,000 people over the next year; one difficulty the company is encountering is a decline in the number of subscribers to landline telephones.

5 A bomb goes off at a bazaar in Peshawar, Pak., killing at least 22 people and igniting a major fire.

•

The U.S. Bureau of Labor Statistics releases a report showing that 533,000 jobs were lost in November; this is the largest monthly total since December 1974.

•

The Mortgage Bankers Association reports that 1.35 million American homes were in foreclosure in the third quarter, a new record and an increase of 76% over the previous year.

•

Former U.S. football star O.J. Simpson, who was acquitted of two murders in 1995, is sentenced to 9–33 years in prison for armed robbery in a case in which he took sports memorabilia from collectors in a casino hotel room in 2007.

6 In the course of one of the frequent fights between police and leftist youths in Athens, the police shoot to death a 15-year-old boy; ferocious rioting begins within hours and spreads to other cities in Greece.

•

The government of Ireland orders all pork products made in the country since September 1 to be destroyed, as Irish pork has been found to be contaminated with high levels of dioxin.

7 Hundreds of militants attack a lot in Peshawar, Pak., and destroy more than 100 trucks fully loaded with supplies for U.S. and NATO armed forces in Afghanistan.

•

The annual Kennedy Center Honors are presented in Washington, D.C., to musicians George Jones, Pete Townshend, and Roger Daltrey, actor Morgan Freeman, singer and actress Barbra Streisand, and choreographer Twyla Tharp.

8 Belize and Guatemala agree to submit a border disagreement dating from 1821 to the International Court of Justice.

•

The Tribune Co., which publishes the *Chicago Tribune*, the *Los Angeles Times*, and 10 other newspapers and also owns several television stations, files for bankruptcy protection.

9 Pakistani authorities say that they have arrested some 20 members of Lashkar-e-Taiba, the Islamist militant group believed to be behind the terrorist attacks in Mumbai (Bombay) in November, including its operational leader.

•

Gov. Rod Blagojevich of Illinois is arrested on federal charges of conspiracy and bribe solicitation; prosecutors say that, among other things, he attempted to sell the Senate seat vacated by President-elect Barack Obama, to which he was empowered to appoint the successor.

•

The Baltimore Opera Company files for bankruptcy protection in Maryland.

10 During six-party talks on North Korea's nuclear program, North Korea refuses to accept a Chinese proposal on nuclear verification; negotiations break down the following day.

•

Prime Minister Yuliya Tymoshenko of Ukraine announces that she has formed a new coalition with parties allied with Pres. Viktor Yushchenko.

•

In the U.K. the Channel island of Sark holds its first-ever democratic election after 450 years of feudal government.

•

Laid-off workers at the suddenly shuttered Republic Windows and Doors plant in Chicago end a six-day sit-in to demand the severance and vacation pay to which they are legally entitled after the Bank of America and JPMorgan Chase agree to lend the company enough money to make the required payments.

11 Bernard L. Madoff, a well-connected and apparently exceptionally successful trader, is arrested by federal agents in New York City; he is believed to have been running an enormous Ponzi scheme, defrauding many individual and institutional customers of some $50 billion.

•

At a crowded and popular restaurant in Kirkuk, Iraq, where Kurdish leaders are meeting with Sunni Awakening Council members, a suicide bomb explodes, killing at least 48 people.

12 The day after the U.S. Senate refused to approve a rescue package for automobile manufacturers, officials from the White House and the Treasury Department say that the government is willing to use money from the $700 billion bailout fund to prevent the collapse of General Motors and Chrysler.

•

Pres. Rafael Correa of Ecuador declines to make a $31 million interest payment, declaring his country to be in default on foreign debt.

•

Japanese Prime Minister Taro Aso announces a stimulus package of about $250 billion to encourage business lending and job growth.

•

A bomb explodes in a bank in Woodburn, Ore., killing a police officer and a bomb disposal technician.

13 UN climate talks in Poznan, Pol., which are intended to draw a framework for a treaty to be negotiated over the coming year, conclude successfully; the previous day the European Union approved a climate and energy package.

•

Pres. Raúl Castro of Cuba arrives in Caracas on his first foreign visit since assuming power.

•

Steer roper Trevor Brazile of Texas wins his sixth all-around cowboy world championship at the 50th annual Wrangler National Finals Rodeo in Las Vegas.

14 Somalia's transitional national president, Abdullahi Yusuf Ahmed, dismisses Prime Minister Nur Hassan

Hussein, although the government's charter does not give him that power.

•

The military forces of the Democratic Republic of the Congo, Uganda, and The Sudan start an offensive against the insurgent group the Lord's Resistance Army, seeking to drive it from the Democratic Republic of the Congo back to Uganda, whence it originated.

•

At a news conference held in Baghdad by Iraqi Pres. Nuri al-Maliki and U.S. Pres. George W. Bush, a journalist from an independent television channel throws both his shoes at Bush, denouncing him for bringing war to Iraq; Bush avoids both shoes.

15 Thailand's legislature elects opposition leader Abhisit Vejjajiva as the country's new prime minister.

•

Russia devalues the ruble for the sixth time since mid-November.

•

Richard Falk, the UN Human Rights Council's special rapporteur for the Palestinian territories, is expelled by Israeli authorities, who believe that he is biased against the country.

•

A charter to transform the Association of Southeast Asian Nations (ASEAN) into an entity similar to the EU goes into force.

16 The U.S. Federal Reserve lowers its key interest rate to a range of 0–0.25% and announces new lending programs to get money to businesses and to consumers.

•

The political party that broke off from the African National Congress (ANC) in South Africa, under the name Congress of the People, chooses former defense minister Mosiuoa Lekota to be its leader.

•

Ignoring the transitional legislature, which has voted to retain Prime Minister Nur Hassan Hussein, Somalian transitional national president Abdullahi Yusuf Ahmed appoints Muhammad Mahmud Guled Gamadhere prime minister.

•

A team of astronomers using NASA's Chandra X-ray Observatory report that they have found that the reason that clusters of galaxies have not grown in the past five billion years may be that their growth is inhibited by the antigravitional force called dark energy.

•

The daily newspapers the *Detroit Free Press* and the *Detroit News* announce that after March 2009 they will discontinue home delivery of the papers on Monday, Tuesday, Wednesday, and Saturday and will print smaller editions on those days for sale at newsstands.

17 At a meeting in Oran, Alg., OPEC member countries agree to cut oil production by a record 2.2 million bbl a day.

•

For the second day in a row, a barrage of rockets flies into Israel from the Gaza Strip; the militant group Islamic Jihad claims credit.

18 In light of a ruling by the Brussels Court of Appeals that the Belgian government was out of line when it attempted to sell the collapsing financial services company Fortis, the French bank BNP Paribas suspends its takeover of the Belgian company.

•

After several days of calm, violent rioting breaks out again in Athens.

•

The UN reports that the death toll from the cholera epidemic in Zimbabwe has risen to 1,111, with 133 people dying in the past two days alone.

•

Legendary classical pianist Alfred Brendel plays his final concert in Vienna, performing Mozart's *Concerto No. 9*.

19 The Palestinian organization Hamas announces that its unwritten truce with Israel is over.

•

U.S. Pres. George W. Bush announces an emergency bailout of $17.4 billion for the troubled automobile manufacturers General Motors and Chrysler, in return for which the companies must produce a plan for profitability by March 31, 2009; the money comes from the $700 billion authorized by Congress to rescue the financial services industry.

20 Canadian Prime Minister Stephen Harper and Premier Dalton McGuinty of Ontario offer the Canadian subsidiaries of the automakers General Motors and Chrysler Can$4 billion (U.S.$3 billion) in emergency loans.

•

Horace Engdahl announces that he will step down as permanent secretary of the Swedish Academy in June 2009 after 10 years in the post; he will be succeeded by Peter Englund.

21 Ireland announces that it will give Allied Irish Banks and Bank of Ireland each €2 billion ($2.78 billion) in recapitalization funds and will take control of Anglo Irish Bank.

•

Police in Tehran shut down the office of the Center for Protecting Human Rights, headed by Shirin Ebadi, who won the Nobel Peace Prize in 2003.

22 Pres. Lansana Conté of Guinea dies.

•

The Organization for Security and Co-operation in Europe announces that its mission in Georgia will be terminated because the organization has been unable to reach a compromise with member country Russia, which insists that the separatist enclaves of South Ossetia and Abkhazia be treated as separate countries.

•

Belgian King Albert II accepts the resignation of Yves Leterme as prime minister; on December 30 Herman Van Rompuy replaces Leterme.

•

In Kingston, Tenn., at a Tennessee Valley Authority coal-burning generating plant, an earthen dike gives way, allowing 1.1 billion litres (300 million gallons) of fly ash sludge and water to spill into the Clinch River; hundreds of acres of land and waterways are buried.

23 An army officer takes over airwaves in Guinea to announce a coup, but Prime Minister Ahmed Tidiane Souaré responds that the government continues to operate.

•

The prestigious but nearly insolvent Museum of Contemporary Art in Los Angeles announces that it will be rescued by arts patron Eli Broad, who will give it $30 million and require that its management be restructured; Charles Young replaces Jeremy Strick as the museum's director.

24 The day after the resignation of Mahmoud al-Mashhadani as speaker of Iraq's legislature, his bloc and another one pull out of the Iraqi National Accord, the largest Sunni coalition.

•

The Japanese automobile manufacturers Toyota and Nissan report that their worldwide sales of vehicles in November fell 21.8% and 19.8%, respectively, from a year before.

•

The U.S. Federal Reserve Board allows GMAC, the financing arm of the car manufacturer General Motors, to become a bank holding company.

•

A man wearing a Santa Claus suit invades a Christmas Eve gathering at a house in Covina, Calif., and opens fire on those inside before setting the house ablaze; nine people are killed, and the gunman later kills himself.

25 The government of Guinea surrenders to the junior army officers who announced a coup hours after the death of the president; Moussa Dadis Camara, the coup leader, has been announced as the new president.

•

In his annual Christmas message, Pope Benedict XVI calls for peace in the world, particularly in the Middle East, and gives blessings in 64 languages, including, for the first time, Icelandic.

26 Israel opens crossings into the Gaza Strip, allowing relief supplies to reach the area; nonetheless, a dozen rockets and mortar shells are fired toward Israel.

•

The coal ash flood in Tennessee is found to be more than three times bigger than was originally estimated and is now thought to encompass 4.1 million cu m (5.4 million cu yd); it is the biggest environmental disaster of this type ever to occur in the U.S.

27 Israel launches massive air strikes against Hamas facilities in the Gaza Strip; more than 225 people in Gaza are killed.

•

A car bomb explodes among Shi'ite pilgrims on their way to visit a shrine in Baghdad; at least 24 people are killed.

28 Ghana holds a runoff presidential election; the vote is split nearly evenly between John Atta Mills and Nana Akufo-Addo.

•

In Shalbandi, Pak., where villagers had killed six Taliban militants several months previously, a Taliban suicide car bomber kills more than 30 people.

•

In Somalia the Islamist group Ahlu-Sunna Wal-Jama declares jihad against other Islamist factions fighting in the country; it has already attacked al-Shabab, the strongest of the factions.

•

The Israeli bombardment of Hamas targets in Gaza continues for a second day. (Photo above.)

•

A four-lane road tunnel under the Yangtze River opens to traffic in a trial operation in Wuhan in China's Hebei province; it is the country's first tunnel under the river.

•

Wild Oats XI is the overall winner of the 2008 Sydney Hobart Yacht Race in Australia; it is the fourth consecutive victory for the yacht, a new record.

•

With a final-game loss to the Green Bay Packers, the Detroit Lions become the first National Football League team ever to lose every game of a 16-game regular season.

Hatem Omar/AP

29 Abdullahi Yusuf Ahmed resigns as president of the transitional government of Somalia.

•

In legislative elections in Bangladesh, the Awami League, led by former prime minister Sheikh Hasina Wazed, and its allies win a large majority of seats.

•

Supporters of ousted Thai prime minister Thaksin Shinawatra take to the streets of Bangkok and prevent the legislature from holding its opening session by surrounding the parliament building.

•

Israel continues its air assault against Hamas targets in the Gaza Strip; as the death toll passes 350 and Hamas rockets kill three Israelis, Israeli Defense Minister Ehud Barak declares that Israel is engaged in an "all-out war" with Hamas.

30 Ghana's election commission says that the results of the presidential runoff are too close to call and that one district that was unable to hold voting on election day will vote on Jan. 2, 2009; the results there will determine the winner.

31 As an emergency meeting of the Arab League convenes, Israel rejects a proposed 48-hour cease-fire and continues its bombardment of Gaza.

•

At the last bell of the year at the New York Stock Exchange, the Dow Jones Industrial Average has lost 33.8% of its value from the beginning of the year, its worst annual loss since 1931; the Standard & Poor's 500-stock index has lost 39.5% of its value.

•

Executives at Russia's natural-gas monopoly Gazprom announce that they will cut off gas supplies to Ukraine on Jan. 1, 2009.

•

China and Vietnam announce that they have completed the demarcation of the 1,350-km (840-mi) border between the countries.

•

Consumers Union, the publisher of the magazine *Consumer Reports*, announces that it has bought the popular blog Consumerist.com from Gawker Media.

Disasters

Listed here are MAJOR disasters that occurred in 2008. The list includes NATURAL and NONMILITARY mechanical disasters that claimed more than 15 lives and/or resulted in significant damage to PROPERTY.

Aviation

January 23, Poland. A Spanish-built CASA transport plane carrying members of the Polish air force home from a conference on flight safety in Warsaw crashes near the town of Miroslawiec; all 20 aboard are killed.

February 21, Venezuela. A Santa Barbara Airlines ATR 42-300 turboprop crashes into a mountainside in Sierra La Culata National Park shortly after takeoff from Mérida; all 46 aboard are killed.

April 3, Suriname. A Blue Wings Airlines Antonov An-28 airliner crashes on its approach to the airport in Benzdorp; all 19 aboard lose their lives.

April 15, Democratic Republic of the Congo. An airliner taking off from the airport in Goma crashes into a busy market neighbourhood and bursts into flames; more than 40 people, most of them on the ground, are killed.

April 28, Black Sea. A Ukrainian Mi-8 helicopter plummets into the Black Sea after its tail hits an offshore drilling platform; 19 of the 20 aboard die in the crash.

May 2, The Sudan. A Beechcraft 1900 airplane crashes near Rumbek, killing at least 23 people, including the southern Sudan's minister of defense, Dominic Dim.

May 29, Panama. A helicopter carrying Chilean police officials from Colón to Panama City, where they had been attending a meeting of Latin American antiterrorism leaders, crashes on top of a building; at least 15 people, including the head of Chile's national police force and at least 4 people on the ground, are killed.

June 10, Khartoum, The Sudan. A Sudanese airliner bursts into flames after landing; at least 30 of the 214 people aboard are incinerated.

August 20, Spain. An MD-82 airliner operated by the low-cost carrier Spanair and bound for the Canary Islands goes off the end of the runway at Madrid Barajas International Airport on takeoff and bursts into flames; at least 154 of those aboard perish.

August 24, Kyrgyzstan. A passenger jet bound for Iran crashes shortly after takeoff from Manas International Airport in Bishkek, killing at least 64 passengers; 22 survive.

September 1, Democratic Republic of the Congo. A small plane crashes into a mountainside during a thunderstorm; all 17 aboard, most of them aid workers, are feared dead.

September 14, Russia. While traveling from Moscow to Perm, a Boeing 737 passenger jet operated by an Aeroflot subsidiary crashes when preparing to land; all 88 aboard die.

October 8, Nepal. A Yeti Airlines Twin Otter airplane attempting to land at tiny Lukla Airport in the Himalayan Mountains catches its wheels on a security fence and crashes; 18 of the 19 people aboard, including 12 Germans and 2 Australians, are killed.

Authorities inspect the wreckage of a Sudanese airliner that exploded after landing at the airport in Khartoum on June 10, killing at least 30 people.

Adb Raouf/AP

Fires and Explosions

January 7, Inch'on, S.Kor. Fire breaks out at a newly built cold storage facility; some 40 people are believed to have lost their lives.

January 31, Istanbul. An explosion, likely caused by fireworks ignited by an earlier fire, destroys a building; at least 22 people die in the blast.

March 15, Near Tirana, Alb. A series of strong explosions at a munitions depot kills 26 people and injures more than 300.

March 26, Xinjiang province, China. As authorities attempt to destroy illegal fireworks outside the city of Turpan, an unplanned explosion occurs; 22 people are reported killed.

April 7, Uganda. A fire in a dormitory for a girls' elementary school outside Kampala kills 19 schoolgirls and 2 adults; the cause is unclear, and reports indicate that the doors may have been locked from the outside.

AP

Nigerian firefighters attempt to extinguish flames in a village near Lagos on May 15; the fire, which began after a fuel pipeline was ruptured, killed more than 100 people.

April 26, Casablanca, Mor. A four-story mattress factory goes up in flames; at least 55 people succumb.

May 15, Nigeria. A fuel pipeline in a village near Lagos is ruptured by road construction equipment, causing much of the area to be engulfed in flames; some 100 people are killed.

August 1, Balcilar, Tur. A gas explosion causes the collapse of a three-story girls' dormitory; at least 17 students are crushed to death.

August 26, Guangxi autonomous region, China. A series of explosions in the Guangxi Guangwei Chemical Co. factory that last for seven hours leave at least 20 workers dead in Yizhou.

August 28, Limani, Cameroon. After an oil tanker overturns, residents rush to salvage the leaking gasoline, but a spark from a passing bus causes an explosion and fire; dozens of people, including passengers on the bus, are incinerated.

September 20, Guangdong province, China. In Shenzhen ignited fireworks cause a fire in a nightclub that leaves at least 43 people dead.

October 23, Rajasthan state, India. A powerful explosion demolishes an illegal fireworks factory in the village of Deeg; at least 26 people lose their lives in the blast.

December 24, Yevpatoria, Ukraine. An explosion destroys an apartment building, and at least 19 people are killed; it is thought that oxygen tanks stored in the basement may have been the cause of the blast.

Marine

February 21, Near Itacoatiara, Braz. The *Almirante Monteiro,* a ferry, collides with a barge in the Amazon River and sinks to the bottom; some 20 people are feared lost.

February 28, Near Dhaka, Bangladesh. A ferry collides with another vessel in the Buriganga River; at least 39 passengers are killed.

March 3, Bay of Bengal. A wooden trawler carrying would-be migrants to Malaysia from Bangladesh and Myanmar (Burma) is found drifting by the Sri Lankan navy; 20 of the more than 90 passengers have died of starvation and dehydration.

March 6, Albania. A boat that is used to carry customers to and from a restaurant on Lake Farka near Tirana sinks; 16 people, most of whom had attended a birthday party at the restaurant, are drowned.

March 22, Off Hong Kong's Lantao Island. A Ukrainian tugboat collides with a Chinese freighter and sinks; 18 crew members are feared lost.

April 1, Nigeria. In Kano state, a dugout canoe carrying a wedding party capsizes; at least 40 people, including the bride, drown.

April 20, Off the Bahamas. Rescue workers find the bodies of 20 drowned Haitians in the sea as well as three survivors; the vessel that had been carrying them is not found.

May 4, Brazil. The wooden ferry *Comandante Sales,* carrying a group of some 80 partygoers, capsizes and sinks in the Solimões River; at least 41 people drown.

May 12, Bangladesh. A ferry on the Ghorautra River goes down quickly in bad weather; at least 44 people die.

May 19, Democratic Republic of the Congo. An overloaded passenger boat sinks in a storm on Lake Tanganyika; dozens of people are lost.

June 7, Libya. A boat carrying would-be migrants to Italy capsizes shortly af-

Rescue workers in Brazil search the capsized ferry Comandante Sales, *which sank in the Solimões River on May 4; at least 41 passengers died in the tragedy.*

Alberto Cesar Araujo—Agencia Estado/AP

ter departing from Zuwarah; at least 40 people are drowned, with a further 100 missing.

June 21, Philippines. The MV *Princess of Stars,* a large ferry, capsizes and sinks in a typhoon off the island of Sibuyan; some 800 people perish.

July 22, Democratic Republic of the Congo. A motorboat carrying passengers from Mobayi Bongo to the Central African Republic sinks in the Ubangi River; at least 47 people drown, with a further 100 missing.

August 27, South of Malta. An overloaded boat that left Zuwarah, Libya, carrying would-be migrants from The Sudan and Eritrea takes on water and sinks; 71 people are feared lost.

August 29, Bihar state, India. An Indian army boat rescuing victims of the flooding disaster that caused the Kosi River to change course capsizes; some 20 flood victims and soldiers drown.

November 3, Yemen. The international group Doctors Without Borders reports that 60 bodies have washed up onto the shores over the past two days; the dead had put out from Boosaaso, Som., in boats, and some had been forced overboard by smugglers, while one boat capsized.

November 4, Philippines. An inter-island ferry bound for Sorsogon goes down in bad weather; at least 40 people perish.

November 8, Sea of Japan. A Russian nuclear submarine undergoing testing suffers an accident with its fire-extinguishing system that fills two compartments with Freon gas, asphyxiating at least 20 workers.

December 14, Philippines. A ferry just entering the mouth of the Cagayan River capsizes; at least 23 passengers drown, with 33 others missing.

Mining and Construction

January 11, Kazakhstan. An Arcelor-Mittal-owned coal mine suffers a gas explosion; at least 30 miners are killed.

January 16, Morocco. An apartment building under construction in Kenitra collapses, killing at least 16 workers.

January 21, Shanxi province, China. As miners attempt to reopen a shaft in a closed mine, an explosion takes place that kills at least 20 people.

August 9, Boussoukoula, Burkina Faso. At an illegal gold mine, rain causes a mine collapse and mud slide in which at least 34 workers are buried, with dozens more reported missing.

September 20, Hegang, Heilongjiang province, China. A coal mine fire leaves 19 miners dead and 12 missing.

Ramon Espinosa/AP

A survivor of a school collapse in Pétionville, Haiti, emerges from the rubble of the building on November 7; at least 91 students and teachers were crushed to death.

September 21, Henan province, China. A gas explosion in a coal mine kills at least 37 miners; 9 are missing.

November 7, Pétionville, Haiti. A third floor is being added to a church-run school when the building collapses, crushing to death at least 91 schoolchildren and teachers.

November 15, Hangzhou, Zhejiang province, China. A section of a subway tunnel that is being constructed collapses; at least 21 people are killed.

December 27, Hunan province, China. A construction crane collapses in downtown Changsha, killing at least 17 workers.

Natural

January 9, Iran. Authorities in Iran say that a disastrous blizzard in the Tehran area has resulted in the deaths of at least 28 people; Tehran declares a two-day national holiday so that people will stay home.

January 17, Afghanistan. Officials report that an unusually hard winter has left at least 200 people dead; huge numbers of livestock have also perished.

January 28, China. The government issues a severe weather warning for eastern and central China, areas that have already received record-setting amounts of snow, causing a transportation crisis and leaving at least 24 people dead.

February 3, Africa. A series of earthquakes takes place in the Great Lakes region, killing some 40 people (34 in Rwanda and 6 in the Democratic Republic of the Congo) and injuring more than 400.

February 5, U.S. A fierce outbreak of tornadoes leaves a path of destruction in several southern states, particularly in Tennessee, where at least 30 people are killed, and Arkansas, which suffers a death toll of at least 13; a further 7 people are reported killed in Kentucky and 4 in Alabama.

February 8, Indian-administered Kashmir. Heavy snowfall in the region triggers avalanches that result in the deaths of at least 20 people.

February 10, China. Officials say that power and transportation are beginning to be restored in some areas where the worst winter storms in 50 years have led to at least 60 deaths.

February 12, Northern Bolivia. Pres. Evo Morales declares a national disaster because of flooding following heavy rains that has left at least 60 people dead.

February 16, Afghanistan. Authorities say the harshest winter in 30 years has left 926 people dead so far, 462 of them in Herat province, and hundreds of thousands of cattle have also succumbed to the cold.

February 17, Madagascar. A particularly ferocious storm, Cyclone Ivan, makes landfall on the east coast, all but destroying the village of Ambodihazinina, leaving more than 80 people dead, and devastating the ripening rice crops.

February 21, Eastern Philippines. After two weeks of torrential rains, at least 20 people have died in flooding

and landslides, tens of thousands of people have been displaced, and great damage has been caused to infrastructure and to rice fields.

April 7, Democratic Republic of the Congo. Humanitarian officials report to the UN that torrential rains in the Kasaï-Occidental and Bandundu provinces have left at least 15 people dead and hundreds homeless.

May 2–3, Myanmar (Burma). Cyclone Nargis, an extraordinarily strong tropical cyclone that formed in the Bay of Bengal and quickly strengthened to a category 4 storm, makes landfall in Myanmar (Burma) and throughout the night churns up the densely populated rice-growing region of the Irrawaddy River delta, cutting a wide path of destruction augmented by a 4-m (12-ft) storm surge that obliterates coastal villages; some 138,000 people perish.

May 10, United States. A violent storm system spawns tornadoes that lay waste to portions of Oklahoma, Missouri, and Georgia, leaving more than 23 people dead, at least 15 of them in Missouri and most of those near Racine.

May 12, Sichuan province, China. A magnitude-7.9 earthquake devastates the area; at the epicentre, in Wenchuan, some 80% of the structures are flattened. At least 69,000 people lose their lives, 18,000 more are missing, and hundreds of thousands are made homeless.

May 14, Uttar Pradesh state, India. A violent storm leaves at least 128 people dead and all but destroys the important mango crop.

June 17, Southern China. The death toll from flooding caused by incessant heavy rains rises to 171; more than a million people have been evacuated.

June 20, India. Authorities say that the death toll from flooding resulting from heavy rain in eastern and northeastern areas of the country has risen past 50; thousands of villages are reportedly submerged.

June 21, Philippines. Typhoon Fengshen smashes into the Philippines; at least 498 residents perish.

July 27, Ukraine and Romania. Officials report that five days of heavy storms have left a total of 13 people dead in Ukraine and 5 others dead in Romania; some 8,000 people in the region have been evacuated.

August 10, Southern India. Officials report that monsoon rains caused the deaths of at least 59 people, not including the 40 people who are swept away when a truck in which they are riding fails to negotiate a flooded bridge in Andhra Pradesh state.

Nasser Nuri—Reuters/Landov

An observer gazes at the site where a rockslide crushed a shantytown outside Cairo on September 6, killing dozens.

August 18, Southeast Asia. It is reported that over the past week, record flooding has caused devastation throughout much of the region, with thousands of residents forced from their homes and at least 160 people dead in Vietnam alone.

August 18, Bihar state, India. As a result of heavy rains that cause the breach of a dam in Nepal, the Kosi River breaks its embankments and changes course to flow in an old channel some 120 km (75 mi) east, inundating villages in Nepal and Bangladesh as well as in India; a minimum of two million people are left homeless and at least 90 dead.

August 26, Hispaniola. Hurricane Gustav makes landfall in Haiti and the Dominican Republic; at least 84 people are killed, and thousands of homes are ruined.

August 30, Sichuan province, China. A magnitude-5.7 earthquake with its epicentre some 35 km (22 mi) southeast of Panzhihua causes houses to collapse in several villages and leads to the deaths of at least 28 people.

September 6, Egypt. The Muqattam cliffs outside Cairo begin to collapse, loosing hundreds of pounds of rocks and boulders that crush a shantytown in the shadow of the cliffs; dozens of people are killed; the cause of the collapse is unclear.

September 6, Haiti. After a week of flooding caused by Tropical Storm Hanna, at least 529 people have perished, most of them in Gonaïves.

September 8, Haiti. Hurricane Ike sweeps through Haiti, leaving at least 58 people dead.

September 13, Texas. Hurricane Ike spreads heavy flooding throughout Galveston and Orange and causes extensive damage in Houston; some 51 people in the region succumb, 20 of them in Texas.

September 22, India. The death toll from three days of heavy monsoon rains is reported to have reached 119.

September 28, Vietnam. Authorities report that Typhoon Hagupit has caused flooding that has left at least 41 people dead; the storm had earlier killed some 8 people in the Philippines and 17 people in China.

October 2, Algeria. Torrential rains cause a flash flood in a normally dry river in the Sahara; the town of Ghardaia is inundated, with some 600 homes destroyed and at least 33 people killed.

October 3, Haiti. The civil protection agency reports that the total death toll in the country from Hurricanes Gustav and Ike and Tropical Storms Hanna and Fay in August and September is 793.

October 5, Kyrgyzstan. A magnitude-6.6 earthquake strikes, killing at least 72 people and flattening the village of Nura.

October 25, Yemen. After two days of heavy rain from a tropical storm, massive flooding along the Wadi Hadramawt leaves at least 180 people dead and some 20,000 people displaced.

October 29, Balochistan province, Pakistan. A shallow magnitude-6.4 earthquake strikes, killing at least 215 people and leaving some 15,000 homeless at the beginning of winter.

November 7, Vietnam. Authorities report that unseasonal flooding in recent weeks has left at least 82 people dead and led to an outbreak of dengue fever.

November 24, Southern Brazil. Officials report that flooding and landslides have left at least 59 people dead and displaced some 43,000 others; by December 1 the death toll has risen to a minimum of 116.

Ajit Solanki/AP

Onlookers in the western Indian state of Gujarat watch as a crane lifts a bus from a canal of the Narmada River; the bus plunged into the canal on April 16, killing at least 45 people.

Railroad

April 28, Shandong province, China. Outside the city of Zibo, a high-speed passenger train traveling from Beijing to Qingdao derails and hits another passenger train en route from Yantai to Xuzhou; at least 70 people are killed.

July 16, Northern Egypt. A truck rear-ends a car waiting at a railroad crossing, pushing three vehicles onto the tracks, where they are crushed by a train; at least 40 people are killed.

August 1, Andhra Pradesh state, India. Five of the 13 cars of the Secunderabad-Kakinada Gautami Express train become engulfed in flames; at least 30 passengers expire.

September 12, Los Angeles. A commuter train crashes head-on into a freight train, killing at least 25 people, when the engineer fails to stop at a red signal; it is thought that he may have been distracted by text messaging on his cell phone.

Traffic

January 12, Port Harcourt, Nigeria. A fuel tanker truck blows a tire and overturns; the fuel spills and ignites, incinerating at least 30 people.

January 20, India. Near the town of Nashik, an overloaded bus carrying pilgrims from a visit to Hindu shrines fails to negotiate a hairpin turn and plunges over a mountainside; at least 37 of the passengers are killed.

January 26, Near Jerash, Jordan. A passenger bus traveling from Irbid to Al-ʿAqabah collides with a water truck, and both vehicles fall off the road into the valley below; at least 20 people are killed.

January 29, China. In the province of Guizhou, which is among those suffering prolonged severe winter storms, a bus goes off an ice-coated road; at least 25 passengers perish.

February 7, Egypt. Some 100 km (60 mi) south of Cairo, a bus collides with a minibus in heavy fog, and some six more vehicles crash into them; at least 29 people are killed in the pileup.

February 29, Southern Guatemala. A greatly overloaded bus crashes while taking a dangerous corner near Jutiapa; at least 45 passengers perish.

March 25, Western Honduras. A passenger bus goes off a highway in the mountains and rolls down a hillside; at least 26 of those aboard are killed.

April 16, Gujarat state, India. In Vadodara a state bus carrying schoolchildren goes off a bridge and falls some 18 m (60 ft) into a canal of the Narmada River; at least 44 children and 3 adults perish.

April 23, Rajasthan state, India. Northwest of Jodhpur, late at night, a truck and a crowded van collide; at least 24 of the van passengers lose their lives.

Workers in China's Shandong province repair the damaged railway at the site of a passenger train collision that claimed the lives of at least 70 persons on April 28.

Xinhua/Landov

May 27, KwaZulu-Natal province, South Africa. A bus goes over a cliff and falls some 80 m (260 ft), landing upside-down in the river below; at least 30 people die.

May 29, Southern India. A truck carrying at least 70 people to a wedding celebration falls off a bridge after the driver swerves to avoid electrical wires on the road; at least 39 of the passengers perish.

July 8, Southern Bolivia. A truck carrying some 60 people as well as goods goes off a mountain road, plunging 200 m (650 ft) into a ravine; at least 47 people, among them 12 children, die.

August 2, Bihar state, India. A truck loaded with food grain sacks and people goes off a road into a nearly dry culvert below; at least 40 people die, most of them crushed to death.

August 8, Near Sherman, Texas. An illegally operated chartered bus carrying Vietnamese Roman Catholics to a religious gathering in Carthage, Mo., goes over a guardrail in a crash, killing 17 passengers.

August 15, Dominican Republic. On the highway between La Romana and Higüey, a passenger bus attempting to go around a parked vehicle hits another passenger bus head-on; at least 20 people are killed.

September 8, Eastern Turkey. A bus carrying Iranian tourists in Agri province goes off the road and crashes; at least 16 passengers die.

October 10, Eastern Thailand. On an overnight trip to the coast from a technology university in Khon Kaen province, a bus carrying students crashes into a hillside; at least 22 people are killed, and 50 are badly hurt.

November 4, Near Hannover, Ger. A tour bus carrying elderly passengers home after a day trip to a farm catches fire, possibly because a passenger smoked a cigarette in the bus's restroom; at least 20 people die.

November 15, Near Boromo, Burkina Faso. A collision occurs between a passenger bus carrying workers to Côte d'Ivoire and a commercial truck loaded with sugar, and both vehicles burst into flames, trapping the bus passengers; at least 66 of them perish.

December 16, Israel. A bus transporting Russian tour guides to the resort town of Elat from a nearby airport goes off the road and rolls down a mountain slope; at least 24 of the passengers are killed.

December 27, Tangail, Bangladesh. A truck leaves the road in thick fog and goes into a ditch; at least 24 of the passengers, most of whom were heading home from Dhaka to vote in legislative elections, die.

Miscellaneous

March 29, Luanda, Angola. Dozens of people are crushed to death when a seven-story building housing the headquarters of the police criminal investigation department collapses; the structure had been deteriorating and recently had a large electrical generator installed on its roof.

April 9, Southern Thailand. In a truck carrying illegal Myanmarese (Burmese) migrant workers, 54 of the 121 crammed inside suffocate.

May 20, India. It is reported that at least 110 people in the Bengaluru (Bangalore) area have died in the past few days after drinking illicit alcohol; by May 22 the death toll has risen to 180.

August 3, Himachal Pradesh state, India. Near the Naina Devi temple, fears of a landslide lead to a stampede in which more than 150 pilgrims, most of them women and children, lose their lives.

September 15, Pasuruan, Indon. A Ramadan tradition in which wealthy families give money to the poor results in tragedy when pushing in a crowd awaiting such handouts causes at least 23 people to be crushed to death.

September 30, Jodhpur, Rajasthan state, India. On the first day of a nine-day festival devoted to the Hindu goddess Durga, a stampede possibly caused by pilgrims slipping on coconut milk offerings causes at least 224 people to be trampled to death.

October 1, Tabora, Tanz. At an event in a disco hall to celebrate 'Id al-Fitr, overcrowding among the young people attending engenders panic, and 19 children are crushed in the ensuing stampede.

Bodies of victims killed in a stampede on August 3 near the Naina Devi temple in the Indian state of Himachal Pradesh lie along a narrow thoroughfare; more than 150 religious pilgrims were killed in the stampede.

Rahul Sharma/AP

People of 2008

Australian Aborigines gather on the lawn of the Parliament House in Canberra on February 11 as Australian Prime Minister Kevin Rudd prepares to deliver an apology to the country's indigenous peoples for wrongs committed by past governments.

Mark Graham/AP

Nobel Prizes

Nobels in 2008 were AWARDED to 11 men and one woman from five countries for work in settling INTERNATIONAL DISPUTES, understanding INTERNATIONAL TRADE, creating SEDUCTIVE fiction and DISTINCTIVE nonfiction, analyzing and developing GREEN FLUORESCENT PROTEIN, describing BROKEN SYMMETRY in the interactions of FUNDAMENTAL PARTICLES, and discovering VIRUSES that cause CERVICAL CANCER and AIDS.

PRIZE FOR PEACE

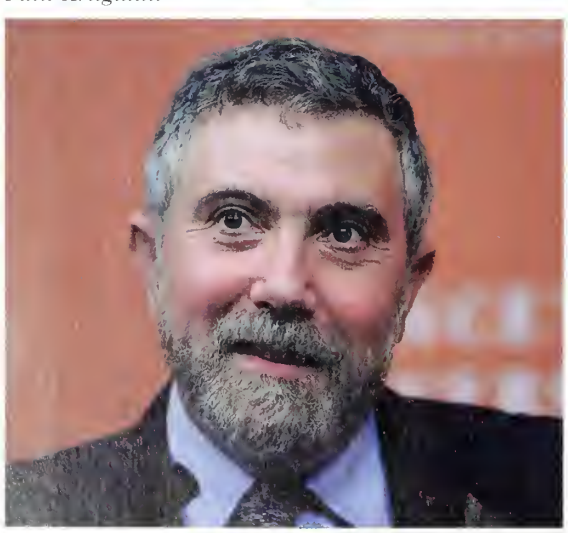
The 2008 Nobel Prize for Peace was awarded to Martti Ahtisaari, former president (1994–2000) of Finland, for his work over more than 30 years in settling international disputes, many involving ethnic, religious, and racial differences. The Norwegian Nobel Committee said that his efforts had "contributed to a more peaceful world and to 'fraternity between nations' in Alfred Nobel's spirit." The committee added that "he has shown what role mediation of various kinds can play in the resolution of international conflicts."

Ahtisaari was born on June 23, 1937, in Viipuri, Fin. (now Vyborg, Russia). When the city of his birth was ceded to the Soviet Union in 1940 after the Russo-Finnish War, the boy and his family remained in Finland, moving first to Kuopio and then to Oulu. He studied at the University of Oulu, receiving a diploma in 1959, and then worked as a primary-school teacher. Beginning in the early 1960s he trained teachers in Pakistan and then in Finland. After joining (1965) the Finnish Ministry for Foreign Affairs, Ahtisaari held a number of positions. He served (1973–76) as ambassador to Tanzania and was (1975–76) an envoy to Zambia, Somalia, and Mozambique. He functioned (1977–81) as the United Nations commissioner for Namibia and twice (1978 and 1989–90) served as a UN special representative to that country. In his earliest major success in diplomacy, he helped guide Namibia's path to independence in 1990 after it had endured years of conflict with South Africa.

As the candidate of the Social Democratic Party, Ahtisaari was elected president of Finland in 1994. Upon leaving the presidency in 2000, he formed the Crisis Management Initiative (CMI), serving as its chairman. Under the auspices of the CMI, the UN, and other organizations, he undertook a number of peace missions around the world, including, in 2000, an appointment as a weapons inspector in Northern Ireland in support of the decommissioning of the Irish Republican Army. In 2005 Ahtisaari helped settle the conflict in Aceh province in Indonesia, with Indonesian government forces agreeing to withdraw after 30 years of fighting in return for the province's dropping its demands for independence. For the next two years he served as a UN special envoy in Kosovo, attempting to mediate between Kosovo's push for independence and the Serbian government, and in 2008 he undertook mediation between Sunni and Shi'ite Muslims in Iraq. Over the years he also worked in other parts of the world, including Central Asia and the Horn of Africa.

Ahtisaari was known for his charm and sense of humour but was also recognized as a man who could be blunt and tough in negotiations between adversaries. He received many honorary degrees and a number of international awards, including the J. William Fulbright Prize for International Understanding in 2000 and the UNESCO Félix Houphouët-Boigny Peace Prize in 2008. (ROBERT RAUCH)

Paul Krugman



Jeff Zelevansky/Getty Images

PRIZE FOR ECONOMICS

The Nobel Memorial Prize in Economic Sciences in 2008 was awarded to American Paul Robin Krugman for his development of a new theory of international trade and of economic geography. Through the integration of economies of scale into general equilibrium models, Krugman furthered understanding of both the determinants of trade and the location of production in an increasingly globalized post-World War II economy. His research findings explained how the consumer's desire for variety and choice enabled countries to achieve the economies of scale required to trade profitably in similar products. This led to later research on the "new economic geography," which explained the location of jobs and businesses and why there was acceleration in the pace of urbanization and a population decline in rural areas.

Through his new theory of trade, Krugman demonstrated why rich countries trade with each other in similar goods (such as the trading of cars between Japan and Germany) when there is no apparent comparative advantage. His analysis was based on the assumption of economies of scale, where mass production leads to a fall in unit cost, but more crucially on the principle that consumers want diversity in the products available to them.

Traditional trade theories, from the early 1800s (notably British economist David Ricardo's laissez-faire Iron Law of Wages) to the 1920s and '30s (in particular the Heckscher-Ohlin theory established by Swedish economists Eli Filip Heckscher and Bertil Ohlin), suggested that trading partnerships were based on national differences, as countries specialized in producing what they did best and imported the rest. In general, these theories provided an adequate explanation of most international trade until the 1950s, when like-for-like trade began to increase and new international trade patterns emerged. Krugman's trade model, which he detailed in an article in the *Journal of International Economics* in 1979, showed that when trade barriers are removed, larger markets are created. While the increased global competition may reduce the number of foreign firms, the ensuing trade benefits not from specialization but rather from economies of scale, competition, and the wider choice and variety of goods available to consumers (as in the global automobile industry).

In his 1991 paper "Increasing Returns and Economic Geography," Krugman developed a comprehensive theory of location of labour and firms in which he examined the proximity factor that drives urbanization. Large firms might cluster near a large market in order to exploit economies of scale and to minimize transport costs to their customers. Previous theories had assumed that firms clustered geographically in order to benefit from any spin-off in terms of expertise that they might glean from each other.

Krugman was born in New York City on Feb. 28, 1953, and was educated at Yale University (B.A., 1974) and the Massachusetts Institute of Technology (Ph.D., 1977), where he then was a member of the economics faculty from 1979 to 2000. He left MIT for a year (1982–83) to work as the chief staffer for international economics on Pres. Ronald Reagan's Council of Economic Advisers and again for a hiatus (1994–96) to teach at Stanford University. From 1979 he also worked as a research associate at the National Bureau of Economic Research. In 2000 he became a professor of economics and international affairs at the Woodrow Wilson School of Public and International Affairs at Princeton University.

Krugman was a prolific and sometimes controversial writer, with more than 20 books and 200 papers in professional journals to his credit. His notable books include scholarly works such as *The Risks Facing the World Economy* (1991), *Currencies and Crises* (1992), and *World Savings Shortage* (1994); economics textbooks such as *Microeconomics* (2004) and *Macroeconomics* (2005); and nonacademic best sellers such as *The Return of Depression Economics* (1999), *The Great Unravelling* (2003), and *The Conscience of a Liberal* (2007). He gained a broader readership through his regular magazine columns in *Slate* (1996–99) and *Fortune* (1997–99) and especially through his politically partisan and frequently humorous Op-Ed column in the *New York Times* (from 2000). Prior to the Nobel, Krugman received (1991) the John Bates Clark medal, given every two years to an economist under age 40 who was judged to have made the most significant contribution to economic knowledge. (JANET H. CLARK)

PRIZE FOR LITERATURE

The 2008 Nobel Prize for Literature was awarded to French writer J.-M.G. Le Clézio, one of the preeminent literary figures of his generation. He was known for his intricate, seductive fiction and distinctive works of nonfiction that mediated between the past and the present, juxtaposing the modern world with a primordial landscape of ambiguity and mystery. Le Clézio—the 14th French-language writer to be honoured as the laureate in literature and the first since Claude Simon received the prize in 1985—was cited by the Swedish Academy as an "author of new departures, poetic adventure and sensual ecstasy, explorer of a humanity beyond and below the reigning civilization." Le Clézio acknowledged an expansive range of literary influences, including Homer, Milton, Boccaccio, Rabelais, Juan Rulfo, Robert Louis Stevenson, and James Joyce, and was prolific in a variety of genres, often merging narrative forms and techniques. Accomplished as a novelist, children's author, and essayist, Le Clézio forged a literature of universal themes, from life and death, rebirth, and redemption to immigration and displacement, alienation, and the loss of innocence.

Jean-Marie Gustave Le Clézio was born on April 13, 1940, in Nice, France; he was descended from a Breton family that had immigrated to the formerly French and subsequently British colony of Mauritius. Bilingual in French and English, he spent part of his childhood in Nigeria before completing his secondary education in France. After studying for a time in England, he returned to France, where he earned an undergraduate degree (1963) from the Institut d'Études Littéraires (now the University of Nice) and a master's degree (1964) from the University of Aix-en-Provence. In 1983 he completed a doctorate of letters at the University of Perpignan, France. Le Clézio traveled extensively and immersed himself in the study of other cultures, particularly the indigenous peoples of Mexico and Central America, which he wrote about in *Trois villes saintes* (1980), *Le Rêve mexicain ou la pensée interrompue* (1988; *The Mexican Dream: Or, The Interrupted Thought of Amerindian Civilizations*, 1993), and *La Fête chantée* (1997).

Olivier Laban-Mattei—AFP/Getty Images

Jean-Marie Gustave Le Clézio

Although he emerged within the French literary milieu dominated by writers of the *nouveau roman* (new novel) such as Simon, Alain Robbe-Grillet, and Marguerite Duras, Le Clézio developed independently from his contemporaries and established himself early in his career as an author of singular achievement and temperament. He made his debut as a novelist with the publication in 1963 of *Le Procès-verbal* (*The Interrogation*, 1964) and gained widespread acclaim as a young author when the book—which had been sent as an unsolicited manuscript to the prestigious Gallimard publishing house—was awarded the Prix Renaudot. Other publications that further enhanced Le Clézio's reputation in France and abroad included the short-story collection *La Fièvre* (1965; *Fever*, 1966) and the novels *Le Déluge* (1966; *The Flood*, 1967), *Terra*

amata (1967; *Terra Amata*, 1969), *La Guerre* (1970; *War*, 1973), and *Les Géants* (1973; *The Giants*, 1975). Le Clézio was drawn to the marginalized of society and offered a compassionate and evocative portrayal of the disenfranchised and displaced in search of meaning, identity, and reintegration. For example, Lalla, the protagonist of his acclaimed novel *Désert* (1980), is a North African Berber separated from her past and her cultural inheritance when she was forced to flee her desert homeland; she returns pregnant and resolved both to perpetuate her tribal inheritance and to embrace her legacy of memory and transcendence.

Beginning with the publication in 1991 of *Onitsha* (*Onitsha*, 1997), Le Clézio turned increasingly to semiautobiographical works such as the novels *La Quarantaine* (1995) and *Révolutions* (2003). In *L'Africain* (2004), Le Clézio recounted the childhood experience of being reunited with his father in the aftermath of World War II. Later works include *Ballaciner* (2007), a personal tribute to the art of filmmaking and its relationship to literature, and the novel *Ritournelle de la faim* (2008). As a writer Le Clézio was primarily a storyteller and craftsman for whom the act of writing was one of the "greatest pleasures in life." He said, "I feel that the writer is just a kind of witness of what is happening. A writer is not a prophet, is not a philosopher, he's just someone who is witness to what is around him." (STEVEN R. SERAFIN)

PRIZE FOR CHEMISTRY

The 2008 Nobel Prize for Chemistry was awarded to a Japanese and two American chemists for the discovery and development of a protein called the green fluorescent protein (GFP). Sharing the prize equally were Osamu Shimomura of the Marine Biological Laboratory, Woods Hole, Mass., Martin Chalfie of Columbia University, New York City, and Roger Y. Tsien of the University of California, San Diego. Their work with GFP opened a vast set of pathways and opportunities for studying biological processes at the molecular level. The protein provided a visual signal that scientists learned to use in many ingenious ways to probe protein activity, such as when and where proteins are produced and how different proteins or parts of proteins move and approach each other within a cell.

GFP, a naturally occurring substance in the jellyfish *Aequorea victoria*, consists of 238 amino acids. Three were of particular interest: serine at position 65, tyrosine at the next position, 66, and glycine at position 67. Together with oxygen, these amino acids undergo a chemical reaction in which they lose their initial identities and form a light-sensitive unit called a chromophore. The chromophore is fluorescent—that is, it absorbs light of one wavelength (blue or ultraviolet) and emits light of a different wavelength (green). One of the most important characteristics of GFP is its ability to be joined to other proteins without affecting their function. In this way GFP could be used as a "signal flag" on virtually any protein almost anywhere it might be found. Moreover, investigators determined how to modify GFP and make similar substances fluoresce in colours that ranged through the spectrum from blue to deep red.

Joe Toreno—Reuters/Landov

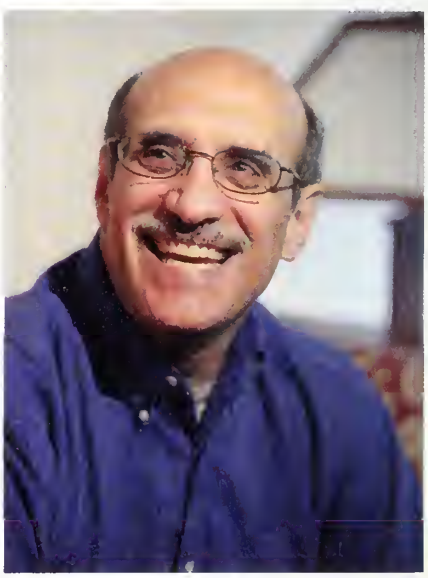
Roger Tsien

A simple, powerful way of using GFP and GFP-like markers was to use them in pairs in which the specific wavelengths of light emitted by one of the markers would excite the other to fluoresce, a process called fluorescence resonance energy transfer (FRET). The two markers had to be relatively near each other for the energy transfer to occur, which could then be verified by detecting the coloured light emitted by the second marker. This method and other, more complex variants could be used, for example, to study how specific proteins moved within a cell. A sophisticated variant for studying the interaction between proteins had one part of the GFP attached to one of the proteins of interest and the rest of the GFP attached to the other. When the two proteins came together, they formed a fully functioning GFP that then showed itself by fluorescing.

The green fluorescence of *Aequorea victoria* was discovered in 1955. In the 1960s Shimomura showed that the fluorescence is produced by the protein that was later named GFP. American biochemist Douglas Prasher analyzed the chromophore in GFP in the 1980s and subsequently found and cloned the gene responsible for making GFP. In 1993 Chalfie showed that the gene that instructs the cell to make GFP could be embedded in the nucleic acids of other organisms, first in the bacterium *Escherichia coli* and then in the transparent nematode *Caenorhabditis elegans*, so that they would make their own GFP. This discovery opened the possibility of using GFP in virtually any organism. Tsien then showed, beginning in 1994, that oxygen is required for GFP fluorescence and that point mutations in the gene could shift the wavelength and intensity of the fluorescence. Tsien also helped to determine the structure of GFP and described how to use GFP and its variants to study the role and behaviour of calcium ions in living systems.

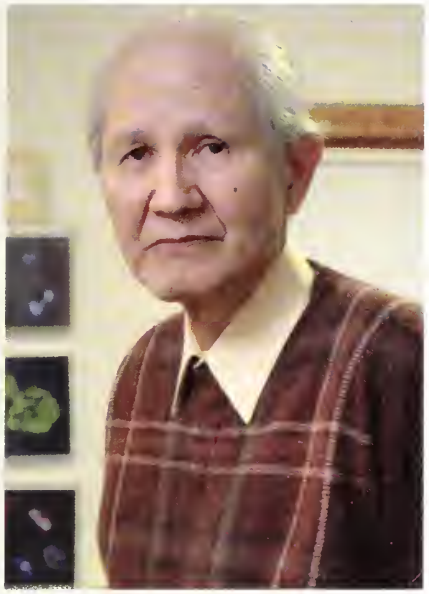
Osamu Shimomura was born on Aug. 27, 1928, in Fukuchiyama, Japan. In 1960, after receiving a Ph.D. in organic chemistry from Nagoya (Japan) University, he became a researcher at Princeton University. He moved to the Marine Biological Laboratory in 1982. Shimomura also worked at Boston University Medical School. Martin Chalfie was born on Jan. 15, 1947, in

Martin Chalfie



Diane Bondareff/AP

Josh Reynolds/AP



Osamu Shimomura

Chicago. In 1977 he received a Ph.D. in neurobiology from Harvard University. He joined the faculty at Columbia University, where he became a professor in 1982. Chalfie was a member (from 2004) of the U.S. National Academy of Sciences. Roger Tsien was born on Feb. 1, 1952, in New York City. In 1977 he received a Ph.D. in physiology from the University of Cambridge. He moved to the University of California, Berkeley, in 1981, and in 1989 he became a professor at the University of California, San Diego, and a Howard Hughes Medical Institute investigator. Tsien also was a member (from 1998) of the U.S. National Academy of Sciences.

(R. STEPHEN BERRY)

PRIZE FOR PHYSICS

The 2008 Nobel Prize for Physics was awarded to a Japanese-born American physicist, Yoichiro Nambu, and two Japanese physicists, Makoto Kobayashi and Toshihide Maskawa, for their theoretical work in particle physics that described broken symmetry in particle interactions. Nambu, of the Enrico Fermi Institute at the University of Chicago, was awarded one-half of the $1.4 million prize for his discovery and description of a mechanism called spontaneous broken symmetry. Kobayashi, of the High Energy Accelerator Research Organization (KEK) in Japan, and Maskawa, of the Yukawa Institute for Theoretical Physics at Kyoto University, each received one-fourth of the prize for their work on symmetry violation that predicted the existence of a previously unknown family of quarks (a group of fundamental subatomic particles).

The apparent symmetry of the basic building blocks of the universe was a subject of intense interest to fundamental particle physicists. As the construction of large particle accelerators in the mid-20th century made possible the study of a greater variety of fundamental particles, it appeared that each particle was paired with an antiparticle. The negatively charged electron, for example, had an antiparticle (the positron) of the same mass but opposite charge. In terms of its properties, each antiparticle looked like the mirror image of its corresponding particle, and when particles and their antiparticles met, mutual annihilation occurred. If particles and antiparticles were symmetrical, however, physicists were presented with the problem of accounting for the universe's huge preponderance of particles over antiparticles, which was an indication of a lack of symmetry in the universe as a whole. Also, as fundamental particles and their interactions were observed in physics experiments, it appeared for a time that all such interactions were symmetrical. For example, interactions of particles and the mirror image of the interactions appeared to be the same, and this property, named mirror symmetry, gave rise to a conservation law called parity conservation. Interactions of electrically charged particles also appeared to be symmetrical, and the combination of symmetry in the charge and parity between particle and antiparticle was called CP symmetry. Investigations into the decay of certain particles revealed, however, that there were exceptions to mirror symmetry (1956) and to CP symmetry (1964).

From theoretical research on superconductivity that he conducted in the late 1950s, Nambu produced a theory—the theory of spontaneous symmetry breaking—that demonstrated how asymmetries could appear in elementary particle physics. The theory was therefore important in the development of the so-called standard model used to describe the fundamental particles that make up matter.

By 1970 it had been suggested that massive particles such as protons and neutrons could be built up from fractionally charged constituents named quarks and that quarks came in three flavours, or types, which were referred to as up, down, and strange. Strong evidence for a fourth flavour—charm—was put forward in 1970, which implied the existence of two families of quarks. In 1972 Kobayashi and Maskawa expanded upon the work of the Italian physicist Nicola Cabibbo and investigated the theory of how quarks interact (the so-called strong interaction) in terms of the CP violation. This led them to postulate that there must be three families of quarks. This extension of the standard model was eventually verified experimentally with the discoveries of the bottom quark (1977) and the top quark (1995).

Yoichiro Nambu was born on Jan. 18, 1921, in Tokyo. He received a B.S. (1942) and a doctorate in science (1952) from the University of Tokyo. After serving as an associate professor at Osaka City University (1949–52), he spent two years at the Institute for Advanced Study in Princeton, N.J., before moving to the University of Chicago in 1954. He served on the faculty at the university until retiring as professor emeritus in 1991. Nambu became an American citizen in 1970. He received many awards, including the U.S. National Medal of Science (1982), the Dirac Medal (1986), and the Wolf Prize in physics (1994/1995). He was a member of both the U.S. National Academy of Sciences and the American Academy of Arts and Sciences and an honorary member of the Japan Academy.

Makoto Kobayashi was born on April 7, 1944, in Nagoya, Japan. He received a Ph.D. in 1972 from Nagoya University, and in 1979 he became an assistant professor at KEK in Tsukuba Science City. In 1989 he was appointed professor and designated as the head of Physics Division II. He became the director of the Institute of Particle and Nuclear Studies at KEK in 2003, and he was named professor emeritus in 2006. Among the awards he received were the J.J. Sakurai Prize (1985) for theoretical particle physics (shared with Maskawa), the Japan Academy Prize (1985), and the Japanese Person of Cultural Merit Award (2001).

Toshihide Maskawa (also spelled Masukawa) was born Feb. 7, 1940, in Nagoya, Japan. In 1967 he received a Ph.D. from Nagoya University. He taught at the University of Tokyo's Institute of Nuclear Study and at Kyoto Sangyo University. Maskawa was director of the Yukawa Institute for Theoretical Physics at Kyoto University from 1997 to 2003, when he became professor emeritus. In 1985 Maskawa and Kobayashi were the first recipients awarded the J.J. Sakurai Prize.

(DAVID G.C. JONES)

Reuters/Landov

Harald zur Hausen; Luc Montagnier; Françoise Barré-Sinonssi

PRIZE FOR PHYSIOLOGY OR MEDICINE

The 2008 Nobel Prize for Physiology or Medicine was awarded to three scientists—one German and two French—for their discoveries of viruses that seriously harm human health. Harald zur Hausen, professor emeritus and former chairman and science director at the German Cancer Research Centre, Heidelberg, was awarded one-half of the prize for the discovery of human papillomaviruses (HPVs) that cause cervical cancer. Luc Montagnier, director at the World Foundation for AIDS Research and Prevention, Paris, and Françoise Barré-Sinoussi, professor and director of the retroviral infections unit at the Pasteur Institute in Paris, shared the other half of the award for their discovery of human immunodeficiency virus (HIV), the cause of the immune-system disorder AIDS.

In the early 1970s zur Hausen argued that HPV caused cervical cancer, the second most common cancer in women, but few scientists agreed with him. What was widely known at the time was that there were many strains of HPV, and although some strains targeted the genitals, they did not appear to induce anything beyond benign warts. Assuming that tumour cells would contain viral DNA, zur Hausen spent more than 10 years in efforts to isolate and identify an HPV agent for cervical cancer. His findings demonstrated that HPV comprised a diverse family of many harmless strains and at least two oncogenic, or cancer-causing, strains—HPV 16 and HPV 18. Zur Hausen discovered HPV 16 in 1983; the following year he cloned both strains from cervical cancer patients. Subsequent studies documented the two strains in more than 70% of all cervical cancer cases worldwide. His discoveries enabled researchers to develop successful vaccines that afforded more than 95% protection from infection by HPV 16 and HPV 18.

In the early 1980s Montagnier, heading a team that included Barré-Sinoussi, began looking for a viral cause for AIDS. The investigation of viral particles from infected lymph nodes of AIDS patients revealed that the infectious agent was a retrovirus that replicated in immune-system cells called helper T lymphocytes. Further study helped characterize it as a lentivirus, or "slow" virus—the first known to infect humans. The gradual but massive replication of the virus after infection extensively destroyed lymphocytes and thereby severely impaired an individual's immune system. The findings of Montagnier and Barré-Sinoussi were a crucial factor that sped development of new antiviral drugs and diagnostics.

During the same period, American scientist Robert Gallo also studied the virus that became known as HIV, and he published his findings a short time after Montagnier's team. Over the ensuing years there was considerable controversy over who first isolated the virus. Montagnier's team, however, was eventually acknowledged as having discovered the virus.

Zur Hausen was born on March 11, 1936, in Gelsenkirchen, Ger. After earning an M.D. from the University of Düsseldorf in 1960, he conducted postdoctoral research at the university's Institute of Microbiology (1962–65) and at the Children's Hospital of Philadelphia (1966–69). Returning to Germany from the U.S., zur Hausen continued his research on viruses at several German universities. He joined the German Cancer Research Center in 1983 as scientific director and chairman, and he remained there until retiring as professor emeritus in 2003.

Montagnier was born on Aug. 18, 1932, in Chabris, France. He received a degree in science (1953) from the University of Poitiers, France, and an M.D. (1960) from the University of Paris. He worked on RNA viruses at laboratories in France and England before he joined (1972) the Pasteur Institute in Paris. After establishing (1993) the World Foundation for AIDS Research and Prevention, Montagnier accepted an endowed chair at Queens College, New York City, where he headed (1998–2001) the Center for Molecular and Cellular Biology. He returned to the Pasteur Institute in 2001 as professor emeritus.

Barré-Sinoussi was born on July 30, 1947, in Paris. After receiving a Ph.D. (1975) from the Pasteur Institute in Garches, France, she undertook postdoctoral research on retroviruses at the National Cancer Institute, Bethesda, Md. Barré-Sinoussi returned to Europe in 1975 to join the Pasteur Institute. In 1996 she became head of the institute's Retrovirus Biology Unit, which was later renamed the Regulation of Retroviral Infections Unit.

(LINDA BERRIS)

Biographies

The SUBJECTS of these biographies are the people who in the editors' opinions captured the IMAGINATION of the world in 2008—the most INTERESTING and/or IMPORTANT PERSONALITIES of the year.

Aso, Taro
(b. Sept. 20, 1940, Iizuka, Fukuoka, Japan) On Sept. 22, 2008, after three previous attempts, former Japanese foreign minister Taro Aso claimed the leadership of the country's ruling Liberal Democratic Party (LDP), winning 351 votes (more than two-thirds of the 527 ballots cast), while his four challengers divided the remaining 176 votes. Two days later Aso was sworn in as Japan's first Roman Catholic prime minister, succeeding Yasuo Fukuda, who had unexpectedly resigned as LDP leader (and, thus, as prime minister) amid political infighting and a troubled economy. It was the LDP's third change of leadership in two years and the fourth bid for the position by Aso, who lost to Junichiro Koizumi in 2001, Shinzo Abe in 2006, and Fukuda in 2007.

It seemed clear to outside observers that the election of the brash Aso—a charismatic speaker with a cheerful demeanour and a tendency to verbal gaffes—was an attempt by the LDP to regain voter confidence after having lost the 2007 elections to the upper house of the Diet (parliament). He was expected to call early elections to the lower house, but it was still uncertain whether he could bring the LDP the support it sought at the ballot box.

Japanese Prime Minister Taro Aso

Yoshikazu Tsuno/AP

Aso, the son of a business tycoon, was closely linked to both political and imperial dynasties and seemed destined for a political career. He was a grandson of two-time prime minister Shigeru Yoshida (1946–47, 1948–54); his father-in-law was former prime minister Zenko Suzuki (1980–82); and one of his sisters was married to a cousin of Emperor Akihito. Aso graduated (1963) from Gakushuin University's faculty of politics and economics and later studied at Stanford University and the University of London. He joined Aso Industry in 1967 and within six years had advanced to president and CEO of the Aso Cement Co., Ltd. Aso left the family business in 1979 when he was first elected to the Diet. He rose through the ranks of the LDP, eventually becoming secretary-general, and held a variety of cabinet posts, including minister of state for the economic planning agency (1996–97), minister of state for economic and fiscal policy (2001), and minister for internal affairs and communications (2003–05).

In October 2005 Prime Minister Koizumi appointed Aso to head the Foreign Ministry, a role he briefly retained under Prime Minister Abe until he was replaced in August 2007. As foreign minister, Aso built a reputation as a strong conservative and hawkish nationalist who endorsed the U.S.-Japan alliance and took a hard line with North Korea and China. He was known to support labour reforms, regional decentralization that would give greater autonomy to Japan's prefectures, and increased taxes to fund the national pension scheme.

Aso also nurtured a populist image, especially among young Japanese. A champion marksman, he represented Japan in skeet shooting at the 1976 Montreal Olympic Games. Of special significance, however, was his love for manga, and he worked to spread appreciation for the graphic literary form. In 2007 Aso organized the International Manga Awards, a "Nobel Prize for manga," to be awarded annually to young foreign manga artists based outside Japan.

(EDITOR)

Bale, Christian
(b. Jan. 30, 1974, Haverfordwest, Pembrokeshire, Wales) Welsh film actor Christian Bale had a mixed year in 2008. He drew international acclaim for his role as Batman/Bruce Wayne in *The Dark Knight*, which, upon its July release, immediately set box-office records amid the intense publicity surrounding the sudden, unexpected death in January of his costar, Heath Ledger. Bale also began filming the fourth futuristic *Terminator* movie, in which he played rebel leader John Connor as an adult. The film, due to be released in 2009, was the first of three projected sequels to Arnold Schwarzenegger's *Terminator* trilogy (1984, 1991, 2003). Playing a fantasy action hero might seem like a big leap for an actor who first gained notice for his riveting turn as serial killer Patrick Bateman in *American Psycho* (2000), but Bale had never taken the obvious, or easy, route in his career.

Christian Charles Philip Bale made his big-screen debut, with little formal training as an actor, at age 13 in *Empire of the Sun* (1987). He received an overwhelming amount of attention for his role, and thereafter he became intensely private, striving to keep his personal life out of the media limelight. Bale appeared in such popular youth-oriented films as *Newsies* (1992), *Swing Kids* (1993), and *Little Women* (1994), for which actress Winona Ryder hand-picked him to play Laurie. Bale also provided the voice of Thomas for the Dis-

Matt Sayles/AP

Welsh-born actor Christian Bale

ney animated movie *Pocahontas* (1995) and played Jesus of Nazareth in the made-for-television movie *Mary, Mother of Jesus* (1999). Then came *American Psycho*, and his career took a new path.

Bale was especially noted for his ability to disappear into a role, his talent for imitating accents, and his penchant for taking on complex, psychologically tormented characters. He lost some 29 kg (63 lb) for the grim psychological thriller *El maquinista* (2004; *The Machinist*), in which he played an insomniac factory worker who has not slept in a year and may be losing his mind. Bale then managed to gain back the weight in time to begin filming *Batman Begins* (2005), the forerunner to *The Dark Knight*. Other recent roles included pilgrim John Rolfe in the historical drama *The New World* (2005), an obsessive magician intent on revenge in *The Prestige* (2006), a struggling rancher in the tense American western *3:10 to Yuma* (2007), and U.S. federal agent Melvin Purvis in *Public Enemies* (due out in 2009). Bale's desire for personal privacy was put to the test when, one day before *The Dark Knight*'s European premiere, he was arrested and questioned by British police about allegedly having assaulted his mother and one of his three sisters; he denied the allegations and was not formally charged. (ANNE SISKA)

Bardem, Javier

(b. March 1, 1969, Las Palmas de Gran Canaria, Gran Canaria, Canary Islands, Spain) In 2008 charismatic and versatile Spanish actor Javier Bardem, long admired and much honoured in his home country, won his first Academy Award, for best supporting actor, for his chilling performance as a sociopathic killer in *No Country for Old Men* (2007). The violent and bleak film—based on the best seller by Cormac McCarthy and directed by Joel and Ethan Coen—followed assassin Anton Chigurh as he hunted a down-on-his-luck welder who had stolen a suitcase of drug money. Carrying an air gun, Chigurh cut a bloody path across Texas as he relentlessly chased his target. Later in the year, Bardem was again on the hunt as he portrayed a lusty painter pursuing women in Woody Allen's comedy *Vicky Cristina Barcelona*.

Javier Ángel Encinas Bardem, who was born into a family of actors and filmmakers, appeared in his first professional role at age five. After briefly studying painting in Madrid, he concentrated on an acting career. In 1992 he received much attention—especially from women—for *Jamón, jamón*, in which he played an underwear model hired to romance a factory worker. Three years later he proved he was more than a sex symbol by winning a Goya Award for best supporting actor for his performance as a drug addict in *Días contados* (1994; *Running Out of Time*). In *Boca a boca* (1995; *Mouth to Mouth*), he garnered laughs and another Goya Award as an aspiring actor who falls in love with a customer while working for a telephone sex company. Bardem later appeared as a wheelchair-bound policeman in Pedro Almodóvar's *Carne trémula* (1997; *Live Flesh*).

Although a major star in Spain, Bardem remained relatively unknown to international audiences until 2000, when he starred as Reinaldo Arenas in the biopic *Before Night Falls*, his first English-language film. Bardem immersed himself in the role—losing 30 pounds and downplaying his rugged good looks—to play Arenas, a homosexual Cuban writer who was imprisoned by the Fidel Castro regime in the 1970s. Bardem became the first Spaniard to be nominated for an Academy Award for best actor. Although inundated with Hollywood offers, he sought out more challenging roles. In 2002 he starred in both the thriller *The Dancer Upstairs*, the directorial debut of actor John Malkovich, and the drama *Los lunes al sol* (*Mondays in the Sun*), as a laid-off shipyard worker; the role earned him another Goya. For his moving performance as quadriplegic Ramón Sampedro in *Mar adentro* (2004; *The Sea Inside*), Bardem collected his fourth Goya.

(AMY TIKKANEN)

Bashir, Omar Hassan Ahmad al-

(b. Jan. 7, 1944, Hosh, Bannaga, Sudan) Career soldier Omar Hassan Ahmad al-Bashir, who in 1989 led a military revolt that overthrew The Sudan's elected government, found himself in 2008 the target of international scrutiny after the chief prosecutor of the International Criminal Court (ICC) called on July 14 for an arrest warrant to be issued against him. Bashir was cited for crimes committed against humanity in Darfur, a region of The Sudan. The Sudanese government, which had not ratified the Rome Statute, refused to acknowledge the jurisdiction of the ICC. Bashir's indictment remained pending at year's end.

Bashir was born into a peasant family that later moved to Khartoum, where he received his secondary education; he then joined the army. He studied at a military college in Cairo and fought in 1973 with the Egyptian army against Israel. Returning to The Sudan, he achieved rapid promotion, and in the mid-1980s he took the leading role in the Sudanese army's campaign against the rebels of the southern Sudan Peoples' Liberation Army (SPLA).

After the 1989 mutiny, Bashir became chairman of the Revolutionary Command Council for National Salvation; he dissolved the parliament, banned political parties, and strictly controlled the press. He was supported by Hassan al-Turabi, a Muslim extremist and leader of the National Islamic Front (NIF). Together they began to Islamize the country, and in March 1991 Islamic law (Shari'ah) was introduced. This move further emphasized the division between the north and the mainly animist and Christian south.

In October 1993 the Revolutionary Council was disbanded, and Bashir was appointed president of The Sudan; he retained military rule, however. He was confirmed as president by an election held in 1996. Bashir's ally Turabi was unanimously elected president of the National Assembly.

Bashir signed (June 30, 1998) a new constitution, which lifted the ban on political parties. In December of that year, however, he used military force to oust Turabi, who he believed was plotting against him. On March 12, 2000, Bashir declared a three-month state of emergency, which, by stages, he thereafter extended indefinitely. After December 2000 elections in which he was confirmed as president, he dismissed the cabinet.

Osman Orsal—Reuters/Landov

Sudanese Pres. Omar Hassan Ahmad al-Bashir

Throughout this period, war with the SPLA continued, displacing millions of southerners. From time to time Bashir made tentative cease-fire agreements with fringe elements of the rebel force, but when oil production started on a large scale in the border area between north and south in 1998, the dispute grew fiercer. Under international pressure Bashir agreed in 2005 to form a peace pact with the SPLA, but delays in the implementation of the agreement led to the withdrawal of southern members from the government on Oct. 11, 2007.

Meanwhile, in August 2003 rebel black African groups in Darfur had launched an attack on Bashir's government, claiming unfair treatment. The president enlisted the aid of Arab militia whose brutal methods displaced more than two million people and earned harsh criticism from international commentators. As the Darfur conflict raged on, Bashir reluctantly accepted the arrival of a very small African Union peacekeeping force but resisted UN attempts to send a much larger international force.

(KENNETH INGHAM)

Betancourt, Ingrid

(b. Dec. 25, 1961, Bogotá, Colom.)

More than six years after she was kidnapped by Revolutionary Armed Forces of Colombia (FARC) guerrillas, Ingrid Betancourt, a former Colombian senator and presidential candidate, was freed along with 14 other hostages on July 2, 2008, in a daring helicopter rescue operation carried out by the Colombian military. The meticulously planned operation, which followed the successful infiltration of the FARC by military intelligence agents, represented a stunning setback for the rebels, who lost their highest-profile captives in Betancourt and three American defense contractors whom they had held since 2003. Aside from raising further questions over the continued viability of the FARC—a number of whose top leaders had been killed in the preceding months and whose ranks were reportedly declining at a steady pace—the rescue prompted much speculation over Betancourt's future involvement in Colombian politics, including whether she would run for president again in the upcoming 2010 elections.

Betancourt, who held dual French and Colombian citizenship, spent her formative years in Paris, where her father served for a time as Colombia's ambassador to UNESCO. She studied there at the Institut d'Études Politiques and in 1983 married Fabrice Delloye, a French diplomat. She returned to Colombia in 1989 and ran for Congress five years later, winning a seat in the lower house. Fiercely outspoken against corruption, Betancourt soon became the target of death threats, and she eventually sent her two children to live in New Zealand with Delloye (whom she divorced in 1990). She later formed her own political party—the Green Oxygen Party—and was overwhelmingly elected to the Senate in 1998.

While campaigning for the presidency in 2002, Betancourt traveled into rebel-held territory in southern Colombia, where she had planned to hold a rally in the town of San Vicente del Caguán. She and her campaign manager, Clara Rojas, were taken hostage at a FARC roadblock on February 23. The FARC released Rojas in early 2008 following negotiations brokered by Venezuela, but despite a subsequent offer by Colombian Pres. Álvaro Uribe to free hundreds of rebel prisoners in exchange for Betancourt's release, she remained in captivity. As fears mounted that Betancourt's health might be failing, the rescue mission was launched. Posing as international aid workers, army soldiers duped the rebels into allowing the 15 hostages to board a helicopter that supposedly was to transfer them to another FARC location. Instead, the aircraft whisked the hostages to freedom.

News of Betancourt's liberation was greeted jubilantly around the globe. After an emotional reunion with her family at the airport in Bogotá, Betancourt flew to France, where Pres. Nicolas Sarkozy hailed her as "a symbol of hope" and named her a knight of the Legion of Honour at a ceremony held at Élysée Palace. In interviews given after her rescue, Betancourt indicated that while she might resume her political career at some point in the future, the idea of running for the presidency again seemed "very distant" to her and it was "too early to talk of such things." Of more immediate concern to her, she said, was gaining the freedom of the estimated 750 hostages who remained in FARC captivity. (SHERMAN HOLLAR)

Biden, Joe

(b. Nov. 20, 1942, Scranton, Pa.)

On Aug. 23, 2008, U.S. presidential candidate Barack Obama (*q.v.*) officially announced his selection of Joe Biden, a longtime Democratic senator from Delaware, as his vice presidential running mate. On November 4 the Obama-Biden ticket defeated Republican John McCain (*q.v.*) and his running mate, Sarah Palin (*q.v.*), winning 365 of the 538 electoral college votes and nearly 53% of the nationwide popular vote.

Joseph Robinette Biden grew up in Scranton and in New Castle county, Del. He received a bachelor's degree (1965) from the University of Delaware and a law degree (1968) from Syracuse (N.Y.) University. After graduating from law school, he returned to Delaware to work as an attorney before quickly turning to politics, serving (1970–72) on the New Castle county council. Biden was elected (1972) to the U.S. Senate at the age of 29, becoming the fifth youngest senator in history. He went on to win reelection six times and became Delaware's longest-serving senator. In addition to his role as U.S. senator, Biden also taught (1991) as an adjunct professor at the Wilmington, Del., branch of the Widener University School of Law.

As a senator, Biden focused on foreign relations, criminal justice, and drug policy. He served on the Senate's Foreign Relations Committee, twice as its chair (2001–03; 2007–09), and on the Committee on the Judiciary, presiding (1987–95) as its chair. He was particularly outspoken on issues related to the Kosovo conflict of the late 1990s, urging U.S. action against Serbian forces to protect Kosovars against an offensive by Serbian Pres. Slobodan Milosevic. On the Iraq War, Biden proposed a partition plan as a way to maintain a united, peaceful Iraq. Biden also was a member of the International Narcotics Control

Caucus and was the lead senator in writing the law that established the office of "drug czar," a position that oversaw the national drug-control policy.

Biden pursued the 1988 Democratic presidential nomination but withdrew after it was revealed that parts of his campaign stump speech had been plagiarized from a speech by British Labour Party leader Neil Kinnock without appropriate attribution. His 2008 presidential campaign never gained momentum, and he withdrew from the race after placing fifth in the Iowa Democratic caucus in January. Despite concerns raised about his reputation as a gaffe-prone politician, Biden emerged as Obama's vice presidential pick, and on August 27 Obama and Biden secured the Democratic Party's nomination. In the debate between the two vice presidential candidates on October 2, Biden turned in what was generally viewed as a solid performance, but he drew criticism later that month with his statement that if Obama was elected, he would be tested with an "international crisis" within six months of taking office—an assertion that Obama dismissed as an example of Biden's tendency toward "rhetorical flourishes." As the two swept to victory in the presidential contest in November, Biden also easily won reelection to his U.S. Senate seat, though he would have to resign the post before taking the oath of office as vice president on Jan. 20, 2009. (EDITOR)

Bolt, Usain

(b. Aug. 21, 1986, Montego Bay, Jam.) Jamaican sprinter Usain Bolt, a track and field barrier breaker since his mid-teens, smashed records as never before in 2008. At the Olympic Games in Beijing, Bolt became the first man since American Carl Lewis in 1984 to win the 100-m, 200-m, and 4 × 100-m relay in a single Olympics and the first ever to set world records (9.69 sec, 19.30 sec, and 37.10 sec, respectively) in all three as he did so. His 0.66-sec winning margin in the 200-m was the largest in Olympic history, and his 0.20-sec edge over the second-place finisher in the 100-m, despite beginning his victory celebration about 80 m into the race, was the largest since Lewis won by the same margin.

The performances of the 1.96-m (6-ft 5-in), 88-kg (194-lb) Jamaican, nicknamed "Lightning Bolt," stunned many casual followers of the sport. Seasoned observers, however, harkened back to the world junior championships of 2002, when Bolt first marked himself as a prodigy. In that meet, racing before a crowd of 36,000 in Jamaica's National Stadium in Kingston, Bolt, just 15 at the time, won gold in the 200 m, becoming the youngest-ever male world junior champion in any event. At 16 Bolt cut the junior (age 19 and under) world record to 20.13 sec. In April 2004 a 19.93-sec clocking made Bolt, at 17, the first teen to break 20 seconds for 200 m.

Bolt, the son of grocers in Jamaica's rural Trewlany parish, excelled as a cricket fast bowler in his preteen years. He developed a deep affection for the European association football (soccer) teams Real Madrid and Manchester United, but his school coaches steered him toward track and field. He was fond of practical jokes, fast food, and nightclubbing, however, and often failed to match his record-setting résumé with equivalent dedication to training. Hampered by a hamstring injury, he failed to advance beyond the 200-m heats at the 2004 Athens Olympics and placed last in the 2005 world championships final.

In 2007 Bolt appeared newly serious and earned a silver medal in the 200 m at the world championships. He also persuaded his coach to let him try the 100 m and ran 10.03 sec in his first professional race at the distance. In 2008 he defied conventional wisdom that very tall sprinters are disadvantaged as fast starters and on May 3 lowered his best time to 9.76 sec, then history's second fastest mark. Four weeks later in New York City, Bolt broke the world record, running 9.72 sec to defeat world champion Tyson Gay and provoke media speculation that multiple Olympic golds might lie in his future, as subsequent events in Beijing confirmed. (SIEG LINDSTROM)

Cai Guo-Qiang

(b. Dec. 8, 1957, Quanzhou City, Fujian province, China) Propelled into a premiere position with his 2008 one-man retrospective at New York City's Guggenheim Museum, pyrotechnical artist Cai Guo-Qiang was the first Chinese artist ever to be so honoured. His show, "I Want to Believe," immediately confronted the viewer with a dramatic installation piece entitled *Inopportune: Stage One* (2004). For the work, Cai used nine actual cars suspended at various angles to evoke a sort of stop-action image of a car bombing, complete with timed sprays of lights. Calling Cai "one of the most powerful artists operating anywhere in the world," Guggenheim Foundation director Thomas Krens opined that the cars suspended in the rotunda "may be the best artistic transformation of the Frank Lloyd Wright space that we've ever seen." The show's other pieces included several of Cai's signature gunpowder drawings and paintings and a re-creation of his agitprop reference to similar pieces he had seen in his boyhood years. Even so, "I Want to Believe" barely held a candle to Cai's other major performance of the year: he was appointed to the post of director of visual and special effects for the ceremonial events bracketing the 2008 Beijing Olympics.

Cai's father—a painter, historian, and bookstore owner—was somewhat ambivalent toward Mao Zedong and the new Chinese society. He encouraged his son to read the forbidden Western classics despite his support of Marxist thinking. The father continued to practice the traditional art of calligraphy but used it to reproduce Mao's epigrams. The younger Cai honed his sense of the dramatic at the Shanghai Institute of Drama, which he attended from 1981 to 1985. After graduating with a degree in stage design, he made plans to leave China.

From 1986 to 1995 he lived in Japan, learning Japanese and refining his control over his chosen artistic medium, gunpowder. It was in this choice that the ambivalence he had absorbed at his father's side seemed most clearly to sur-

Chinese artist Cai Guo-Qiang at his show "I Want to Believe."

Keith Bedford—Reuters/Landov

face. Gunpowder was an ancient Chinese invention and a thoroughly traditional substance. Yet it was not a traditional medium for art and thus was a perfect material for expressing both respect and frustration, for embodying both the violence and the beauty that became his trademark.

In 1995 Cai moved to New York City. There he continued to make a kind of performance art that *New York Times* critic Roberta Smith labeled "gunpowder land art," events recorded on videotape. He also created drawings made from gunpowder residue, some of which he altered by painting on them. In addition, he began, like a surprising number of other contemporary Chinese artists, to reveal a gift for creating large-scale installations. Cai's works of this sort included groupings of stuffed animals, sometimes tigers pierced with arrows or packs of snarling wolves hurtling toward an invisible barrier. Though some critics found his work somewhat hollow and less than original, others were riveted by his contradictory vision and his unquestioned instinct for the dramatic.

(KATHLEEN KUIPER)

Christofias, Dimitris

(b. Aug. 29, 1946, Kato Dhikomo, Cyprus) On Feb. 28, 2008, Dimitris Christofias was sworn in as president of the Republic of Cyprus, the Greek portion of the divided island. The victory received worldwide attention because the new leader was Greek Cyprus's first president from AKEL, the Marxist-Leninist-oriented Progressive Party of the Working People. Speculation was rife as to what path his leadership would take. In the years before the election, Christofias was seen as something of a euroskeptic, and his party had urged delay in converting the country's currency from the Cyprus pound to the euro (a conversion that occurred on Jan. 1, 2008). He was also a critic of the U.S.-led Iraq war and of the British military bases on Cyprus. In his inaugural address, however, Christofias stressed his commitment to previous agreements, including those with the EU and the UN. He declared that his two main priorities would be finding a solution to the problem of a divided Cyprus and building a fairer society.

Christofias became politically active at an early age, joining the Pancyprian United Students Organization in 1960 at age 14. At 18 he was a member of AKEL and the United Democratic Youth Organization (EDON), AKEL's youth arm. In 1969 he was elected a member of the EDON Central Council. That same year he went to the Soviet Union to further his education. After obtaining (1974) a Ph.D. in history from the Academy of Social Sciences in Moscow, he returned to Cyprus to embark on a career in politics. He became an official of EDON and was elected (1977) the youth organization's general secretary, a position he held for 10 years.

In the meantime, Christofias rose through the AKEL ranks. He was elected to a district committee and then joined (1986) the party's political bureau. In 1987 he exchanged his position with EDON for membership in the AKEL central committee, and in the following year he became the party's leader. Christofias entered national politics in 1991 when he was elected to the House of Representatives, and in 2001 he became president of the House.

In 2008 he was chosen as the AKEL candidate for president. In the first round of balloting, held on February 17, he took second place (with 33.29% of the vote) among the three contenders, ahead of incumbent Pres. Tassos Papadopoulos. Christofias defeated Foreign Minister Ioannis Kasoulikes in the runoff election on February 24, garnering 53.4% of the votes cast.

Christofias's initiative toward solving the Cyprus question began soon after his inauguration. In March he held meetings with Turkish Cyprus Pres. Mehmet Ali Talat, which activated the moribund joint technical committees (agreed on in 2006 but never implemented), and they examined a range of other possible actions. The president-to-president and official-to-official dialogue continued throughout the year.

(GEORGE H. KELLING)

Clegg, Nick

(b. Jan. 7, 1967, Chalfont St. Giles, Buckinghamshire, Eng.) In 2008 Nick Clegg, the newly elected leader of the Liberal Democrat Party (LDP), faced the task of reviving the flagging fortunes of the smallest of the U.K.'s three main political parties. At age 41, however, he knew that unless the political climate changed drastically for the worse, he would have at least two general elections in which to make an impact and "establish three-party politics for good."

Nicholas Peter William Clegg and his wife, attorney Miriam González Durántez (the daughter of a conservative senator in Spain), were possibly the most nationally diverse couple to have reached prominence in British politics. He had a Dutch mother and a half-Russian father (whose aristocratic mother fled to Britain after the 1917 Bolshevik Revolution); he grew up bilingual, speaking English and Dutch, and later became fluent in French, German, and Spanish. Clegg was educated at Westminster School, London, and he studied anthropology (M.A., 1989) at the University of Cambridge, political philosophy (1989–90) at the University of Minnesota, and European affairs (M.A., 1992) at the College of Europe in Bruges, Belg. He traveled extensively and worked at various jobs in Germany, Austria, Finland, the U.S., Belgium, and Hungary.

In 1994, after having briefly tried his hand at journalism, Clegg became an official at the European Commission in Brussels, where he progressed to become adviser to Sir Leon Brittan, an EU commissioner and former Conservative Party cabinet minister. Clegg helped to negotiate the admission of China and Russia to the World Trade Organization. Brittan regarded his young adviser as one of the brightest future politicians of his generation and urged him to pursue a career as a Conservative MP. Clegg, however, felt that the Liberal Democrats reflected far better his own internationalist outlook. In 1999 he was elected as an LDP member of the European Parliament.

Clegg was widely tipped as a future party leader. He paved the way by leaving the European Parliament in 2004 and winning a seat in the 2005 British general election as MP for Hallam, a suburb of Sheffield. In January 2006, when Charles Kennedy resigned as LDP leader, Clegg felt that he was too new to Parliament to stand for leader and backed 63-year-old Sir Menzies Campbell, who appointed Clegg as the party spokesman on home affairs. He quickly made his mark as an eloquent critic of the Labour government's curbs on civil liberties. Less than two years later, amid harsh media criticism of his elderly appearance, Campbell was forced to resign. This time Clegg did decide to stand. On Dec. 18, 2007, he defeated 53-year-old Chris Huhne by a margin of just 511 votes in the balloting of more than 41,000 party members. After becoming LDP leader, Clegg sought to streamline the party's process of decision making and policy formulation; previous leaders had expressed frustration because they were required to consult members more widely than leaders of other major U.K. parties.

(PETER KELLNER)

Correa, Rafael
(b. April 6, 1963, Guayaquil, Ecuador) When leftist economist Rafael Correa scored a decisive election triumph over banana magnate Álvaro Noboa in the 2006 presidential election, many predicted that political instability and social chaos would ensue, but toward the end of 2008 Correa's popularity at home remained well above 60%. Though commentators made much of the new Ecuadoran leader's friendship and affinity with Venezuelan Pres. Hugo Chávez, Correa brushed the criticism aside, vowing to carry out an "economic revolution" that put Ecuadorans before debt payment and oil profits. "Markets should be subject to societies, not the other way around," he said. After taking office in 2007, Correa launched a deeply reformist agenda that antagonized some business and media groups, but he proved more capable of diplomacy, alliance-building, and pragmatism than many in Ecuador's notoriously fractious political elite.

Concern for social and economic problems tinged the life of Rafael Correa Delgado from an early age. Though his maternal grandfather was a great-nephew of former president José Eloy Alfaro Delgado, he grew up in straitened circumstances. Correa said that his father, during a period of unemployment, agreed to carry illegal drugs aboard a flight to the U.S. His father was arrested and served several years in jail, and Correa recalled that his mother made ends meet by selling food that she prepared at home.

Friends and acquaintances remembered Correa as a bright, intense young man who tolerated opposing views with difficulty. He attended the prestigious San José La Salle high school on a scholarship and was active in the Boy Scout movement. Correa spent a year as a church-sponsored volunteer with Quechua-speaking Indians in Cotopaxi province. He received a master's degree from the Catholic University of Leuven in Belgium and a doctorate from the University of Illinois; his thesis examined the effects of economic globalization on living standards in the less-developed world.

Correa served briefly as Ecuador's finance minister in 2005, and the following year he defeated Noboa in a runoff vote for the presidency after proving himself to be a skilled, charismatic political campaigner. After becoming president, Correa promoted sweeping constitutional changes, increased agricultural subsidies, and seized companies owned by members of a powerful family implicated in a banking scandal in the 1990s. In early 2008 he broke off diplomatic relations with Colombia after that country's forces raided a guerrilla camp inside Ecuador; Correa later installed a new defense chief, the country's fourth since his inauguration. The popular Correa secured the majority he needed to win a September 28 referendum on a new constitution that would extend his power. (PAUL KNOX)

Cotillard, Marion
(b. Sept. 30, 1975, Paris, France)
In 2008 French actress Marion Cotillard won an armload of best actress awards for her portrayal of legendary French chanteuse Edith Piaf in *La Môme* (2007; U.S. title, *La Vie en Rose*). Cotillard, who stunningly captured the gauche grace of the diminutive singer, was widely and effusively praised for her mercurial, often tortured, performance. It came as no surprise, then, when she took home an Academy Award and a César, France's most esteemed film award, as well as a BAFTA, a Golden Globe, and other honours. Although Cotillard did not sing on camera, her performance captured Piaf in a way rarely seen on-screen, and, after years of fame in France, Cotillard finally became a household name around the world.

Cotillard grew up in Orleans in an artistic household—her father, Jean-Claude Cotillard, was an actor and director, and her mother, Niseema Theillaud, was an actress. Her parents performed together in a theatre troupe, and Cotillard got her first taste of acting when she appeared onstage in a play written by her father. She did not pursue a professional acting career, however, until the age of 16, when she moved to Paris.

In her first prominent film role, in the Luc Besson-penned *Taxi* (1998), she played the girlfriend of a pizza delivery man turned vigilante taxi driver. The movie spawned two sequels over the next five years, and the *Taxi* franchise became one of France's most successful. In 2005 she earned the César Award for best supporting actress for her performance as a vengeful prostitute in *Un Long Dimanche de fiançailles* (2004; *A Very Long Engagement*). While that film and the *Taxi* series cemented Cotillard's star status in her own country, she became known to American audiences with her turn in American director Tim Burton's *Big Fish* (2003), in which she had a small but memorable role. Her next foray into Hollywood was less successful; she appeared in the poorly received *A Good Year* (2006), which starred Australia's Russell Crowe. The following year she was chosen out of hundreds of hopefuls for the lead in *La Môme*. By mid-2008 Cotillard had returned to work on her next project, the Hollywood film *Public Enemies* with Johnny Depp, and was preparing to appear in the screen adaptation of the Tony Award-winning Broadway musical *Nine*.

In addition to her film work, Cotillard used her high public profile to bring attention to the aims of Greenpeace, working for the organization as a spokesperson and offering her apartment as a testing ground for product safety. She also contributed to *Dessins pour le climat*, a book of drawings published by Greenpeace in 2005 to raise funds for the environmental group. (MELISSA ALBERT)

Cowen, Brian
(b. Jan. 10, 1960, Tullamore, County Offaly, Ire.) In April 2008 Brian Cowen—then serving as Ireland's finance minister, deputy prime minister, and deputy head of the ruling Fianna Fail party—was thrust into the international spotlight when Prime Minister Bertie Ahern, amid an investigation into possible past financial misconduct, announced that he would resign as prime minister and leader of Fianna Fail the following month. Cowen, who had remained supportive of Ahern throughout, was elected head of Fianna Fail, and on May 7 he was sworn in as prime minister.

Cowen was exposed to politics at a young age. His grandfather was a coun-

Irish Prime Minister Brian Cowen

Courtesy of the Department of Finance

cillor in the Fianna Fail party, and his father held a seat in the Dail (lower house of parliament). He was an exemplary debater in school and often spoke at his father's election rallies. Cowen studied at University College, Dublin, and the Incorporated Law Society of Ireland, where he was trained as a solicitor. His father's death in 1984 prompted a by-election for his seat, and Cowen, then age 24, captured it, becoming one of the youngest members ever to sit in the Dail.

Cowen's political mentor was Albert Reynolds, who became prime minister in 1992, at which point Fianna Fail was in a coalition government with the Progressive Democrats. Cowen was an outspoken critic of the coalition, famously stating about the Progressive Democrats, "When in doubt, leave them out!" He served as minister of labour (1992–93), and in 1993, after the breakup of the Fianna Fail–Progressive Democrats government, he helped to negotiate the short-lived coalition of Fianna Fail and the Labour Party. Cowen then served in such posts as minister for transport, energy, and communications (1993–94), leaving office after Fianna Fail was forced into opposition by the formation of a Fine Gael–Labour–Democratic Left coalition.

During Fianna Fail's years out of government, Cowen served successively as an opposition spokesperson for agriculture, food, and forestry (1994–97) and health (1997). Following elections in 1997, Ahern formed a Fianna Fail coalition government with the Progressive Democrats, and the party once again returned to power. Cowen served as minister for health and children (1997–2000), foreign affairs (2000–04), and finance (2004–08). In June 2007 he was appointed to the post of deputy prime minister.

Cowen was known for his sharp tongue and sometimes rough-hewn manner, but he was also recognized for fierce intelligence, wit, and jovial demeanour among constituents. A combative politician and loyal party member, Cowen was for many years seen as an obvious successor to Ahern. His first months in office were not easy, however. In June, Irish voters rejected the EU's Lisbon Treaty, placing Cowen, who had supported the referendum, in a potentially embarrassing position. In the autumn Cowen acknowledged that Ireland's "Celtic Tiger" economy had slipped into recession, and he joined with other world leaders to tackle the international financial crisis. (EDITOR)

Cyrus, Miley
(b. Nov. 23, 1992, Franklin, Tenn.)
Fifteen-year-old actress and singer Miley Cyrus spent much of 2008 dealing with the pressures of megafame. Though already well known to the preteen demographic for her wildly successful cable TV show *Hannah Montana* and its related sound track albums, she gained wider exposure as her song "See You Again" crossed over to the pop charts early in the year. She also found herself embroiled in controversy as several sets of photos of her, including one taken by Annie Leibovitz and published in *Vanity Fair* magazine, were denounced as risqué and inappropriate. She managed to deflect some of the unwanted attention, however, with the summer release of another album, *Breakout*.

Destiny Hope Cyrus was born to country singer and actor Billy Ray Cyrus and his wife, Tish, and she grew up on her family's farm outside Nashville. Her sunny disposition as a child earned her the nickname "Smiley Miley." (She had her name legally changed to Miley Ray Cyrus in May 2008.) Though her father was initially reluctant to let her follow in his show business footsteps, at the age of nine she landed a role in an episode of his TV series *Doc* and another role in the film *Big Fish*.

In 2005 Cyrus auditioned for the lead role in *Hannah Montana*, a Disney Channel series about a girl who leads a double life as a normal middle-school student and, with the help of a blonde wig, a glamorous pop singer. Though initially deemed by executives to be too small and young for the character, she persisted and won the part. The show debuted the following year (featuring Billy Ray as her TV dad) and became an immediate sensation, scoring record ratings for cable television and turning the 13-year-old into a bona fide star. Aiming to capitalize on the show's obvious youth-market appeal, a sound track album featuring the music of *Hannah Montana* was released in 2006 and eventually sold more than three million copies. It was followed by the equally successful *Hannah Montana 2: Meet Miley Cyrus* (2007), which was packaged as a double CD with half of the material under Cyrus's own name.

In late 2007 Cyrus embarked on a national tour called Best of Both Worlds in support of her latest album. Two concerts from the tour were filmed and presented as a 3-D movie, which made more than $30 million in its opening weekend despite having been released only to select theatres. Among Cyrus's plans for 2009 were a feature-length *Hannah Montana* movie and an autobiography to be published by Disney-Hyperion Books. According to *People* magazine, the Miley Cyrus franchise was projected to be worth $1 billion in the 2007–08 fiscal year. (JOHN M. CUNNINGHAM)

PRNewsFoto—Starz Entertainment/AP

Miley Cyrus performing at the American Music Awards

de Niese, Danielle
(b. 1980, Melbourne, Australia)
In April 2008 the first solo CD by the Australian-born American soprano Danielle de Niese, *Handel Arias* (2007), won the Orphée d'Or from the Académie du Disque Lyrique in Paris as the debut recording of the year. It was another in a series of triumphs for the talented young singer, and with her youth and glamourous good looks, as well as her talents as an actress and a dancer, de Niese was hailed as just what opera needed.

De Niese's father, of Sri Lankan and Dutch ancestry, and her mother, of Sri Lankan and Scottish ancestry, emigrated from Sri Lanka to Australia, where their daughter was born. She studied music as a child, and when she was 10, the family moved to Los Angeles. There she continued studies in music as well as dance, and as a teenager she was the host of a television program that featured young per-

Australian-born American opera singer Danielle de Niese

formers, for which she won (1996) an Emmy Award. She made her opera debut in Los Angeles at the age of 15, becoming the third generation in her family to perform professionally. After high school she entered (1997) the Mannes music school in New York City, and the following year she became the youngest person ever to be admitted to the Lindemann Young Artist Development Program of the Metropolitan Opera. When de Niese was only 19, she made her Metropolitan debut as Barbarina in Wolfgang Amadeus Mozart's *Le nozze di Figaro;* this was quickly followed by appearances there in Maurice Ravel's *L'Enfant et les sortilèges.*

After engagements with other American companies, de Niese made her European debut in 2001, singing in The Netherlands and then in Paris and Naples. It was at the Glyndebourne (Eng.) Festival Opera in 2005, however, when she was called upon at the last minute to sing (and dance) the role of Cleopatra in a new production of George Frideric Handel's *Giulio Cesare,* that she won international acclaim. (A DVD of the production was released in 2006.) Subsequent engagements in major opera houses and with prominent orchestras in Europe and the U.S. followed. In addition, de Niese made appearances in *Les Misérables* on Broadway and in the 2001 motion picture *Hannibal.*

De Niese's small voice was especially suited to works of the Baroque and Classical periods, and at a time when early music performances had a newfound popularity, she was in great demand. In addition to several works of Handel, she also had success in Jean-Philippe Rameau's *Les Indes galantes,* Christoph Gluck's *Orfeo ed Euridice,* and as Poppea in Claudio Monteverdi's *L'incoronazione di Poppea,* a role that took her back to Glyndebourne in 2008. Other Mozart roles included Susanna in *Le nozze di Figaro* and Despina in *Così fan tutte.* Venturing into later periods, de Niese sang the roles of Lauretta in Giacomo Puccini's *Gianni Schicchi* and Nannetta in Giuseppe Verdi's *Falstaff,* as well as Tytania in Benjamin Britten's *A Midsummer Night's Dream.* (ROBERT RAUCH)

Downey, Robert, Jr.
(b. April 4, 1965, New York, N.Y.)
Though Robert Downey, Jr., had long been considered one of Hollywood's most gifted and versatile actors, it was not until 2008 that he became a box-office juggernaut, with starring roles in two summer blockbusters. In *Iron Man* he won acclaim for his charismatic portrayal of the eponymous comic-book superhero. In the satiric comedy *Tropic Thunder* he turned heads as a self-important movie star who dons blackface to land the role of an African American soldier in the Vietnam War. Both films garnered more than $100 million in domestic receipts.

Robert John Downey, Jr., was raised in an artistic household in New York City's Greenwich Village; his father was a noted underground filmmaker who gave the five-year-old Downey his first part. After dropping out of high school in California, Downey returned to New York City to pursue an acting career. Supporting roles in several movies, including the cult hit *Weird Science* (1985), led to a stint (1985–86) on the television comedy skit show *Saturday Night Live.* With his boyish looks and raffish charm, Downey then scored the lead in the romantic comedy *The Pick-up Artist* (1987) and broke out further with his visceral performance as a cocaine addict in *Less than Zero* (1987).

Steady work followed, but much of it went unnoticed until his appearance in 1992 as the title character in Richard Attenborough's *Chaplin* biopic, which earned him numerous plaudits and an Academy Award nomination for best actor. By this time, however, Downey had developed a substance-abuse problem, and, despite impressive turns in films ranging from the violent media satire *Natural Born Killers* (1994) to the costume drama *Restoration* (1995), his frequent skirmishes with the law and his public struggle with drug addiction often overshadowed his on-screen successes. He reached a low point in 1999, when he was sentenced to three years in prison for having violated parole from an earlier arrest.

The following year, after being granted an early release, Downey was cast in a recurring role on the TV series *Ally McBeal,* and the Golden Globe Award he subsequently won for the performance seemed to mark the start of a comeback. In 2003, following a series of relapses that threatened to derail his career for good, he turned sober. He thrust himself into his work thereafter, appearing in 13 feature films over the next five years, including *The Singing Detective* (2003), *Good Night, and Good Luck* (2005), *A Scanner Darkly* (2006), and *Zodiac* (2007). Among Downey's most anticipated upcoming projects was the portrayal of real-life Los Angeles journalist Steve Lopez in *The Soloist,* a film based on Lopez's book describing his efforts to help a schizophrenic homeless man realize his musical dreams. Downey was also cast as the lead in a new Sherlock Holmes movie. Given Downey's talent for reinvention, few doubted that he would rise to such challenges. (JOHN M. CUNNINGHAM)

Dudamel, Gustavo
(b. Jan. 26, 1981, Barquisimeto, Venez.)
In 2008 Gustavo Dudamel, the exciting young Venezuelan conductor, became music director designate of the Los Angeles Philharmonic Orchestra. He had been named to head the orchestra a year earlier, this after only a single appearance in 2005 at the Hollywood Bowl, and was scheduled to become music director in the 2009–10 season. He conducted his first subscription concerts in Los Angeles in 2007.

By the age of five, Dudamel had begun studies with the National System of Youth and Children's Orchestras of Venezuela (popularly known as El Sistema), the country's acclaimed training program in music. He first took up the violin and then studied composition and conducting. In 1999 José Antonio Abreu, who had founded El Sistema in the 1970s, gave Dudamel additional instruction in conducting and appointed him music director of the Simón Bolívar Youth Orchestra of Venezuela (SBYOV), the chief performing group. The next year Dudamel and the orchestra toured Germany, and in following years they made further trips to Europe, all to ecstatic reviews. They played their first concerts in the U.S. in 2007 and in Japan in 2008. Meanwhile,

Urs Flueeler—Keystone/AP

Venezuelan conductor Gustavo Dudamel

Dudamel had come to the notice of major orchestras in Europe and the U.S. and was receiving invitations to appear as a guest conductor; in 2006 he was named principal conductor of the Göteborg Symphony, the national orchestra of Sweden. His first appearances in the opera house took place in 2006 in two prestigious venues, the Staatsoper in Berlin and La Scala in Milan, and he returned to both houses in 2008 to conduct Giacomo Puccini's *La Bohème*.

From the beginning musicians, audiences, and critics alike were astonished by Dudamel's ability, despite his young age, to draw fresh, dynamic performances from orchestras. In 2004 he won the first Gustav Mahler Conducting Competition, sponsored by the Bamberger (Ger.) Symphony, which brought him to the attention of such leading conductors as Claudio Abbado and Simon Rattle, who served as coaches and mentors. In 2007 Dudamel received the Premio de la Latinidad, given by the Unión Latina for contributions to culture, and in 2006 he was awarded the Pegasus Prize from the Festival of Two Worlds, in Spoleto, Italy. For his first recording, of Ludwig van Beethoven's Symphonies 5 and 7 with the SBYOV, released in 2006, he won the ECHO Award from the German recording industry as the new artist of the year. With the SBYOV he subsequently recorded Mahler's *Symphony No. 5* (2007) and *Fiesta* (2008), a compilation of Latin American works. His 2007 performance of Béla Bartók's *Concerto for Orchestra* with the Los Angeles Philharmonic was available by digital download, and a documentary film on Dudamel and the SBYOV, *The Promise of Music*, was released in 2008. (ROBERT RAUCH)

Eliasson, Olafur

(b. 1967, Copenhagen, Den.)

On June 26, 2008, in an astounding merger of art, engineering, and natural phenomena, Olafur Eliasson's four man-made waterfalls were turned on along New York City's waterfront. For three and a half months, the waterfalls' scaffolding structures, which ranged from 27 to 36 m (90 to 120 ft) high and up to 14 m (45 ft) across, pumped cascades of water into the East River in lower Manhattan. This spectacular installation coincided with the exhibition *Take Your Time: Olafur Eliasson* at the Museum of Modern Art and P.S. 1 Contemporary Art Center in New York City, the first comprehensive U.S. survey of his work, which began its tour in 2007 at the San Francisco Museum of Modern Art. The exhibition highlighted Eliasson's exploration of man-made and natural forces through his multifaceted artistic oeuvre of sculpture, photography, and immersive architectural installations.

Eliasson spent his childhood in Denmark and Iceland, where the unique terrain informed his use of elemental materials such as light, water, and temperature. From 1989 to 1995 he studied at the Royal Danish Academy of Fine Arts in Copenhagen. He began gaining international attention in the early 1990s with groundbreaking sculptures and installations that employed illusory tools along with intentionally simple mechanics. Later in his career, he divided his time between Copenhagen and his studio in Berlin, where projects were conceptualized and constructed by a team of architects, engineers, and assistants. Eliasson's early interest in natural phenomena and perception led him to create works that simultaneously sparked and challenged the senses. In *Your Strange Certainty Still Kept* (1996), droplets of water were frozen in midair through the use of a perforated hose and strobe lights. *Ventilator* (1997) incorporated a menacing electric fan swinging from a ceiling. In *Room for One Colour* (1997), he flooded a room with saturated yellow light, causing all other colours to be perceived as black. Conversely, in *360° Room for all Colours* (2002), a circular space changed colours almost imperceptibly.

Eliasson increasingly focused on built environments and site-specific works. In 2003 he represented Denmark in the 50th Venice Biennale with *The Blind Pavilion*, an architectural structure made of alternating black opaque and transparent glass panels that created disorienting reflections for visitors walking through. That same year he exhibited *The Weather Project* at Tate Modern in London, a 15-m (50-ft)-diameter orb resembling a dark afternoon sun made of 200 yellow lamps, diffusing screen, fog, and mirrors. During its five-month installation, more than two million visitors basked in the sun's artificial glow, interacting with the constructed environment as if it were the product of nature. With these projects and others, Eliasson kept a consistent emphasis on the critical role of the viewer in the materialization of the artwork such that the experience remained transformative, varied, and ultimately dependent on its audience. (MICHAL RAZ-RUSSO)

Etheridge, Melissa

(b. May 29, 1961, Leavenworth, Kan.)

Following the release of her album *The Awakening* (2007), an audio autobiography of her career in music, singer-songwriter Melissa Etheridge staged a concert tour in 2008 that was similarly designed to tell the story of her life through a progression of highly personal songs. That sort of forthrightness was not unusual for the veteran raspy-voiced rock and roller. She had come to be known for her willingness to lead a very public life, baring her soul through music, while her private affairs sometimes made headlines.

Melissa Lou Etheridge began playing the guitar at age 8, and by age 11 she was writing songs. She honed her skills playing in local bands throughout her teens (emulating influences such as Bruce Springsteen and Pete Townshend of the Who) and briefly attended the Berklee College of Music in Boston before returning to Kansas. On her 21st

birthday, Etheridge left home for Los Angeles, where she played in clubs and bars until 1986, when Chris Blackwell, founder of Island Records, signed her to a recording contract. Her first album, *Melissa Etheridge* (1988), with its hit single "Bring Me Some Water," earned her a Grammy Award nomination. Success continued with the release of *Brave and Crazy* (1989) and *Never Enough* (1992), which garnered a Grammy for the single "Ain't It Heavy."

In early 1993, at the gay-and-lesbian Triangle Ball during the celebration of the inauguration of Pres. Bill Clinton, Etheridge announced to the crowd what many of her most devoted fans had assumed: she was a lesbian. The album *Yes I Am* followed later that year, with the hit singles "Come to My Window" (another Grammy winner) and "I'm the Only One." Soon Etheridge's relationship with director Julie Cypher became a matter of public record. The couple, who had been together since 1990, appeared on the cover of *Newsweek* magazine in 1996, and in 2000 they revealed in an article in *Rolling Stone* that musician David Crosby had supplied the sperm for the two children Cypher had borne. When she separated from Cypher later that same year, Etheridge chronicled the details of their relationship and breakup in her memoir, *The Truth Is. . .My Life in Love and Music*, and on her album *Skin*, both released in 2001. (Two years later Etheridge exchanged vows with actress Tammy Lynn Michaels, who gave birth to twins in 2006.)

In 2004 Etheridge was diagnosed with breast cancer, and after undergoing treatment, she made a memorable appearance during the 2005 Grammy Awards ceremonies. Still bald from chemotherapy treatments, Etheridge sang a characteristically heartfelt rendition of Janis Joplin's "Piece of My Heart," bringing many in the audience to tears. Etheridge returned to touring the following year. She also wrote and performed the Academy Award-winning song "I Need to Wake Up" for the 2006 Oscar-winning documentary *An Inconvenient Truth*. (ANTHONY G. CRAINE)

Fey, Tina
(b. May 18, 1970, Upper Darby, Pa.)
In April 2008 American writer-actress Tina Fey added to her already impressive résumé when the motion picture *Baby Mama*, which she starred in, was the top box-office hit in the U.S. and Canada in its opening weekend. The female buddy movie—a rarity among Hollywood films—gave Universal Studios its first box-office winner of the year. Fey was named the Associated Press Entertainer of the Year in December.

Lucas Jackson—Reuters/Landov

American actress and comedy writer Tina Fey

Elizabeth Stamatina Fey was educated at the University of Virginia, where she studied drama, and following graduation in 1992 she moved to Chicago to take classes at The Second City, a training ground for comedians. After about two years of instruction in improvisational comedy, she joined the Second City cast, first as a touring company understudy and later as a performer on the company's main stage. In 1997 Fey submitted samples of her sketch writing to the *Saturday Night Live* television show staff. The show's executive producer, Lorne Michaels, interviewed her, and within a week she was hired, one of the show's few female writers. In 1999 Fey became the first woman to be named *Saturday Night Live*'s head writer, and during the 2000–01 season, she debuted onscreen as coanchor of the show's "Weekend Update" feature. She went on to join the cast as a regular. In 2002, with the rest of the show's writing staff, she shared the Emmy Award for outstanding writing for a variety, music, or comedy program.

In 2004 Fey extended her reach into motion pictures with *Mean Girls*, writing the screenplay and appearing as one of the supporting characters. In 2006 she returned to TV to produce, write, and star in *30 Rock*, a comedy based on her *Saturday Night Live* experiences. For *30 Rock* she, with the other producers, shared the 2007 and 2008 Emmys for outstanding comedy series, and in 2008 she won Golden Globe, Screen Actors Guild, and Emmy awards for her performances in that show. In addition to continuing her work on *30 Rock*, Fey returned as a guest on *Saturday Night Live*, satirizing Republican vice presidential nominee Sarah Palin, whose facial resemblance to Fey seemed to provide too good an opportunity for the comic actress to pass up. Fey also was scheduled for a role in the big-screen comedy *This Side of the Truth* and screenwriting duties for *Curly Oxide and Vic Thrill*, both planned for release in 2009. (BARBARA WHITNEY)

Flórez, Juan Diego
(b. Jan. 13, 1973, Lima, Peru)
Singing in Gaetano Donizetti's *La Fille du régiment* at the Metropolitan Opera in New York City in April 2008, the Peruvian tenor Juan Diego Flórez, by prior arrangement with management, broke a long-standing policy against encores when he repeated the aria "Ah! mes amis," with its nine spectacular high Cs. The repetition of arias had been common until the practice was banned in the 20th century as performances became more serious, formal affairs, and this episode was a sign that opera might be loosening up once again. In fact, a year earlier, in performing the same music, Flórez had broken a similar 74-year ban at La Scala in Milan.

Flórez entered Peru's National Conservatory of Music at the age of 17. He was originally interested in pop music himself, but his focus shifted to the development of his classical voice. He received a scholarship to the Curtis Institute of Music in Philadelphia, which he attended from 1993 to 1996, and he then studied with the Peruvian tenor

Peruvian opera singer Juan Diego Flórez

Karel Navarro/AP

Ernesto Palacio, who subsequently became his manager. Flórez's first break came in 1996 when he replaced a singer on short notice in *Matilde di Shabran* at the Rossini Opera Festival in Pesaro, Italy. He made his debut at La Scala later that year and at Covent Garden in London the next year. Within a few years he was singing in other major opera houses across Europe and the U.S. and was giving recitals on concert stages throughout Europe and the Americas.

Flórez had a light and agile voice that could be especially expressive. Given his impeccable technique and his high range, he was being called the new king of the high Cs. He specialized in the bel canto repertoire of Donizetti and Vincenzo Bellini, and he came to be considered the best Gioachino Rossini singer of his generation. Some of his performances in opera were issued on DVDs, including his roles as Count Almaviva in Rossini's *Il barbiere di Siviglia* (2005) and as Tonio in *La Fille du régiment* (2008), in a production with soprano Natalie Dessay as Marie. Operas on CD included Wolfgang Amadeus Mozart's rarely performed early work *Mitridate, rè di Ponto* (1999) and Rossini's *Le Comte Ory* (2004), and Flórez also sang on recordings of Rossini sacred works, including *Stabat Mater* (1998). In addition, Flórez made several solo recordings, including *Una furtiva lagrima* (2003), works of Bellini and Donizetti; *Sentimiento Latino* (2006), a compilation of South American and Spanish songs; and *Arias for Rubini* (2007), works of Donizetti, Bellini, and Rossini, honouring the great 19th-century tenor Giovanni Rubini. *Juan Diego Flórez: Bel Canto Spectacular* (2008) included both solo performances and collaborations with such singers as soprano Anna Netrebko and tenor Plácido Domingo. Flórez's recordings won a number of awards, and in 2007 he was awarded the Order of the Grand Cross of the Sun of Peru, the country's highest honour. (ROBERT RAUCH)

Gelman, Juan

(b. May 3, 1930, Buenos Aires, Arg.)

At a ceremony in Spain in 2008 during which the Argentine poet Juan Gelman received the Cervantes Prize—the highest literary honour in the Spanish-speaking world—King Juan Carlos praised Gelman's poetry for its "strength, sincerity, and spontaneity." For Gelman the moment must have seemed an ironic one: the activist and poet who had been driven out of Argentina in the 1970s because of his fiercely leftist politics was now being lauded by a Spanish monarch.

Alfredo Estrella—AFP/Getty Images

Argentine poet Juan Gelman

Gelman was jailed in the early 1960s during the Peronists' struggle for control of the federal government. From the late 1960s to the mid-1970s, he wrote for the magazines *Panorama* and *Crisis* in Buenos Aires. His political activism and his involvement with the Montoneros, a left-wing Peronist group that used violence in its efforts to overthrow the military government, resulted in his being forced into exile in Italy in 1975. He returned to Argentina briefly in 1988 before moving to Mexico.

Gelman released his first collection of poetry, *Violín y otras cuestiones* ("Violin and Other Issues"), in 1956. He published prolifically for the next five decades, with his poetry registering the waxing and waning of his prominence as a political activist during the second half of the 20th century. The poems in *Anunciaciones* (1988; "Annunciations"), for instance, show Gelman withdraw from the public sphere; through them he reflects on his political life and returns to some of his early interests in language and creativity. Among the most notable themes in Gelman's wide-ranging poetry are his experiences in Argentina during the 1960s and '70s, his exile, and his Jewish heritage, as well as the nature of poetry itself. A selection of his poems appear in English translation in *Unthinkable Tenderness* (1997).

In the late 1990s Gelman returned to public prominence as he tried to locate the child of his son and daughter-in-law, who were among those "disappeared" by the military government during Argentina's Dirty War of the late 1970s and early 1980s. In 2000 the president of Uruguay, Jorge Batlle, acknowledged that Gelman's daughter-in-law had been transported to Uruguay, where she gave birth to a daughter; Gelman and his granddaughter were subsequently reunited.

Beginning in 2000, Gelman received a number of major literary awards, both for new collections of poetry and for his lifetime's work. The most prominent was the Cervantes Prize, which was announced in 2007 and which confirmed his place as Argentina's most prominent poet at the turn of the 21st century. He remained politically active in 2008 through commentary posted on his blog. (J.E. LUEBERING)

Giannini, Frida

(b. 1972, Rome, Italy)

As the creative director since 2006 of the fashion house Gucci, Frida Giannini was credited with having made the name the world's most coveted luxury brand, a status that was confirmed in February 2008 by a Nielsen ratings survey. In addition, her efforts increased sales at Gucci by more than 10% in two years.

After studying at Rome's Accademia di Costume e Moda, Giannini went to work in 1997 at Fendi, where she rose to become a designer of leather goods; there she was responsible for the Baguette, Fendi's opulent handbag that ignited the hugely profitable accessories craze. Tom Ford, then artistic director of Gucci, hired her in 2002 as director of handbag design, and Giannini took on more responsibilities (creative director of Gucci accessories from 2004 and creative director of women's ready-to-wear and accessories from 2005) until she was named creative director in 2006.

Though critics doubted that Giannini had the experience and vision to reinvigorate Gucci, the company's management reasoned that as a young, female European, Giannini could identify with the customer. In addition, she had performed brilliantly as creative director of accessories, overseeing the merchandise that generated 80% of the company's revenue. In 2004, for example, she introduced the Flora collection—handbags, ribbon-embellished sandals, scarves, and limited-edition watches—which incorporated a perky floral print created originally in 1966 for Princess Grace of Monaco; the line was an unqualified triumph for the firm.

The classic spirit of Flora epitomized Giannini's new direction for the brand. According to Gucci's CEO Mark Lee, her contribution was a "warmer, reinvented, richer, more joyful and sensual Gucci" as she moved the company

Vittorio Zunino Celotto/Getty Images

Italian fashionista Frida Giannini

away from Ford's "minimalist, sometimes cold, hard glamour."

For inspiration, Giannini mined Gucci's archive. Critics branded her ideas as too safe and revisionist. For example, Gucci's autumn-winter 2008 collection was defined by a decadent, dark bohemian look incorporating slim-fit velvet trousers tucked into fringed leather boots as well as drop-waist dresses enhanced with epaulets and lavish embroidery. Nevertheless, customers consistently embraced Giannini's approach, and Gucci's revenues rose dramatically under her creative leadership.

Following Ford's departure, Giannini lured back to Gucci prominent celebrities, including Gwyneth Paltrow and Madonna, who had defected when he was let go. For the opening in New York City of Gucci's Fifth Avenue flagship boutique in February 2008, Giannini and Madonna cochaired a blockbuster fashion event that raised money for orphans and children in sub-Saharan Africa affected by HIV/AIDS.

(BRONWYN COSGRAVE)

Glass, Ira

(b. March 3, 1959, Baltimore, Md.)

On May 4, 2008, on-screen host Ira Glass launched the premiere episode of the second season of *This American Life*, the cable television adaptation of his long-running public radio program of the same name. When the TV show debuted in 2007, many critics initially doubted that the radio show's idiosyncratic format—a series of thematically related stories narrated by various reporters, writers, and artists—would translate to the small screen. The one facet of the television program that they apparently took for granted, however, was Glass, whose ingratiating TV presence and expert framing of the stories were singled out for praise by reviewers after the first installments aired.

Glass acknowledged that as a boy he knew nothing about public radio, but in 1978, after having failed to find a summer job at any of Baltimore's commercial radio and TV stations, he talked his way into an internship at National Public Radio (NPR) in Washington, D.C. He quickly became enamoured with the medium, and he started working for NPR soon after graduating (1982) from Brown University, Providence, R.I., with a degree in semiotics. Glass was a jack-of-all-trades at NPR, holding positions as wide-ranging as tape cutter, copy writer, and producer and occasionally serving as a guest host on *Talk of the Nation* and *All Things Considered*.

He moved to Chicago in 1989 to become a reporter for NPR's Chicago bureau. His yearlong accounts of local attempts at school restructuring won awards from both the National Education Association and the Education Writers Association and further burnished his public radio star. Glass's prominence led to an offer from the MacArthur Foundation to produce and host a new radio show that would focus on Chicago-area writers and performers. Originally titled *Your Radio Playhouse*, Glass's show first aired on WBEZ in Chicago in November 1995. It was an instant hit and was nationally syndicated the following year as *This American Life*. The program received the prestigious Peabody Award in 1996 and again in 2006. The show also drew critical acclaim and developed a strong cult following, which led to unheard-of—by public radio standards—touring shows, CD collections, and a movie adaptation (*Unaccompanied Minors* [2006]), on which Glass served as an executive producer. While some of the often-insular public radio fan base blanched at the idea of Glass's taking *This American Life* to television—he was called "Judas" at one speaking engagement soon after the deal was announced—the radio program (along with its associated podcast) continued to thrive alongside its televised sister show and reached an estimated 1.7 million weekly listeners on more than 500 radio stations in 2008.

(ADAM AUGUSTYN)

Groban, Josh

(b. Feb. 27, 1981, Los Angeles, Calif.)

Just eight years after putting his dream of a college theatre degree on hold so that he could try his hand at a recording career, American singer Josh Groban began 2008 on a professional high. His 2007 release of Christmas songs, *Noël*, was the top-selling album of 2007 in the U.S., with almost 3.7 million copies sold, and had received a nomination for the international album of the year award at Canada's 2008 Juno Awards. Shortly afterward, during the annual Grammy Awards television broadcast on February 10, Groban sang a duet with Italian opera-pop superstar Andrea Bocelli in a tribute to the late Luciano Pavarotti. The performance was particularly noteworthy because in 1999 Groban—then an unknown teenaged stand-in hired by the Grammy-winning producer David Foster—had taken the ailing Bocelli's place in rehearsing the same duet with Canadian pop diva Céline Dion for the Grammy ceremony. In May 2008 Groban's CD/DVD *Awake Live* debuted in the top 10 on *Billboard*'s album chart, the filth of his seven albums to make the top 10. The same month, the rising superstar headlined a star-studded revival of the 1980s musical *Chess* at London's Royal Albert Hall.

Joshua Winslow Groban did not study voice seriously until his teens, when he became active in musical theatre at the Los Angeles County High School for the Arts. In late 1998 his voice instructor introduced him to Foster, who hired Groban to sing at a number of events, including the January 1999 inaugura-

American singer Josh Groban

Dave Hogan/Getty Images

tion of California Gov. Gray Davis. Groban's work with Foster soon led to a recording contract offer from Warner Brothers. Concerned that radio stations and retail stores might overlook Groban because his singing—often in Italian—defied easy categorization, his promoters organized a series of performances on TV news and talk shows, as well as two guest spots on the popular series *Ally McBeal*. The appearances, which capitalized on the singer's unaffected onstage magnetism, fueled sales of two million copies of his first album, *Josh Groban* (2001). Produced by Foster, the album blended contemporary pop with classic songs that showcased Groban's rich baritone voice and romantic sensibility. Performances at high-profile media events, including the closing ceremony of the 2002 Winter Olympics in Salt Lake City, Utah, extended his international appeal and added to the legions of fans known as Grobanites. The CD/DVD *Josh Groban in Concert* (2002) was recorded live during an appearance on the public TV series *Great Performances*. *Closer* (2003) featured more original compositions, as well as performances by such guest artists as classical violinist Joshua Bell. Despite mixed reviews, the album sold two million copies within eight weeks of its release. *Awake* (2006), which also went double-platinum, included collaborations with the South African group Ladysmith Black Mambazo and jazz pianist Herbie Hancock. (JANET MOREDOCK)

Guo Jingjing

(b. Oct. 15, 1981, Baoding, Hebei province, China) As the 2008 Olympic Games opened in Beijing, one of the top favourites to win gold was diver Guo Jingjing. The 26-year-old Guo, already a veteran of three Olympic Games, had not lost a major international event, either individual or synchronized, on the 3-m springboard since 2001 and was widely recognized as the greatest female diver in history. She did not disappoint. Standing 1.63 m (5 ft 4 in) and weighing just 49 kg (108 lb), Guo exploded off the springboard, twisting and tumbling in the air in a way that seemingly defied gravity; then, with her body perfectly aligned, she cut through the water's surface, producing barely a sound or a ripple as she entered. In the end she again walked away with the gold in both the 3-m springboard and the 3-m synchro (with partner Wu Minxia).

Guo grew up in Baoding, a medium-sized city located about 140 km (90 mi) south of Beijing. At age seven she was "discovered" at her elementary school by diving coach Yu Fen, who had risen to prominence coaching Olympic champion Fu Mingxia. Guo, who lived at the sports school where Yu coached, progressed rapidly under her mentor's guidance and was selected for China's 1996 Olympic team, making her international debut at age 13 in Atlanta. She finished fifth, but it was clear that the teenager had the talent, the willingness to work hard, and a certain, undefinable flair for her sport that made her something special.

Yu retired after the Atlanta Games, and Guo transferred to Coach Zhou Jihong, who had become China's first Olympic diving champion in 1984. Under Zhou, she won silver in both the 3-m springboard and 3-m synchro events at the 2000 Games in Sydney. Training for five to seven hours a day, she won double golds at the world championships in 2001, 2003, 2005, and 2007. It was double gold again at the 2004 Olympic Games in Athens.

A megacelebrity in her native land, Guo appeared in commercial advertisements and gossip magazines and was often pursued by Chinese paparazzi. The attention grew ever more intrusive when she began dating another top Chinese diver, Tian Liang, a gold medalist in Athens. The couple became known as "the prince and princess of diving." The scrutiny seemed even more intense after the pair broke up in 2007 and she began dating Kenneth Fok, the grandson of a Hong Kong business tycoon. Naturally outgoing and friendly, Guo was fiercely protective of her privacy, which, on occasion, led to clashes with the press.

Guo announced her retirement from diving following her triumph in Beijing. With four Olympic gold medals, along with two silver, and a world championship medal collection that included eight gold and one silver medal, she departed the scene as the most decorated diver in history—male or female. (PHILLIP WHITTEN)

Heigl, Katherine Marie

(b. Nov. 24, 1978, Washington, D.C.) In 2008 Emmy Award-winning American actress Katherine Heigl, who portrayed Dr. Isobel (Izzie) Stevens on the hit television series *Grey's Anatomy*, seemed to be on the precipice of being crowned the new queen of romantic comedies on the big screen. Following up on the huge success of *Knocked Up* (2007), she starred as a serial bridesmaid looking for Mr. Right in *27 Dresses*. The lighthearted film grossed about $160 million worldwide. Offscreen, however, the candid Heigl found herself at the centre of a drama. In June she angered writers and producers of *Grey's Anatomy* when she announced that she had removed herself from consideration for an Emmy, claiming that she had not been given material to warrant a nomination. This followed her earlier remarks that the story line concerning her character—who had an affair with a married coworker—was a "ratings ploy." Though rumours quickly spread that Heigl was planning to leave the show to concentrate on her film career, she began filming its fifth season later that month.

Heigl started modeling while a child and eventually appeared in TV commercials. In 1992 she made her movie debut in *That Night*, and minor roles in a series of films followed. After graduating from high school, she moved to Los Angeles to pursue an acting career. She quickly found regular work, including the comic fantasy *Wish upon a Star* (1996) and the horror film *Bride of Chucky* (1998). In 1999 she landed a role in the science-fiction TV series *Roswell*, which became a cult hit, and Heigl garnered much attention as the alien Isabel. After *Roswell* ended in 2002, she starred in several television movies, including *Love Comes Softly* (2003) and a sequel, *Love's Enduring Promise* (2004). In 2005 Heigl got her big break when she was cast in *Grey's Anatomy*, a dramedy about hospital doctors. The show was an immediate hit and made Heigl a star. In 2007 she received her first Emmy, for best supporting actress. She also made news that year when she publicly denounced costar Isaiah Washington, who had allegedly referred to cast mate T.R. Knight by a homophobic slur; Washington was later dropped from the show.

While appearing on *Grey's Anatomy*, Heigl continued to enjoy a feature film career, but it was not until her role in *Knocked Up* that she scored a major hit. The unconventional romantic comedy centred on an entertainment reporter (played by Heigl) who has a drunken one-night stand with a stoner. When Heigl's character becomes pregnant and decides to keep the baby, the unlikely couple attempt to form a lasting relationship. Despite her later claim that the film was a "little sexist," it was a critical and commercial success, grossing about $220 million worldwide. Heigl

looked to earn more laughs in 2009, when *The Ugly Truth* was scheduled to be released. (AMY TIKKANEN)

Heller, Michael
(b. March 12, 1936, Tarnow, Pol.)
In 2008 the Templeton Prize, with an award of £820,000 (more than $1.6 million), was conferred on Michael Heller of Poland, an ordained Roman Catholic priest and world-respected mathematical cosmologist. As had been the case frequently in recent years, the focus of the annual prize was intended to honour a person who had dedicated his life to understanding and explaining the interaction of science and religion, and Heller was singled out as a scholar "who for more than 40 years has developed sharply focused and strikingly original concepts on the origin and cause of the universe, often under intense governmental repression." Heller, who had published more than 800 works, including 30 books in Polish and 5 in English, often wrote of the need for an understanding of the natural sciences as a basis for constructing philosophies of nature and man. The disciplines of mathematical physics, theology, and philosophy—most often viewed as incompatible—to Heller were interdependent and indivisible.

Michal Kazimierz Heller was born in southern Poland. When he was four years old, his father helped sabotage the chemical plant in which he worked, and the family fled to the U.S.S.R. to escape the advancing Nazi invaders. During a roundup of Polish refugees, the Hellers were sent to a labour camp in Sakha (Yakutia) in Siberia, where they withstood the attendant hardships chiefly through fortitude and their strong Roman Catholic faith. After World War II they were sent back to Poland, where in 1953 Heller completed his secondary schooling and entered the seminary in Tarnow. Having received a master's degree in theology and taken ordination in 1959, he was given a parish near his hometown. The following year he began courses in science and mathematics at the Catholic University of Lublin, which was at the time virtually the only institution in communist Poland where a priest could pursue advanced studies. He received a master's degree in philosophy (1965), a doctorate (1966), and a habilitation degree (1969) with a thesis titled *Mach's Principle in Relativistic Cosmology*. In 1972 Heller began his association with the Pontifical Faculty (later Academy) of Theology in Krakow. He was given the rank of associate professor in 1985 and professor in 1990, while also serving as rector of the Institute of Theology in Tarnow (from 1991) and dean of its faculty of theology (from 2000). The government allowed Heller to travel outside Poland only from the mid-1970s, but he subsequently visited or held positions at the Catholic University of Louvain (1977 and 1982) and the University of Liège (1996) in Belgium, the Universities of Oxford and Leicester in England (1982), the Catholic University of America in Washington, D.C., and the Vatican Observatory in Castel Gandolfo, Italy (1986). Heller was made a member of the Pontifical Academy of Sciences in 1991. (CHARLES TRUMBULL)

Hillier, Rick
(b. 1955, Campbellton, Nfd.)
In April 2008 charismatic Chief of the Defence Staff (CDS) Gen. Rick Hillier announced his intention to retire as Canada's highest-ranking military officer, effective July 1. Known for his folksy Newfoundland mannerisms, Hillier had attracted considerable public and media attention for speaking out with a candour that was rare among senior Canadian leaders. While addressing a group of reporters in July 2005, shortly after he became CDS, he described Islamist terrorists as "detestable murderers and scumbags." Credited with restoring the domestic reputation of Canada's armed forces, Hillier consistently emphasized the strategic importance of ground troops and openly criticized people who were inclined to think of the Canadian military as nothing more than a peacekeeping force: "We're not the public service of Canada. We're not just another department. We are the Canadian Forces, and our job is to be able to kill people."

Canadian General Rick Hillier

Larry MacDougal—The Canadian Press/AP

Richard J. Hillier joined (1973) the army through the Regular Officer Training Plan and completed a Bachelor of Science degree at Memorial University of Newfoundland in 1975. After finishing his armour officer training, he joined the 8th Canadian Hussars (Princess Louise's) regiment in Petawawa, Ont. He then attended the U.S. Army Armour Officer Advanced Course at Fort Knox, Kentucky, and the Combat Training Centre's Armour School in Gagetown, N.B. Later he served with the Royal Canadian Dragoons regiment in Germany, becoming a squadron commander in 1985. Hillier attended the Canadian Forces Command and Staff College in Toronto in 1988. Upon promotion to lieutenant colonel in 1989, he was posted to Land Forces Command Headquarters in Ottawa before taking command of the Dragoons in Petawawa in 1990. The next year Hillier was posted to National Defence Headquarters in Ottawa, where he served in several administrative positions, becoming a colonel in 1994. He was chief of operations with UN forces in the former Yugoslavia in 1995. Upon his promotion to brigadier general (July 1996), he was put in command of the 2nd Canadian Mechanised Brigade Group in Petawawa.

Hillier first gained widespread public recognition in January 1998 when he took charge of Operation Recuperation. This effort involved more than 15,000 military personnel assigned to help New Brunswick, Ontario, and Quebec recover from a devastating ice storm that had destroyed infrastructure and killed 25 civilians. As an exchange officer, he was appointed the first-ever Canadian deputy commander of the U.S. Army's III Corps in July 1998, and he was promoted to major general in March 1999. In 2000 he commanded the NATO Stabilization Force's Multinational Division (Southwest) in Bosnia and Herzegovina. As a lieutenant general, Hillier became commander of the Canadian army in May 2003, and in February 2004 he was given a six-month assignment to lead NATO's International Security Assistance Force in Afghanistan. He was promoted to full general and assumed his duties as CDS in February 2005. Hillier's honours include Commander of the Order of Military Merit, the Meritorious Service Cross, the Canadian Forces' Decoration, and the U.S. Legion of Merit. (PETER SARACINO)

Hoy, Christopher
(b. March 23, 1976, Edinburgh, Scot.) In winning three gold medals at the 2008 Olympic Games, Chris Hoy became the most successful male Olympic cyclist of all time. Hoy's victories in the team sprint, keirin, and individual sprint in Beijing also made him Scotland's most successful Olympian, as well as the first Briton to win three gold medals in a single Olympics since swimmer Henry Taylor in 1908. In December Hoy was named the BBC Sports Personality of the Year, and at year's end it was revealed that he would receive a knighthood in the 2009 New Year's Honours List.

Hoy was inspired to take up cycling as a seven-year-old by the 1982 film *E.T. The Extra-Terrestrial*. He competed in BMX until 1991, when he turned briefly to mountain biking. He also rowed for Scotland at the junior championship level. Hoy changed disciplines to track cycling in 1992, and in 1994 he won his first British championship track medal, a silver in the junior sprint.

A pivotal point in his career came in 1997 when the British Cycling Federation launched its World Class Performance Plan, which provided funding for Hoy while he completed his studies. He graduated from the University of Edinburgh in 1999 with a bachelor's degree in sports science. That same year he also won his first senior world championship medal, a team sprint silver.

Hoy won a team sprint silver medal at the 2000 Sydney Olympic Games. In 2002 he became a double world champion in the kilometre time trial and team sprint. Though he was less successful in 2003, he regained the world kilometre title in 2004 and won gold in the kilometre time trial in Athens while setting an Olympic and world sea-level record with his time of 1 min 0.711 sec.

The International Olympic Committee's decision in 2005 to drop the kilometre event from the program for Beijing prompted Hoy to rethink his strategy and focus on pure sprinting. His final ride at the kilometre distance was on May 12, 2007, in La Paz, Bol., where he tackled the absolute world record at altitude (58.85 sec) set in 2001. Hoy fell short by just five one-thousandths of a second on his second attempt. He left Bolivia with the consolation of having taken more than a second off the world record for a flying-start 500-m time trial, clocking 24.758 sec, the following day.

Between 2005 and 2007 Hoy won four more world titles, and at the 2008 world championships, in Manchester, Eng., he laid the foundation for his Olympic success by winning the keirin and individual sprint titles. France won the team sprint, but the Great Britain trio of Hoy, Jamie Staff, and Jason Kenny avenged that defeat in Beijing, setting a world record of 42.950 sec to give Hoy the first of his three gold medals.

Hoy was named an ambassador for the 2012 Olympic Games, to be held in London. The velodrome being built in Glasgow for the 2014 Commonwealth Games was to be named in his honour.

(JOHN R. WILKINSON)

Jamie Squire/Getty Images

Scottish cyclist Chris Hoy

Ibrahim, Anwar bin
(b. Aug. 10, 1947, Cherok Tok Kun, Penang, Malay.) In August 2008 veteran Malaysian politician and moderate Islamist Anwar bin Ibrahim, the main opposition leader, won election to Malaysia's parliament, a major step in the rehabilitation of his political career, which had been sullied by unsubstantiated charges of sodomy. Immediately following the landslide victory in his home district of Permatang Pauh, Penang, he launched a strenuous campaign to bring down the government of Prime Minister Abdullah Badawi, whose party, the United Malays National Organization (UMNO), had expelled Anwar in 1998 after he was fired as deputy prime minister. With Abdullah's government stagnating amid scandal and social and economic turmoil, the country's historically disparate opposition rallied around the reformist Anwar in 2007. Early in 2008 he assumed de facto leadership of a three-party opposition coalition, the People's Alliance, made up of the People's Justice Party (PKR), the Pan-Malaysian Islamic Party (Pas), and the Democratic Action Party (DAP).

Prior to general elections in March, Anwar, though banned from seeking political office himself until April, campaigned actively on behalf of the People's Alliance. The coalition's message of ethnic equality, religious tolerance, and open markets—reformist ideals long espoused by Anwar—garnered enough support to break the ruling National Front's (BN's) two-thirds majority in the parliament, which previously had been broken only once since Malaysia gained independence. In mid-September the newly elected Anwar called on Abdullah to convene an emergency session of the parliament, then in recess for the Ramadan fast, asserting that he had enough support to carry a no-confidence vote against the government. The prime minister refused and threatened action against Anwar, whom he declared a threat to the country's security.

The son of politicians, Anwar embarked on his political career in the late 1960s while studying at the University of Malaya in Kuala Lumpur, where he became known as an Islamist student leader. In 1971 he founded the Muslim Youth Movement of Malaysia, serving as its president until 1982. Despite his criticism of the BN and its most powerful component, UMNO, in 1982 Anwar accepted an invitation from Prime Minister Mahathir Mohamad to join UMNO and his government. Anwar advanced swiftly, serving as minister of culture, youth, and sports (1983), agriculture (1984), and education (1986–91) before being appointed minister of finance (1991–98) and deputy prime minister (1993–98). At the helm of Malaysia's remarkable economic prosperity during the 1990s, Anwar gained the respect of colleagues worldwide. During the Asian financial crisis of 1997, however, he clashed with Mahathir over the implementation of economic recovery measures. Anwar was dismissed in 1998, and in 1999 he was jailed on charges of corruption, to which a charge of sodomy—a criminal offense under Malaysian law—was later added. In 2004 Malaysia's High Court overturned the sodomy conviction, citing a lack of evi-

dence, and freed Anwar. Following his release, Anwar held lecturing positions at the University of Oxford; Johns Hopkins University, Baltimore, Md.; and Georgetown University, Washington, D.C. (JANET MOREDOCK)

Johnson, Boris

(b. June 19, 1964, New York, N.Y.) On May 1, 2008, Boris Johnson, an American-born British journalist and Conservative Party politician, narrowly defeated incumbent London mayor Ken Livingstone of the Labour Party to become the city's second elected mayor. Many saw Johnson's slim victory as a repudiation of the national Labour government led by Prime Minister Gordon Brown.

As a child, Alexander Boris de Pfeffel Johnson lived in New York City, London, and Brussels before attending boarding school in England. He won a scholarship to Eton College and later studied classics at Balliol College, Oxford, where he was president of the Oxford Union. After briefly working as a management consultant, Johnson embarked on a career in journalism. He started as a newspaper reporter for *The Times* in 1987 but was fired for fabricating a quotation. He then began working for *The Daily Telegraph*, where he served as a correspondent covering the European Community (1989–94) and as an assistant editor (1994–99). Johnson became a political columnist for *The Spectator* in 1994 and later presided (1999–2005) as the magazine's editor.

In 1997 Johnson was selected as the Conservative candidate for Clwyd South to the House of Commons, but he lost decisively to the Labour Party incumbent, Martyn Jones. Soon after, Johnson began appearing on television, beginning in 1998 with the BBC talk program *Have I Got News for You*, and his bumbling demeanour and occasionally irreverent remarks made him a perennial favourite on British interview shows. He again stood for Parliament in 2001, this time winning the contest in the Henley-on-Thames constituency. Johnson's frequent appearances on TV programs made him one of Britain's most recognized politicians, but his political rise was threatened on a number of occasions. He was forced to apologize to the city of Liverpool in October 2004 after the publication of an insensitive editorial in *The Spectator*, and a month later he was dismissed from his position as shadow arts minister after rumours surfaced that he had lied about an alleged affair with a fellow journalist. Despite such public rebukes, Johnson was reelected to his parliamentary seat in 2005.

He entered into the London mayoral campaign in July 2007, challenging Livingstone, who was first elected as an independent in 2000. During the tightly contested election, Johnson overcame perceptions that he was a gaffe-prone and insubstantial politician by focusing on issues of crime and transportation. A month after his somewhat unexpected victory, Johnson fulfilled a campaign promise by stepping down as an MP.

Johnson also wrote numerous books, including *Lend Me Your Ears* (2003), a collection of essays; *Seventy-Two Virgins* (2004), a novel; and *The Dream of Rome* (2006), a historical survey of the Roman Empire. (EDITOR)

Mayor of London Boris Johnson

Paula Bronstein/Getty Images

Johnson, Jimmie

(b. Sept. 17, 1975, El Cajon, Calif.) In November 2008 race-car driver Jimmie Johnson won his record-tying third consecutive National Association for Stock Car Auto Racing (NASCAR) driver's championship—matching fellow American Cale Yarborough's 30-year-old mark. With just seven seasons of racing in the top series (called the Nextel Cup until 2008, when it became the Sprint Cup), Johnson had already established himself as one of the best drivers in the history of NASCAR.

Early in his career Jimmie Kenneth Johnson showed that he had what it took to one day be called a champion. He began racing at the age of five on 50 cc motorcycles, and at eight years old he won the 60 cc class championship. Eventually he moved on to four-wheel vehicles and began racing in off-road leagues, including Short-Course Off-Road Drivers Association, SCORE International, and Mickey Thompson Entertainment Group.

He won six championships and was named Rookie of the Year in each of those leagues before moving on to the American Speed Association, where he took Rookie of the Year honours in 1998. He began to race in NASCAR's Busch Series in 1998 and by 2000 was a member of Herzog Motorsports' Busch team, finishing third in that season's Rookie of the Year standings. When Herzog Motorsports lost its sponsor in 2000, Johnson was recommended to Hendrick Motorsports by NASCAR driver Jeff Gordon.

Johnson made his first appearance in NASCAR's top series on Oct. 7, 2001, finishing 39th at Lowe's Motor Speedway in a Nextel Cup race. He also earned his first Busch Series win at Chicagoland Speedway, winding up eighth in the Busch Series point standings. He began his rookie campaign in the 2002 Nextel Cup, winning three races and ending the season ranked fifth. Two of those victories came at Dover (Del.) International Speedway, making him the first rookie in series history to sweep both races at a track and the first to lead the point standings (for one week). He finished second in the standings in 2003, with three victories, and won a series-best eight times in 2004 to end up second in the inaugural Chase for the Championship. He finished fifth in the Chase in 2005 before starting his dominant run the following season.

In the 2006 Nextel Cup, Johnson registered five victories, including the Daytona 500, and had 13 top-5 and 24 top-10 finishes. In 2007 he earned his second straight title, becoming the first driver to have 10 victories in a season (including 4 in a row) since his teammate Gordon won 13 races in 1998. In the renamed Sprint Cup in 2008, Johnson won seven races—three during the Chase—and built up enough overall points to secure his third consecutive driver's title with a 15th-place finish in the season-ending Ford 400 in Homestead, Fla., on November 16. (PAUL DIGIACOMO)

Jonas Brothers

(b. Nov. 5, 1987, Teaneck, N.J.), (b. Aug. 15, 1989, Casa Grande, Ariz.), and (b. Sept. 16, 1992, Dallas, Texas) Propelled by the marketing muscle of the Disney organization, the Jonas Brothers, a trio

Peter Kramer/AP

The pop-singing Jonas Brothers: (from left) Nick, Joe, and Kevin Jonas

of soft-rocking siblings, went from the darlings of "tweenage" consumers to pop culture phenomenon in 2008. Their combination of optimism, catchy tunes, and coverboy good looks—coupled with their ubiquitous presence on Radio Disney and the cable television Disney Channel—made Kevin, Joe, and Nick Jonas among the year's most familiar faces and helped their album *A Little Bit Longer* debut at number one on the *Billboard* 200 chart.

Paul Kevin Jonas II, Joseph Adam Jonas, and Nicholas Jerry Jonas were raised in a musical family and imbued with a strong sense of Christian values, notably by their father, an Assembly of God minister. Family sing-alongs in their New Jersey home set the stage for Nick's precocious performances on Broadway, beginning at age six. In 2004 he released a Christian-themed solo album. The pleasure of making music together prompted the brothers to form a band, with Kevin and Nick on guitar (with keyboard work mixed in) while Nick and Joe shared the lead vocal chores. Their first album, *It's About Time* (2006), featured songs co-written by Desmond Child and pop star Adam Schlesinger of the band Fountains of Wayne. Although it was given only a limited marketing push, the album sold 62,000 copies.

Early in 2007, the Jonas Brothers signed with Disney's Hollywood Records, releasing an eponymous album that entered the chart at number five and, riding hits such as "S.O.S.," went platinum. The brothers also began appearing regularly on the Disney Channel, most notably in a highly watched 2007 episode of the show *Hannah Montana*, starring Miley Cyrus (*q.v.*). The Jonases then opened for Cyrus on her "Best of Both Worlds" tour, and it was rumoured that she and Nick Jonas were dating for a time. Jonas Brothers music videos became Disney Channel staples, and they starred in a reality program, *Jonas Brothers: Living the Dream*, but their real breakthrough followed their appearance in the Disney movie musical *Camp Rock*, in which Joe played the romantic lead. Ever more popular, the brothers released *A Little Bit Longer*, with many songs written by Nick; undertook their own tour; and prepared to star in another TV show. In July 2008 they appeared on the cover of *Rolling Stone* magazine as rock critics began acknowledging that the brothers' brand of romantic pop rock was more treat than treacle.

(JEFF WALLENFELDT)

Kaká

(b. April 22, 1982, Brasília, Braz.)

In January 2008 Brazilian-born association football (soccer) player Kaká, AC Milan's spectacular playmaking midfielder, was voted Player of the Year by the Italian players' association. It crowned an amazing year for Kaká, who earned a Union des Associations Européennes de Football (UEFA) Champions League title when AC Milan defeated Liverpool, Eng., in the final on May 23, 2007, and secured more than a dozen personal awards, including being selected 2007 European Player of the Year and Fédération Internationale de Football Association (FIFA) World Player of the Year.

Ricardo Izecson dos Santos Leite owed his universally accepted nickname to his younger brother Rodrigo, who as a child could not pronounce Ricardo and could manage only "Caca." Kaká was seven when the family moved from Cuiabá to São Paulo. A keen football enthusiast, he was taken on by the São Paulo Football Club the following year. At age 15 he was given a contract, but his progress was interrupted three years later by a serious spinal injury (sustained in a swimming accident), which threatened his career. He recovered, however, and made his first-team debut in January 2001. That year he scored 12 goals in 27 matches as an attacking midfield player. Within a year he had made his bow for the Brazilian national team against Bolivia and had been named to Brazil's 2002 World Cup squad.

Kaká's growing exposure on the world stage prompted interest from leading European clubs, and in August 2003 AC Milan paid $8.5 million for his signature. He made his first appearance in Italy the next month in a 2–0 win over Ancona. Kaká was equally adept at initiating and finishing attacks, and his forceful all-around skills developed with Milan, where his teammates gave him another nickname—Ricky. (In 2004 his brother Rodrigo joined him at AC Milan.) Kaká finished eighth and seventh, respectively, in balloting for FIFA Player of the Year in 2005 and 2006 before winning almost every available honour in 2007.

With 59 international appearances and 22 goals for Brazil, in addition to 109 goals in 309 domestic games in Brazil and Italy, Kaká was the highest-paid footballer in the world, with an annual income from the game alone amounting to €8 million (about $12 million) and extensive corporate sponsorship deals. Although his contract with AC Milan lasted until 2011, he remained one of the most sought-after talents in football. In addition to his unselfish performances on the field, Kaká was known as a very private man, a devoted husband, and a devout evangelical Christian with strong moral beliefs. In November 2007, shortly before being named FIFA Player of the Year, he acknowledged that he had considered quitting amid the violence and corruption scandals surrounding the sport in Italy. He became an Italian citizen in February 2008 but would have to wait until 2009 to make his debut for Italy's national team. (JACK ROLLIN)

Kapoor, Anish

(b. 1954, Bombay [now Mumbai], India) In 2008 the first American museum survey of Anish Kapoor's work in more than 15 years was featured at the Institute of Contemporary Art in Boston. *Anish Kapoor: Past, Present,*

Francesco Kangaro—Bloomberg News/Landov

Indian-born British artist Anish Kapoor with his proposed Sky Plinth *for Londou's Trafalgar Square.*

Future highlighted the Indian-born London-based artist's dazzling use of rich colours, polished surfaces, and sensuous forms. Kapoor emerged as part of a generation of British sculptors who gained recognition in the 1980s for their use of abstract and organic forms. He came to prominence for his biomorphic sculptures and installations made in materials as varied as stone, aluminum, and resin that appeared to challenge gravity, depth, and perception. Throughout his career Kapoor explored dualities such as presence and absence, solid and void, and reflection and absorption.

Kapoor made London his home in 1973, and he studied at the Hornsey College of Art until 1977 and at the Chelsea School of Art from 1977 to 1978. A visit to India in 1979 sparked new perspectives on his homeland. These were reflected through his use of saturated pigments and striking architectural forms in bodies of work such as *1000 Names*. Created between 1979 and 1980, this series consisted of arrangements of abstract geometric forms coated with loose powdered pigments that spilled beyond the object itself and onto the floor or wall. Kapoor went on to represent Great Britain at the 1990 Venice Biennale and was awarded the Premio Duemila for his installation *Void Field*, a grid of rough sandstone blocks each with a mysterious black hole penetrating its top surface. In 1991 he was honoured with the prestigious Turner Prize. Kapoor continued to explore the idea of the void through the 1990s, creating series of works that incorporated human-scale constructions that receded into walls, disappeared into floors, or dramatically changed depth with a simple change in perspective. He received an honorary fellowship from the London Institute in 1997 and another in 2001 from the Royal Institute of British Architecture.

Kapoor's interest in addressing site and architecture led him to create projects that became increasingly ambitious in scale and construction. For his 2002 installation *Marsyas* at the Tate Modern in London, Kapoor created a trumpetlike form by erecting three massive steel rings joined by a span of fleshy-red PVC membrane that stretched across the museum's 155-m (550-ft)-long Turbine Hall. In 2004 Kapoor unveiled *Cloud Gate* in Chicago's Millennium Park; the 110-ton highly polished stainless steel elliptical archway, nicknamed "the bean," was his first permanent site-specific installation in the United States. For just over a month in 2006, Kapoor installed *Sky Mirror,* an 11-m (35-ft)-diameter concave stainless-steel mirror in New York City's Rockefeller Center. Both *Cloud Gate* and *Sky Mirror* reflected and transformed their surroundings and demonstrated Kapoor's ongoing experimental investigation of material, form, and space. (MICHAL RAZ-RUSSO)

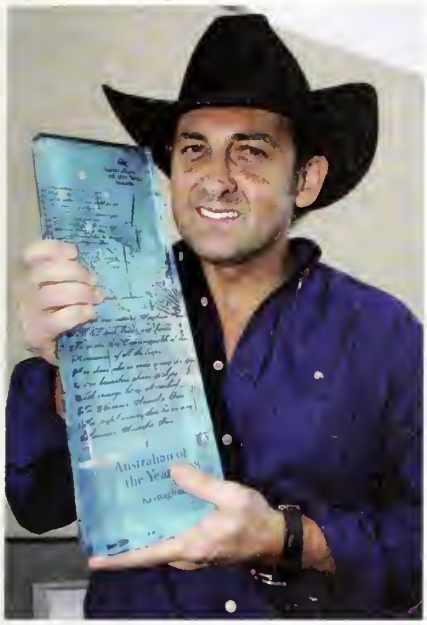
Kernaghan, Lee

(b. April 15, 1964, Corryong, Vic., Australia) On Jan. 25, 2008, Australian country music star Lee Kernaghan was named Australian of the Year by Prime Minister Kevin Rudd. Kernaghan was honoured for his contributions to Australian music and for his series of fundraising performances, which had brought in more than a million dollars to benefit struggling farmers and communities in drought-stricken areas of the Australian bush. On the following day Kernaghan received multiple honours at the Country Music Association of Australia's (CMAA's) annual awards ceremony, where his hit single "Spirit of the Bush" (2007), recorded with fellow country music luminaries Adam Brand and Steve Forde, won the best single, best vocal collaboration, and best video awards. A native of the bush who was often described as the embodiment of rural values, Kernaghan reinvigorated Australian country music in the 1990s, synthesizing traditional themes, the energy of contemporary rock, and images from an evolving bush culture. His 27 CMAA career awards were second in number only to those won by Slim Dusty, widely considered the father of Australian country music.

Lee Raymond Kernaghan was the eldest child of Ray Kernaghan, who rose to great popularity as a country music singer during Lee's teen years. In the mid-1970s Lee formed his first band with his brother, Greg, and sister Tania, who also went on to become a successful country singer, and he wrote two songs recorded on their father's album *Jet Set Country* (1979). In 1982 the younger Kernaghan received a Star Maker Award at the Tamworth Country Music Festival. He released his first single in 1983, and in 1986 he and his father represented Australia at the International Country Music Fan Fair in Nashville.

Unable to find work, Kernaghan abandoned his musical career in 1990, but in 1991 he recorded several demos with Australian producer Garth Porter. These soon led to a contract with ABC Records. Porter produced Kernaghan's debut album, *The Outback Club* (1992), and co-wrote some of the songs. The record took the honours for best album, best song ("Boys from the Bush"), best male vocalist, and best producer at the 1993 CMAA Awards. The Australian Recording Industry Association also named it the best country album of 1993. Kernaghan's second release, *Three Chain Road* (1993), featured collaborations with Slim Dusty, including "Leave Him in the Longyard," which was named best group vocal at the 1994 CMAA Awards. Each of Ker-

Gaye Gerard/Getty Images



Australian of the Year Lee Kernaghan

naghan's subsequent albums—*1959* (1995), *Hat Town* (1998), *Rules of the Road* (2001), *Electric Rodeo* (2002), and *The New Bush* (2006)—earned numerous honours and enthusiastic praise from critics, fans, and the music industry. In 2004 Kernaghan was awarded a medal of the Order of Australia in recognition of his fund-raising efforts on behalf of farmers and rural communities. (JANET MOREDOCK)

Key, John Phillip

(b. Aug. 9, 1961, Auckland, N.Z.)

When John Phillip Key took the oath of office as New Zealand prime minister on Nov. 19, 2008, he was fulfilling the second of two childhood ambitions. The first was to become a millionaire, a goal he achieved as an international investment banker between 1985 and his entry into politics in 2002 as a National Party backbench MP. At that time he had undisputed personal wealth exceeding $NZ 50 million (about U.S.$25 million).

Key was the son of an English father and a Jewish mother who fled Austria for the U.K. in 1939; the couple married in 1948 and immigrated to New Zealand, eventually settling in Auckland. When Key's father died in 1969, the family moved to Christchurch, where they lived in a state rental house and Key's mother worked as a night porter and cleaner to repay accumulated debt. At age eight or nine, Key told his two older sisters that he intended to make a million dollars and become prime minister. He did well at Burnside High School, where he shone in public speaking, debating, and economics, and studied accountancy at the University of Canterbury, from which he graduated with a B.Comm in 1983, the year before his marriage to fellow student Bronough Irene Dougan.

After Prime Minister David Lange's 1984–87 Labour government floated the New Zealand dollar, Key quit his job with a sportswear clothing manufacturer and took a position as a foreign-exchange trader in Wellington for Australia-based Elders Merchant Finance. In 1988 he was lured to the newly established Bankers Trust in Auckland, famously telling the chief executive that "I want your job" and sleeping with a Reuters screen beside his bed.

Beginning in 1995, Key worked in Singapore, London, and Sydney for American investment bankers Merrill Lynch, assuming responsibility for various business units, notably international foreign-exchange and European bond and derivative trading. He developed a reputation as a smart risk taker, and in 1999 he joined the foreign-exchange committee of the Federal Reserve Bank of New York. He also took management studies courses at Harvard University.

Key returned to New Zealand in 2001 to stand for Parliament for the National Party. He won the Helensville (Auckland) seat the following year with a narrow majority of 1,589 votes; three years later he retained his seat with a majority of 12,778. In November 2006 Key, then party spokesman for finance, was elected to succeed departing National leader Don Brash. Key reinvigorated the party, with a renewed emphasis on education, reduced taxes, and an end to the "growing government-funded culture of dependency." In the Nov. 8, 2008, general election, the National Party took 58 of the 122 seats contested, and 11 days later Key achieved his boyhood ambition of becoming prime minister. (NEALE MCMILLAN)

Lange, André

(b. June 28, 1973, Ilmenau, E.Ger.)

By collecting gold medals throughout the 2007–08 season, German bobsleigh driver André Lange confirmed that he was a dominant force in the world of international bobsleigh racing and arguably one of the greatest drivers ever. Lange earned a podium finish at each venue on the World Cup circuit, including four gold medals, three of those during the last three World Cup races. His consistency earned him the World Cup overall titles in both two-man (his first) and four-man (his third) bobsleigh. At the 2008 world championships, held in Altenberg, Ger., less than two weeks later, Lange drove to a double gold-medal performance, securing his third straight (and fourth career) two-man title (all with his longtime brakeman Kevin Kuske) and his seventh career four-man title.

Lange switched at age 19 to bobsleigh from another sliding sport, luge. After winning his World Cup bobsleigh debut, in 1998 at the four-man event in Calgary, Alta., he finished his premier season 13th and 24th in the overall World Cup rankings in four-man and two-man, respectively. He continued to climb in the World Cup overall driver rankings, and since 1998 he had not finished below the top 10 in either two-man or four-man racing.

During his Olympic debut at the 2002 Winter Games in Salt Lake City, Utah, Lange competed only in the four-man event. In the first heat, he finished behind American pilot Todd Hays. The second heat did not prove better, with Lange slipping to third overall. During the third heat, his sled overtook the lead. He drove well in the fourth heat and held on to win the gold medal by 0.30 second.

At the 2006 Winter Olympics in Turin, Italy, Lange swept the two-man and four-man events. In both races Lange was in the lead after the first heat. Sliding with Kuske in the two-man, the duo's split time slipped to fourth overall in the second heat, but the pair rallied, overtook the lead in the third heat, and did well enough in the fourth heat to win. The four-man race proved no different. Lange, with teammates Kuske, Rene Hoppe, and Martin Putze, finished the first heat in first place and collected the fastest split times in each of the first three heats. Lange was awarded his second consecutive gold medal in four-man bobsleigh, the first time that feat had been achieved since East German pilot Meinhard Nehmer won the four-man event at the 1976 and 1980 Olympic Winter Games. Lange's double-gold-medal performance in Turin had last been accomplished by another East German, Wolfgang Hoppe, at the 1984 Winter Olympics in Sarajevo, Yugos. (JULIE PARRY)

Leno, Jay

(b. April 28, 1950, New Rochelle, N.Y.)

In 2008 American comedian Jay Leno continued to rule as the king of late-

night television comedy when *The Tonight Show with Jay Leno* topped the ratings charts with more than five million viewers, nearly one and a half times that of his nearest rival. Despite the Writers Guild strike early in the year, Leno produced humorous content for the show—including a nightly monologue filled with dozens of jokes—by writing it himself. Ever since he took over the coveted job as host of *The Tonight Show* from the legendary Johnny Carson in 1992, Leno, with his cordial, easy-going manner, had demonstrated a strong work ethic and a knack for connecting with his audience. In July it was announced that Leno would host his last episode of *The Tonight Show* on May 29, 2009; thereafter, the show was to be hosted by Leno's NBC colleague Conan O'Brien, while Leno was to host a new prime-time talk show that was set to debut in the fall.

James Douglas Muir Leno was raised in Andover, Mass., and displayed his talent for comedy at an early age. While attending Emerson College in Boston, where he graduated (1972) with a degree in speech therapy, Leno worked as a stand-up comic in nightclubs. After moving to Los Angeles, he served as the opening act for such entertainers as Johnny Mathis and Tom Jones. Early in his career, Leno worked as a writer (1974) for the television situation comedy *Good Times* and occasionally took acting jobs on sitcoms, such as *Laverne & Shirley*, *Friends*, and *Seinfeld*, and in films, including *Wayne's World 2* (1993), *The Flintstones* (1994), and *Wag the Dog* (1997). Leno also provided the voice for characters based on him in animated TV shows, such as *The Simpsons*, *South Park*, and *Family Guy*, and movies, notably *Cars* (2006).

Leno debuted on *The Tonight Show Starring Johnny Carson* in 1977 and became Carson's permanent guest host 10 years later. When Leno succeeded Carson as host of the show, he gave it a more trendy, laid-back image, with edgier musical acts and new comedy segments, including "Jaywalking," "Headlines," and "Police Blotter." Under Leno's leadership, the program garnered four Emmy Awards (1995–97; 1999), and Leno was awarded numerous accolades, including a star on Hollywood's Walk of Fame in 2000. His anecdotal memoir, *Leading with My Chin*, appeared in 1996.

In addition to his comic fame, Leno was recognized as an automotive authority. He wrote a column, "Jay Leno's Garage," for *Popular Mechanics* magazine and contributed to several books, including *Velocity: Supercar Revolution* (2006), *Legendary Motorcycles* (2007), and *The Hemi in the Barn: More Great Stories of Automotive Archaeology* (2007). (BARBARA A. SCHREIBER)

Letts, Tracy
(b. July 4, 1965, Tulsa, Okla.)
The 2008 Pulitzer Prize for drama—as well as the 2008 Tony Award for best play—was awarded to Tracy Letts for *August: Osage County*, a dark comedy depicting a wildly dysfunctional Oklahoma family coping with the death of its patriarch. The show premiered at Chicago's Steppenwolf Theatre in the summer of 2007 and opened on Broadway just a few months later. At the Tonys the play dominated the awards, winning a total of five.

Tracy Shane Letts was raised in Durant, Okla., home of Southeastern Oklahoma State University, where his father, Dennis, taught English and his mother, Billie, taught journalism. (She later wrote a best-selling novel, *Where the Heart Is*.) Letts's father was also an aspiring actor (and would go on to appear in some 40 films and to play the father in the Steppenwolf and Broadway productions of *August: Osage County* before his death in February 2008), and his work in community theatre led Tracy to pursue acting as a teenager. Letts attended Southeastern Oklahoma State briefly before moving to Dallas for two years and then, at age 20, to Chicago, where he eventually began landing acting jobs.

In 1991 Letts wrote a play, *Killer Joe*, that was so graphic and violent that no theatre company would agree to produce it. Two years later Letts and a few other actors produced the play themselves. Mixed reviews did not prevent it from being a hit. A later successful staging at the Edinburgh Festival Fringe resulted in well-received productions in New York City and London. Next came *Bug*, a love story about a woman who is a cocaine addict and a man who thinks his body is infested with insects, which Letts wrote in 1996. It premiered in London, and later the New York production caught the eye of director William Friedkin, who in 2006 turned it into a film, with Letts writing the screenplay. Meanwhile, Letts continued to act. He moved to Los Angeles for a brief period, finding bits of work on television shows such as *Seinfeld* and *Judging Amy*. He appeared onstage in several Steppenwolf productions before being invited to join the ensemble in 2002.

Joe Corrigan/Getty Images

American playwright Tracy Letts

In 2003 Steppenwolf staged Letts's next play, *The Man from Nebraska*, the story of an insurance agent's loss of religious faith, which represented a departure from the writer's previous shocking blood-and-guts material. The play was a finalist for the Pulitzer Prize. While *August: Osage County* was also seen in some ways as more tame than Letts's earlier fare, the playwright saw more similarities than differences across his body of work. Where most plays tended to involve characters every bit as literate as the writers who authored them, Letts said that he wrote plays with real-life characters who did not necessarily express themselves poetically. (ANTHONY G. CRAINE)

Libi, Abu Yahya al-
(b. *c.* 1963, Libya)
Al-Qaeda strategist Abu Yahya al-Libi emerged during 2008 as one of the top leaders in the new generation of the Islamic militant organization; he was also one of those "most wanted" by the United States. Libi was considered one of al-Qaeda's main theologians, because the top two al-Qaeda leaders—Osama bin Laden (an engineer) and Ayman al-Zawahiri (a physician)—had not undertaken Islamic studies.

Little was known about Libi's origins, but it was believed that his birth name was Muhammad Hassan Qa'id and that he assumed the alias Abu Yahya al-Libi in the 1990s when he joined al-Qaeda. He was also known under several other names, including Abu Yahya al-Sahrawi. Libi's education was entirely religious; during the 1980s he received five years of training in Mauritania in Shari'ah, Islamic law. After returning to Libya, he became a member of the

Libyan Islamic Fighting Group, a now-defunct network that in the 1980s attempted to topple Libyan ruler Col. Muammar al-Qaddafi.

As a youth, Libi was influenced by the activities of his older brother 'Abd al-Wahhab, who became a noted personality among extreme Islamists in Libya and who in the 1980s fought in Afghanistan against the Soviet Union's takeover of that country. Libi also joined the Islamic Jihadi fighters in Afghanistan in the early 1990s. He then went to Africa but returned to Afghanistan during the period that the Taliban controlled the country after the Soviets had withdrawn.

After the U.S. declared war on the Taliban and invaded Afghanistan following the Sept. 11, 2001, terrorist attacks in the U.S., Libi was arrested by the Pakistani authorities in the summer of 2002 in the border region between Afghanistan and Pakistan. U.S. forces imprisoned him in a maximum-security facility in Bagram, Afg., but on July 11, 2005, he staged a daring escape with three other al-Qaeda prisoners and found instant fame. He appeared (2006) in a 54-minute videotape chronicling his capture in 2002, his time spent in prison, and his prison breakout.

Libi climbed the ladder rapidly in al-Qaeda's hierarchy and was named a field commander. The charismatic militant preacher and ideologue helped recruit al-Qaeda members. He appeared in more than 12 videotapes giving "lessons" on Islam and jihad and rousing Muslims to fight the infidels of the West as well as Muslim and Arab rulers (whom he threatened constantly). Libi urged Muslims to help al-Qaeda fighters in hot spots such as Pakistan, Iraq, Palestine, Somalia, and Afghanistan. His videotapes, in Arabic, were placed on extremist Sunni Muslim Web sites, sometimes with English and Urdu subtitles to reach the broadest-possible audience. Although Libi was sometimes called "Sheikh," a title reserved for distinguished religious scholars, he lacked the legal authority to issue a fatwa, a legal and authoritative religious decree. He was believed to be living in the mountainous region between Pakistan and Afghanistan. (LOUAY BAHRY)

Lidstrom, Nicklas

(b. April 28, 1970, Västerås, Swed.)

In his 16th season in the National Hockey League (NHL), Swedish-born Nicklas Lidstrom of the Detroit Red Wings again demonstrated why many ice hockey fans considered him one of the greatest defensemen in the history of the game, and on June 4, 2008, he completed the season by leading his team to victory in defeating the Pittsburgh Penguins to win the Stanley Cup. Lidstrom's poise and skill were credited as key to Detroit's success, and this latest championship—his fourth on the Wings' roster—made him the first player born and trained in Europe to captain a Cup-winning team. Soon after, the 10-time NHL All-Star was awarded his sixth Norris Trophy for best defenseman—his third in as many years—which placed him just two shy of the record set by the legendary Canadian Bobby Orr.

Lidstrom played on several Swedish ice hockey clubs before being selected by Detroit as the 53rd overall pick in the 1989 NHL draft. After winning a gold medal with Sweden at the 1991 International Ice Hockey Federation world championships, Lidstrom made his NHL debut on Oct. 3, 1991. He finished the 1991–92 season as runner-up for the Calder Trophy for best rookie player. A scoring defenseman, Lidstrom earned notice for his consistency and durability—he typically logged the most ice time on the team and was rarely injured. In the 1994–95 season, he appeared in his first Stanley Cup, but Detroit was defeated by the New Jersey Devils.

In 1997 the Red Wings swept the Philadelphia Flyers to win the franchise's first Stanley Cup in 42 years. Lidstrom led all defensemen in points as the Wings repeated as champions in 1998. He won his first Norris Trophy in 2001. The next season he helped Detroit defeat the Carolina Hurricanes for a third Stanley Cup; for his dominating performance in the postseason—he scored 5 goals, including 2 game winners, and had 11 assists—Lidstrom became the first European to receive the Conn Smythe Trophy for most valuable player in the play-offs. He capped the 2002–03 season with his third consecutive Norris Trophy. He recorded his 800th career point in 2006, and after Steve Yzerman retired as captain following the 2005–06 season, Lidstrom was named to succeed him. In Lidstrom's first season as team leader, the Wings reached the conference finals but lost to the eventual champions, the Anaheim Ducks. Detroit responded in 2007–08 by posting the best record in the league en route to the franchise's 11th Stanley Cup.

In addition to his NHL play, Lidstrom continued to compete on the Swedish national team. At the 2006 Winter Olympics in Turin, Italy, he scored the game-winning goal in the final against Finland to win the gold medal for Sweden. (AMY TIKKANEN)

Liukin, Nastia

(b. Oct. 30, 1989, Moscow, Russia, U.S.S.R.)

At the 2008 Olympic Games in Beijing, American gymnast Anastasia (Nastia) Liukin, age 18, won five medals, including the individual all-around gold. She also earned the silver medal on balance beam and the bronze on floor exercise and led her team to the silver, the U.S. women's second consecutive Olympic team silver medal. On Liukin's signature event, the uneven bars, she and Chinese gymnast He Kexin tied for the top score. After the tie-breaking procedure was put into place, He was awarded the gold medal, and Liukin received the silver. Although Liukin was disappointed not to win bars, her five medals made her the most successful gymnast in Beijing. In October the Women's Sports Foundation named her Individual Sportswoman of the Year.

Liukin was born Anastasiya Valeryevna Lyukina into a family with extraordinary gymnastics genes. Her Kazakh-born father and coach, Valery Lyukin, won four medals for the Soviet Union at the 1988 Olympic Games and two more at the 1991 world championships, and in 1987 he became the first gymnast to complete a triple back somersault on floor exercise. Her mother, Anna Kochneva, also competed for the Soviet Union and was the 1987 rhythmic gymnastics world champion in clubs. After the dissolution (1991) of the Soviet Union, Lyukin moved his family to the U.S., where he cofounded the World Olympic Gymnastics Academy (WOGA) in Plano, Texas. (The family anglicized their name to Liukin when they became American citizens.) Liukin's parents initially objected to her early interest in gymnastics, but she soon became known for her stylish grace and the long lines in her gymnastics moves, making all her moves look effortless.

Liukin was not age-eligible to qualify for the 2004 U.S. Olympic team, so she watched as Carly Patterson, her teammate from WOGA, won the all-around title. In 2005 Liukin won her first U.S. senior national title, and at the world championships that year, she took gold on the uneven bars and balance beam and earned the silver medal on floor exercise. In the all-around competition, she finished second to her teammate Chellsie Memmel by the slenderest of margins: 0.001 point. Liukin again won

the U.S. title in 2006, but she sprained her ankle at training camp just before the 2006 world championships. Although she was able to compete only on the uneven bars, she made the best of her one-event appearance, winning the silver medal, along with the team silver.

After ankle surgery Liukin was back on form at the 2007 world championships, claiming gold on balance beam and in the team competition and silver on bars. She was also fifth all-around, showing the world that the title was within reach. Liukin, whose nine world medals tied the U.S. record with Shannon Miller, followed in her parents' footsteps, but she left her own mark in the sport of gymnastics.

(LUAN PESZEK)

Livni, Tzipi

(b. July 8, 1958, Tel Aviv, Israel)

Israeli Foreign Minister Tzipi Livni, who became Kadima ("Forward") party leader in September 2008, was tapped soon after to form a coalition government following the resignation of party chairman and Prime Minister Ehud Olmert. Livni spent much of the next few weeks trying to form a coalition government, but her efforts proved unsuccessful. Instead, she petitioned Israeli Pres. Shimon Peres to call early elections, which were set for Feb. 10, 2009.

Tziporah Malka Livni was the daughter of Polish-born parents who were both active in Irgun Zvai Leumi, a militant Jewish group that fought for the foundation of Israel and was the precursor of the hawkish Herut and Likud parties. After serving as a lieutenant in the Israel Defense Forces, Livni began a law degree in 1979 at Bar-Ilan University, Ramat Gan. The following year she was recruited by the Israeli intelligence agency Mossad, and her studies were interrupted in 1983 when she was sent on a mission to Paris. She left the agency shortly thereafter and married accountant Naftali Shpitzer. In 1984 she completed her degree, and during 1984–96 she practiced law, specializing in real-estate and corporate law.

Israeli Foreign Minister Tzipi Livni

Guillaume Baptiste—Israeli Embassy/Getty Images

Livni entered politics following the 1995 assassination of Labour Party Prime Minister Yitzhak Rabin by a right-wing Jewish extremist. She believed that Israel's political right had been unfairly discredited by the assassination and was determined to reverse the Oslo process Rabin had led. When she failed to win a Knesset (parliament) seat in the 1996 election, newly elected Prime Minister Benjamin Netanyahu of the Likud party appointed her head of the Government Companies Authority, where she oversaw a large privatization program.

In 1999 Livni narrowly won a seat in the Knesset in an election swept by the Israel Labour Party. Her rapid political ascent began two years later when Likud's Ariel Sharon replaced Labour's Ehud Barak as prime minister, and after holding a number of junior portfolios and cultivating a highly principled image, she became minister of justice in early 2005. During this time her views on the Arab-Israeli conflict underwent a dramatic change; whereas she had previously supported an Israeli state that encompassed all of the West Bank and Gaza Strip, she became a supporter of the policy of land for peace, with the belief that a Palestinian state was necessary to maintain Israel as a democratic, Jewish-majority state. To that end, as a member of Sharon's inner circle, she helped plan Israel's unilateral withdrawal from the Gaza Strip in 2005.

In November 2005 she left Likud, with Sharon and other party moderates, to found Kadima. When Sharon was incapacitated by a stroke in January 2006, Olmert took over as party leader, winning a general election in March and appointing Livni minister of foreign affairs. Livni later called on Olmert to resign in the wake of Israel's 34-day war against the Shi'ite militia Hezbollah in Lebanon in summer 2006, and the two became bitter rivals. Amid allegations of corruption, Olmert announced in July 2008 that he would step down as prime minister, and Livni narrowly won a September 2008 party election to replace him.

(LESLIE D. SUSSER)

Louboutin, Christian

(b. 1963, Paris, France)

In 2008 French shoe designer Christian Louboutin maintained his high profile on the international fashion scene. In April he opened a European flagship boutique on London's Mount Street; in 2008 he also added stores in Jakarta, Las Vegas, Paris, Tokyo, and Singapore. The new boutiques raised his total to 20, and it was estimated that his company sold 340,000 pairs of shoes annually. Louboutin also made a series of personal appearances at upscale American department stores where his collection was sold, including Barneys New York. These visits were timed to coincide with the first exhibition to be devoted to his creations, *Sole Desire: The Shoes of Christian Louboutin* (March 13–April 19), at the Fashion Institute of Technology in New York City.

At age 17 Louboutin came to the realization that footwear was his calling. He was an apprentice in the dressing rooms of the Folies-Bergère, the famed Parisian music hall, where he was impressed with the ability of showgirls to remain surefooted while wearing huge headdresses. Louboutin gained experience through work at the venerable Paris shoe brand Charles Jourdan, with the master shoe designer Roger Vivier—who became Louboutin's mentor—and as a designer for Chanel, Maud Frizon, and Yves Saint Laurent.

In 1992 Louboutin launched his own business in Paris, and he continued to use the boutique and design atelier there as his headquarters. He developed an unmistakable signature by giving all of his shoes bright red soles. A typical pair of his luxury shoes might also have a stiletto heel and coloured leather or exotic reptile uppers; prices averaged about $800 a pair.

The influential industry journal *Footwear News* noted that Louboutin's trademark red soles were a "subtle status symbol" and were far more alluring than the overt branding of the big-name luxury brands. Differing stories had been offered for the origin of the coloured soles, but Louboutin said that the hue was inspired by an assistant's red nail polish. He decided to use red on all his soles, reasoning that "red is more than a colour. It is a symbol of love, of blood, of passion," as he told the *The Times* (London).

Louboutin developed a huge celebrity following, and his own lifestyle placed him in the jet set. When he was not traveling for business or pleasure, he divided his time between a Paris apartment, a château in the French countryside, and a retreat in Egypt. (BRONWYN COSGRAVE)

Eleanor Bentall—Bloomberg News/Landov

French shoe designer Christian Louboutin

Lugo, Fernando
(b. May 30, 1951, San Pedro del Paraná, Itapúa province, Para.)
On Aug. 15, 2008, former Roman Catholic bishop Fernando Lugo was inaugurated president of Paraguay after having led an opposition coalition (the Patriotic Alliance for Change [APC]) that broke the Colorado Party's 62-year hold on power. Lugo won the April 20 election with 41% of the vote, while Colorado candidate Blanca Ovelar de Duarte earned 31%.

Lugo rose to prominence in Paraguay as the "bishop of the poor," leading landless peasants in his poor rural diocese of San Pedro Apóstol de Ycuamandiyú in a campaign for agrarian reform against wealthy landowners backed by the Colorado Party. After 11 years Lugo resigned his bishopric in January 2005 to step more directly into politics. In a country that was infamous for corruption and in which a third of the population of 6.7 million live in poverty, his reputation for honesty and his work for the poor made the priest, who invariably campaigned in sandals and open-necked shirts, enormously popular. Unions, agrarian groups, and others opposing Colorado Party rule united behind him, as did the APC. After Lugo defied a December 2006 canonical admonition against becoming a presidential candidate, the Vatican suspended him *a divinis* in January 2007, barring him from practicing as a priest.

Lugo promised to push for land redistribution, political and economic transparency, and new social programs to help the poor. He called for renegotiating Paraguay's share of revenues from Brazil for power from the huge Itaipú hydroelectric dam.While cast in the media as part of a leftist "revolution" sweeping Latin America, Lugo described himself as a moderate compared with his left-leaning presidential counterparts in Bolivia, Brazil, Argentina, Ecuador, Uruguay, and Venezuela. "I am not Hugo Chávez, I am Fernando Lugo. I am not Evo Morales, I am not [Rafael] Correa, and I am not Fidel [Castro]," he told the BBC.

Fernando Armindo Lugo Méndez was the nephew of Epifanio Méndez Fleitas, a Colorado Party leader who was forced into exile in 1956, during Gen. Alfredo Stroessner's 35-year dictatorship (1954–89). After briefly working as a primary-school teacher, Lugo began (1970) a novitiate with the Divine Word Missionaries. In 1977 he gained a degree in religious studies from the Universidad Católica in Asunción and was ordained a priest. He worked the following five years in Ecuador's Andean region under the bishop of Riobamba, Leonidas Proano, a leading South American liberation theologist. After a brief return to Paraguay, Lugo was sent to Rome in 1983 for further studies. He returned to Paraguay in 1987, and in 1992 he was appointed the provincial superior, or head, of the Divine Word community in Paraguay. He was consecrated bishop of San Pedro in 1994.
(ROBERT ORTEGA)

Ma Ying-jeou
(b. July 13, 1950, Hong Kong)
On March 22, 2008, Ma Ying-jeou, a Harvard-educated former mayor of Taipei, won a landslide victory in Taiwan's presidential election, defeating Frank Hsieh of the pro-independence Democratic Progressive Party (DPP) by a 58% to 42% margin. Ma was the candidate and former chairman of the Kuomintang (KMT), or Nationalist Party, which supported closer relations with Beijing and eventual reunification with China. His triumph followed a similarly resounding win for the KMT in Taiwan's legislative elections on January 12, when the Nationalists secured 81 of the 113 seats in the Legislative Yuan (parliament). The decisive poll results ensured that Ma would take office on May 20 with a solid mandate, and he vowed to restore the island's rapid economic growth of the 1980s and '90s, in part by boosting trade and investment ties with China.

Ma was born in British-occupied Hong Kong to parents who had fled mainland China after the communist victory in 1949. The family settled in Taiwan in 1951. Ma grew up in Taipei and studied law at National Taiwan University. He won a scholarship to continue his studies in the United States, where he earned a Master of Laws degree (1976) from New York University and a Doctor of Juridical Science degree (1981) from Harvard University. Returning to Taiwan, he entered public service. One of his early assignments was as an English interpreter for then president Chiang Ching-kuo. Ma later served (1984–88) as deputy secretary-general of the KMT.

In 1991 Ma was elected a representative to Taiwan's National Assembly and appointed vice-chairman of the Mainland Affairs Council. He served as the country's minister of justice from 1993 to 1996. Two years later he scored an impressive political victory by defeating future president Chen Shui-bian in the Taipei mayoral race. Though Ma was reelected in 2002 and was elevated to the KMT chairmanship in 2005, his political career was imperiled after allegations surfaced in late 2006 that he had misused public funds while serving as Taipei's mayor. He was formally indicted on corruption charges in February 2007. Ma resigned the KMT chair but nevertheless forged ahead with his presidential campaign. The Taipei District Court acquitted him of all charges the following August, and the Taiwanese High Court upheld the acquittal in December.

Among Ma's first priorities as president were to open direct air and shipping links with China and to lift restrictions on Taiwanese investments in

the mainland. He also planned to pursue "confidence-building measures" aimed at easing military tensions across the Taiwan Strait. While promising to work toward a formal peace agreement with China, he favoured an approach that emphasized "pragmatism and incrementalism" and conceded that "it will take some time" to thaw frosty bilateral relations.

(SHERMAN HOLLAR)

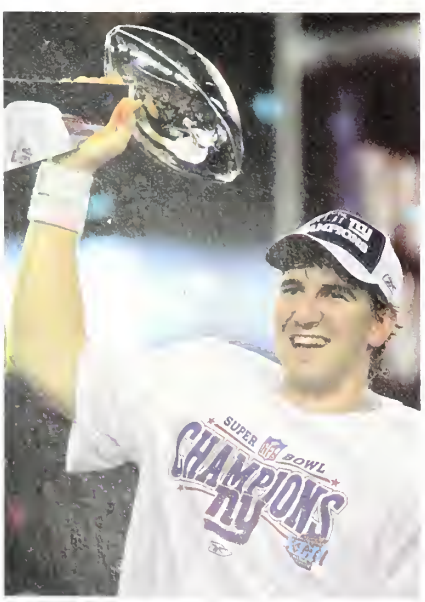
Manning, Eli

(b. Jan. 3, 1981, New Orleans, La.)

Coming from the first family of U.S. football quarterbacks, Eli Manning had great expectations bestowed upon him before he even threw a pass in the National Football League (NFL), but in 2008 he fulfilled those lofty demands. In Super Bowl XLII, held on February 3, in Glendale, Ariz., Manning led the New York Giants to a 17–14 victory over the previously unbeaten New England Patriots, taking the lead on a touchdown pass with 35 seconds left in the game. Eli was named Super Bowl Most Valuable Player (MVP) just one year after his older brother Peyton accomplished the feat with the Indianapolis Colts. In only his fourth season as New York's quarterback, Eli was a Super Bowl champion, something it took his brother nine seasons to achieve.

Elisha Nelson Manning was the youngest of NFL quarterback Archie Manning's three sons and was born right after his father completed his 10th season with the New Orleans Saints. He followed in his father's footsteps and played college football at the University of Mississippi, where he passed for 10,119 yd and 81 touchdowns in four seasons. As a senior, he finished third in the Heisman Trophy voting and won the Maxwell Award as the nation's best all-around player.

U.S. football quarterback Eli Manning



Gabriel Bouys—AFP Getty Images

Eli Manning was selected by the San Diego Chargers with the number one overall pick in the 2004 NFL draft, but he did not want to play for the Chargers, so they traded him to the Giants. Peyton was already one of the NFL's premier quarterbacks, and the inevitable comparisons with his brother may have played a role in Eli's early struggles. As New York's starting quarterback during 2004–06, he went 20–21—including 0–2 in play-off games. In February 2007 Eli watched Peyton execute his MVP-winning performance in the Colts' Super Bowl XLI victory over the Chicago Bears. Critics began to say that Eli would never be able to match his brother's success.

Eli struggled in the 2007 regular season, tying for the league lead in interceptions with 20, but the Giants finished 10–6 and clinched a spot in the play-offs. He then led the Giants to road wins over the Tampa Bay Buccaneers, Dallas Cowboys, and Green Bay Packers to earn a trip to Super Bowl XLII and the NFL title.

Eli's strong play continued in the 2008 season. He led the Giants to a 12–4 record, the National Football Conference (NFC) East Division title, and the top play-off seed in the NFC. Eli was also chosen for the first time to play in the Pro Bowl, joining Peyton—an American Football Conference team selection for the ninth time—in an unprecedented showdown between sibling quarterbacks in the NFL's annual all-star game.

(PAUL DIGIACOMO)

May-Treanor, Misty, and Walsh, Kerri

(b. July 30, 1977, Los Angeles, Calif.) and (b. Aug. 15, 1978, Santa Clara, Calif.)

For American duo Misty May-Treanor and Kerri Walsh in 2008, not even water falling from the Beijing sky could rain on their parade as they became the first beach volleyball team to win back-to-back Olympic gold medals. In the final match on August 21, May-Treanor and Walsh ignored a steady downpour and drenched bathing suits to beat Wang Jie and Tian Jia of China 21–18, 21–18 to continue their four-year reign over women's beach volleyball. The match was the American pair's 108th consecutive victory and their 14th straight Olympics win (they did not lose a set either in Beijing or in Athens at the 2004 Olympics). In their first post-Olympic tournament, May-Treanor and Walsh extended their winning streak to 112 matches, but it came to an end on August 31 with a 21–19, 10–21, 25–23 loss to Olympic teammates Elaine Youngs and Nicole Branagh in the AVP (Association of Volleyball Professionals) Crocs Cup Shootout in Mason, Ohio. The defeat also ended the pair's streak of 19 straight titles—quite an accomplishment for a team that had started playing together only in 2001.

Misty May grew up in California and played indoor volleyball at Long Beach State, where she led her team to the 1998 National Collegiate Athletic Association (NCAA) title in her senior year. She then played for the U.S. national indoor team at the Pan Am Games, after which she decided to try her hand at beach volleyball instead. She teamed with Holly McPeak at the 2000 Sydney Olympic Games, finishing fifth after they lost in the quarterfinals.

Meanwhile, 1.9-m (6-ft 2-in) Kerri Lee Walsh helped Stanford University win consecutive NCAA indoor volleyball titles in 1996 and 1997; she was named national co-player of the year in 1999. She moved on to play for the U.S. indoor team at the Sydney Games, finishing fourth.

May and Walsh teamed up on the sand in 2001 to finish with the number five ranking in the world before reaching number one in 2002. They got even better in 2003, winning a then-record 90 straight matches and all eight tournaments in which they played, including the world championships, where they upset the defending Brazilian champions in the final. That success carried over to the 2004 Olympics, in which they became the first American female tandem to win gold in beach volleyball. Following the Athens Games, they captured two more world titles, in 2005 and 2007.

In November 2004 May wed Major League Baseball player Matt Treanor, and Walsh married volleyball player Casey Jennings in December 2005. After the Beijing Olympics both women said that they would like to start families and take time off from competing in 2009, but first May-Treanor took on a different challenge as a contestant on the television show *Dancing with the Stars*. An injury she incurred while re-

Georgios Kefalas—KEYSTONE/AP

American beach volleyball champions Misty May-Treanor (left) and Kerri Walsh

hearsing, however, required surgery on her Achilles tendon. Neither May-Treanor nor Walsh ruled out the possibility of making a run at a third straight gold medal at the 2012 Olympics in London. "I'm not done. I hope Misty's not done," Walsh said. "I can't imagine playing beach volleyball without her."

(PAUL DIGIACOMO)

McCain, John

(b. Aug. 29, 1936, Panama Canal Zone) U.S. Sen. John McCain of Arizona was the Republican Party's nominee for president in 2008. On November 4 he was defeated by Barack Obama (*q.v.*), the Democratic candidate. A self-described conservative "foot soldier in the Reagan revolution," McCain was known for clashing with his party's right wing on a wide range of issues. He was long a favourite of reporters, who admired what they saw as his directness and helped him gain a reputation as a political maverick.

The son and grandson of U.S. Navy admirals, John Sidney McCain III graduated (1958) from the U.S. Naval Academy near the bottom of his class. He then served in the navy as a ground-attack pilot. In 1967, during the Vietnam War, his plane was shot down over Hanoi, and, badly injured, he was captured by the North Vietnamese. In captivity he endured torture and years of solitary confinement. Finally released in 1973, he received a hero's welcome home as well as numerous service awards, including the Silver Star and the Legion of Merit.

McCain retired from the navy in 1981. He relocated to Arizona and was elected to the House of Representatives in 1982. After serving two terms, he successfully ran for a seat in the U.S. Senate in 1986; he was reelected in 1992, 1998, and 2004. The war hero senator gained national visibility by delivering a well-received address to the 1988 Republican national convention. In the most spectacular case to arise out of the savings and loan scandals of the 1980s, however, McCain became embroiled as a result of his connections with financier and developer Charles Keating, Jr., who had engaged in fraud. Although cleared by the Senate in 1991 of illegalities, McCain was rebuked for having exercised "poor judgment." He subsequently became a champion of campaign finance reform.

In 2000, promising the country "straight talk" and extensive government reform, McCain ran for the Republican presidential nomination, competing against Texas Gov. George W. Bush. Bush prevailed after a strenuous fight, including an especially brutal effort by the Bush campaign in the South Carolina primary. McCain eventually recovered from the defeat, campaigned hard for Bush's reelection as president in 2004, gave unswerving support to the Iraq War, and, after initially opposing Bush's tax cuts, voted against their repeal. In 2007 McCain announced that he would once again seek the Republican presidential nomination. Although his campaign seemed to be in serious trouble as the election year approached, he scored a decisive victory in New Hampshire and went on to secure the nomination with his primary victories on March 4, 2008. By aligning himself with Bush, McCain gained powerful political resources, but he also contradicted his reputation for independence, made himself look inconsistent on key issues (including taxes), and identified himself with a president who in his second term earned the longest sustained period of public disapproval ever. In the general election, McCain and his vice presidential running mate, Alaska Gov. Sarah Palin (*q.v.*), lost decisively to Obama and his running mate, Joe Biden (*q.v.*), who garnered nearly 53% of the vote.

(SEAN WILENTZ)

McCall Smith, Alexander

(b. Aug. 24, 1948, Bulawayo, Southern Rhodesia [now Zimbabwe]) On March 23, 2008, BBC television broadcast an adaptation of Alexander McCall Smith's best-selling novel *The No. 1 Ladies' Detective Agency* (1998) to critical raves. The film was the pilot for a 13-episode TV series featuring McCall Smith's indomitable Precious Ramotswe, to begin production later in the year. Despite the unexpected death of the film's director, Anthony Minghella, just a few days before the broadcast, 2008 looked to be another productive year for McCall Smith.

McCall Smith was raised in Southern Rhodesia and moved to Scotland at age 18 to study at the University of Edinburgh. He received a law degree in 1971 and then returned to Africa, where he helped to establish the law school at the University of Botswana. Back at the University of Edinburgh, where he eventually became a professor of medical law, McCall Smith published a range of scholarly works, including, with J. Kenyon Mason, *Law and Medical Ethics* (1991) and, with Colin Shapiro, *Forensic Aspects of Sleep* (1997). He also served as vice-chairman of the British Human Genetics Commission.

McCall Smith published his first fiction, a children's novel, in 1976. He went on to write more children's books, many of which were set in Africa or derived from African sources. *Children of Wax: African Folk Tales* (1989), a collection aimed at both children and adults, consists of stories he collected in Zimbabwe.

He also wrote radio plays and short stories, and it was from one of the latter that *The No. 1 Ladies' Detective Agency* emerged. The novel sold slowly at first. It did not appear in the U.S. until 2002, after McCall Smith had already published two more books centred on Mma Ramotswe (Mma being an honorific), Botswana's only female detective, but it soon after became an international best seller. By the time the series reached its ninth novel, *The Miracle at Speedy Motors* (2008), more than 15 million copies of the books had been sold in English alone. Throughout the engaging series, Mma Ramotswe—along with her faithful assistant, Mma Makutsi, and Mr. J.L.B. Maketoni—solve mysteries in which crime consists not of murder but of petty burglary, jealousy, and other puzzles of everyday life in Botswana. The books are "about good people leading good lives," McCall Smith explained to an interviewer.

McCall Smith embarked on three other series in 2003–04: *The Sunday Philosophy Club*, which began with a 2004 novel of the same name and has as its main character Isabel Dalhousie, a philosopher and amateur detective in Edinburgh; the *44 Scotland Street* series, which began as a serial published in the newspaper the *Scotsman* in 2004; and the *von Igelfeld* series, which began with *Portuguese Irregular Verbs* (2003), a comic novel about the German academic Dr. Moritz-Maria von Igelfeld.

In 2005 McCall Smith retired from teaching to focus on writing full-time. He was made CBE in 2007.

(J.E. LUEBERING)

McCullough, David

(b. July 7, 1933, Pittsburgh, Pa.)

In 2008, the 40th anniversary of the publication of his first book, American historian and biographer David McCullough saw his Pulitzer Prize-winning biography *John Adams* (2001) made into a television miniseries on the HBO cable channel. It was the second of his presidential biographies to be filmed, following the 1995 TV movie *Truman*.

David Gaub McCullough earned a B.A. (1955) in English literature from Yale University. After graduation he went to New York City, where he took a job at Time-Life's *Sports Illustrated* magazine. In 1961 McCullough moved to Washington, D.C., to work for the United States Information Agency. He left that post after Pres. John F. Kennedy's assassination in 1963 and became an editor for the American Heritage Publishing Co. While there, he began work on *The Johnstown Flood* (1968), the success of which led him to quit his job in 1970 and devote himself full time to writing. His next book, *The Great Bridge: The Epic Story of the Building of the Brooklyn Bridge* (1972), was followed by *The Path Between the Seas: The Creation of the Panama Canal, 1870–1914* (1977), *Mornings on Horseback: The Story of an Extraordinary Family, a Vanished Way of Life, and the Unique Child Who Became Theodore Roosevelt* (1981), *Truman* (1992), *Brave Companions: Portraits in History* (1992), *John Adams*, and *1776* (2005). Though McCullough's narrative approach to history received some criticism from academic historians, his works garnered an impressive list of prizes and awards, including two Pulitzer Prizes (*Truman* and *John Adams*), two National Book Awards (*The Path Between the Seas* and *Mornings on Horseback*), and two Francis Parkman Prizes from the Society of American Historians (*The Path Between the Seas* and *Truman*). He was the recipient of the 1995 Charles Frankel Prize of the National Endowment for the Humanities (now the National Humanities Medal) and a 2006 Presidential Medal of Freedom. In addition to his writing, McCullough served as a television host on the PBS programs *Smithsonian World* (1984–88) and *The American Experience* (1991–2006), and he was the narrator of PBS documentaries, including Ken Burns's *Brooklyn Bridge* (1981) and *The Civil War* (1990), *FDR* (1994), *The Statue of Liberty* (1996), *Napoleon* (2000), and *Abraham and Mary: A House Divided* (2001). From 1991 to 1998 McCullough was president of the Society of American Historians. He was elected (1994) to the American Academy of Arts and Sciences and enshrined (2006) in the American Academy of Arts and Letters. He also served as a visiting professor or scholar in residence at the University of New Mexico; Cornell University, Ithaca, N.Y.; Dartmouth College, Hanover, N.H.; and Wesleyan University, Middletown, Conn. McCullough was a 2008 Janet Weis Fellow in Contemporary Letters at Bucknell University, Lewisburg, Pa.

(MARTIN L. WHITE)

Medvedev, Dmitry

(b. Sept. 14, 1965, Leningrad, U.S.S.R. [now St. Petersburg, Russia]) After Russian Pres. Vladimir Putin's party, United Russia, won an overwhelming majority of seats in the parliamentary elections of December 2007, Putin publicly designated his protégé, First Deputy Prime Minister Dmitry Medvedev, as his preferred successor. A constitutional provision forced Putin to step down in 2008, and Medvedev won the presidential election in early March with more than 70% of the vote. Medvedev formally assumed office as president on May 7.

Dmitry Anatolyevich Medvedev attended Leningrad State University (now St. Petersburg State University), where he earned a bachelor's degree in 1987 and a law degree in 1990. He accepted (1990) a faculty position at his alma mater and taught law there until 1999. In 1991 Medvedev joined the legal team of St. Petersburg's newly elected mayor, Anatoly Sobchak, who also had incorporated Putin into his administration. Medvedev and Putin worked together in the mayor's office for the next five years.

When Sobchak's term of office ended, Medvedev returned to academic life, and Putin moved to a position at the Kremlin. After Putin became acting president of Russia in December 1999, he made Medvedev his protégé. In 2000 Medvedev headed Putin's presidential election campaign, and following Putin's victory Medvedev was named first deputy chief of staff. Later that same year, Medvedev was appointed chairman of the state-owned natural-gas monopoly Gazprom. In 2003 he became Putin's chief of staff, and two years later he was appointed to the newly created post of first deputy prime minister.

Throughout his service under Putin, Medvedev distinguished himself as an able administrator with an eye toward reform. His admiration of Western popular culture—in particular, his fondness for rock-and-roll music—made some conservatives within the Kremlin uneasy, but much of this criticism was softened after Putin named Medvedev his heir apparent. Medvedev responded by stating that Putin would serve as prime minister in his government, which led critics to wonder where executive power would actually reside. The central message of Medvedev's subsequent presidential campaign was, "Freedom is better than no freedom," a remark that hinted at an openness to the West that was uncharacteristic of the Putin years. Medvedev's commanding victory in the March presidential election was widely expected. Although some outside observers criticized the contest as unfair, most agreed that Medvedev's victory reflected the will of the majority of the Russian people. Within hours of his inauguration on May 7, he followed through on his vow to nominate Putin to be his prime minister, and Russia's parliament confirmed the appointment the next day. (EDITOR)

Astakhov Dmitry—ITAR-TASS/Landov

Russian Pres. Dmitry Medvedev

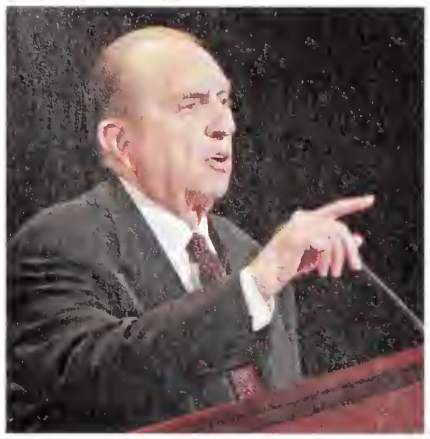
Meireles, Cildo
(b. 1948, Rio de Janeiro, Braz.)
In winning the 2008 Ordway Prize, an unrestricted gift of $100,000, Brazilian conceptual artist Cildo Meireles won more than money—he won recognition as one of the foremost living artists of Latin America. The Ordway Prize, administered by the New Museum and the Creative Link for the Arts, in New York City, and named for naturalist and philanthropist Katherine Ordway, was awarded biennially and simultaneously to two individuals in mid-career, an artist and a curator.

Meireles moved with his family to Goiana (north of Recife) before he was 4 years old and then relocated with them to the modernist capital of Brasília when he was 10. There he lived for nine years, with architect Oscar Niemeyer's new city rising around him. Meireles hoped to study filmmaking, but this dream eventually faded, and his involvement in the arts took a different turn. He was only 19 when he participated in his first art exhibit, at the Museum of Modern Art of Bahia, in Salvador.

During a time of military rule and political repression in Brazil, events such as the death by torture (officially reported as suicide) of the journalist Wladimir Herzog were commonplace. Meireles responded by producing his two-part *Inserções em circuitos ideológicos* (1970; *Insertions into Ideological Circuits*). For this project he stamped anonymous messages in English or Portuguese on Brazilian cruzeiros and Coca-Cola bottles and introduced them into circulation. His banknotes said such things as "Quem matou Herzog?" ("Who killed Herzog?") and "Eleições Diretas" ("Direct Elections")—and sometimes "Yankees Go Home." Although these objects later were collected in museums, Meireles—who was influenced by the Brazilian critic Ferreira Gullar—insisted that the objects were not the art. "Remember that the work is not what we see in a museum exhibition. It's not the bank notes or the Coca-Cola bottles. These objects are only relics. The work itself has no materiality. And it is ephemeral. It only exists when someone is interacting with it. In this respect, it's much more connected with the concept of the antiobject or the nonobject."

Also at this time, Meireles made his first installation, *Eureka/Blindhotland* (1970–75), which by his own account "dealt with the difference between appearance and reality." It consisted of 200 black balls having the same volume but different mass. Exhibition attendees were invited to interact with the balls, to meditate on the deceptiveness of appearance. Another of Meireles's installations, *Missão/missões: como construir catedrais* (1987; *Mission/Missions: How to Build Cathedrals*), was composed of 600,000 coins, a stack of 800 communion wafers, and 2,000 suspended cattle bones. According to the artist, it was about Europeans, particularly Jesuits, in the Americas, symbolizing "material power [and] spiritual power, and a kind of unavoidable, historically repeated consequence of this conjunction, which was tragedy."
(KATHLEEN KUIPER)

George Frey/Getty Images



American Mormon church leader Thomas Monson

Monson, Thomas Spencer
(b. Aug. 21, 1927, Salt Lake City, Utah)
On Feb. 3, 2008, 80-year-old Thomas Spencer Monson was confirmed as the 16th president of the Church of Jesus Christ of Latter-day Saints (LDS). His ascension to the highest Mormon office was in no way surprising, for Monson had served for more than four decades in top LDS church posts. These included second counselor (third highest position) in the First Presidency from 1985 to 1995 and first counselor thereafter under the president, Gordon Hinckley. From 1995 Monson concurrently held the post of president of the Quorum of the Twelve Apostles, the senior priest of the LDS church, and so, per tradition, he was chosen president following Hinckley's death in January 2008.

Monson was the second born in a family of six children; his father was a printer. At age 17 he joined the U.S. Naval Reserve and served a year of active duty, including a few weeks at the end of World War II. He completed a business degree cum laude at the University of Utah in 1948. In the same year, he married and began his career in printing, rising to the post of general manager of Deseret Press, then the largest printing operation west of the Mississippi River. Monson's rise in LDS church affairs was equally notable. He was made bishop of a ward in Salt Lake City at age 22, and in 1959 he was called to serve as president of the Canadian Mission. In 1963 he was elevated to the Quorum of the Twelve Apostles. During the years following, Monson was active with LDS mission work in the South Pacific and especially in Eastern Europe, where he helped in the construction of a temple (dedicated in 1985) in Freiberg, E.Ger., and in gaining permission for the LDS to proselytize behind the Iron Curtain. He also was active in LDS church publishing activities, including the preparation of new versions of basic Mormon texts. He served for many years on the National Executive Board of the Boy Scouts of America and received numerous awards from national and international scouting bodies.

Although LDS church membership had grown 13-fold since 1950, most new recruits were not Americans, and by 2008 there were almost the same number of church members in Latin America and the Caribbean as in the U.S. Furthermore, the campaign of a Mormon, former Massachusetts governor Mitt Romney, for the Republican presidential nomination in 2008 put the traditionally secretive church in the limelight. The LDS church was prospering, and its new president maintained that he would not veer unexpectedly from the church's traditional doctrine. (CHARLES TRUMBULL)

Newson, Marc
(b. 1963, Sydney, Australia)
Hot on the heels of the opening in 2007 of his luxe first-class lounges for Qantas Airways in the Melbourne and Sydney international airports, Australian designer Marc Newson in 2008 had a second solo exhibition at New York City's Gagosian Gallery. Newson's approach was deemed "an experimental exercise in extreme structures and advanced technologies," and the gallery displayed some of his best-known objects. Though the show could represent his household goods and furniture, it could not begin to encompass the interior spaces he designed—his recording studio or restaurant interiors.

Newson attended the Sydney College of the Arts and graduated in 1984 with

Jacques Brinon/AP

French architect Jean Nouvel

a degree in jewelry and sculpture. The following year he won a grant from the Crafts Board of the Australia Council, which enabled him to create his breakthrough piece, the aluminum and fibreglass Lockheed Lounge (1986). This was the first of several limited-edition chairs. Like many of his later furniture pieces, it is made of atypical materials. It has a seamless exterior (extruded substances captivated him) and a modernist yet somewhat retro form variously described as biomorphic or zoomorphic. In 1987 Newson moved to Japan, where he worked mostly with the design company Idée, creating among other objects the Charlotte chair (1987), the Super Guppy lamp (1987), the Embryo chair (1988), the three-legged carbon-fibre Black Hole table (1988), the Orgone lounge (1989), the Felt chair (1989), and a wicker chair (1990).

Newson moved to Paris in 1991 and designed household products for Philippe Starck and later glassware for Iittala in Finland and Alessi, Magis, and Flos in Italy. He formed a partnership with the Swiss businessman Oliver Ike to create Ikepod, a watch company, in 1994. Newson's award-winning shapes and watch cases of gold, silver, and titanium—each signed and numbered—made his watches among the most exclusive pieces of jewelry in the world. (The company was relaunched in 2005, with different partners.)

In 1997 Newson moved to London, where he began to design vehicles—among them the MN01 bicycle for Biomega (1999), the 021C concept car for Ford (1999), and the livery of a privately owned jet, Falcon 900B (1999). In 2006 Newson was named creative director of Qantas. In the U.K. he was named (2006) Royal Designer for Industry.

Newson's work was in the collections of the Design Museum in London; the Musee des Arts Decoratifs, Paris; the Museum of Modern Art, New York City; the Powerhouse Museum of Sydney; and the San Francisco Museum of Modern Art. (KATHLEEN KUIPER)

Nouvel, Jean

(b. Aug. 12, 1945, Fumel, Lot-et-Garonne *departement*, France) French architect Jean Nouvel's lack of a signature style was his trademark. Rather than making his buildings recognizably his own, he designed them to "create a visual landscape" that fits their context—sometimes by making them contrast with the surrounding area. For his boldly experimental designs, which defied a general characterization, he was awarded the 2008 Pritzker Architecture Prize. Architect Frank Gehry summarized Nouvel's strengths and weaknesses in this way: "He tries things and not everything works. There's a mixture of things that are extraordinary, things that are experiments, things that don't come off aesthetically. But Jean is willing to jump in and take on things and try. That's a great quality."

Nouvel's manner of conceptualizing a building had its roots in his origins. His parents, both teachers, suggested that instead of following his dream to become an artist, he should do something more practical so that he could earn a living; architecture provided a perfect compromise. In 1965 Nouvel captured the first of many prizes by winning a national competition to attend the École des Beaux-Arts in Paris. While there, he also worked for an architectural firm formed by the modernist architect Claude Parent and the "urbanist" and cultural theorist Paul Virilio. Nouvel graduated in 1972 with a degree in architecture.

Not until 1987, however, did Nouvel gain an international audience. That was the year the Institute of the Arab World (Institut du Monde Arabe [IMA]) was completed, and for its design he won the 1989 Aga Khan Award for architectural excellence. The main, south facade of that building, with its high-tech aperture-like panels, manages to be at once both cutting-edge in its creative response to changing levels of light and evocative of traditional Arab *moucharaby* (latticework grills). Other awards include a Golden Lion from the Venice Biennale (2000), a Royal Gold Medal from the Royal Institute of British Architects (2001), and the Praemium Imperiale (2001), presented by the Japan Art Association to "artists who have contributed significantly to the development of international arts and culture."

Nouvel's list of completed structures includes one of the three buildings that constitute Seoul's Leeum Museum (2004), Barcelona's bullet-shaped Agbar Tower (2005), the Guthrie Theatre (2006) in Minneapolis, and the quirky Quai Branly Museum (2006) in Paris. He also won a commission to design a branch of the Louvre to be built in Abu Dhabi and a 75-story mixed-use tower to be built next to New York City's Museum of Modern Art. With such an illustrious résumé, Nouvel earned a place in the pantheon of architectural superstars. (KATHLEEN KUIPER)

Obama, Barack

(b. Aug. 4, 1961, Honolulu, Hawaii)
On Nov. 4, 2008, Democratic politician Barack Obama won election as the 44th U.S. president, defeating Arizona Sen. John McCain (*q.v.*), the Republican candidate. Obama was the first African American elected to that office. Before winning the presidency, Obama represented Illinois in the U.S. Senate (2005–08). He was the third African American to be elected to that body since the end of Reconstruction in 1877.

Barack Hussein Obama, Jr., spent most of his childhood and youth in Hawaii, where his parents had met

while they were both university students; his father was from Kenya, and his mother, a white woman, was a native of Kansas. Obama also lived for several years in Jakarta following his parents' divorce in 1964 and his mother's subsequent marriage to an Indonesian oil manager. Obama graduated from Columbia University, New York City (1983), and Harvard Law School (1991), where he was the first African American to serve as president of the *Harvard Law Review*. He moved to Chicago, where he had earlier served as a community organizer, and lectured on constitutional law at the University of Chicago before being elected (1996) to the Illinois Senate as a member of the Democratic Party. In 2004 he won election to the U.S. Senate and quickly became a major national political figure.

In February 2007 Obama announced that he would seek the Democratic Party's presidential nomination. His personal charisma, his stirring oratory, and his campaign promise to bring change to the established political system resonated with many Democrats, especially young and minority voters. On Jan. 3, 2008, Obama won a surprise victory in the first major nominating contest, the Iowa caucus, over Sen. Hillary Clinton, who was the overwhelming favourite to win the nomination. Five days later, however, Obama finished second to Clinton in the New Hampshire primary, and a bruising—and sometimes bitter—primary race ensued. Obama won more than a dozen states on Super Tuesday, February 5, and produced an impressive string of victories later in the month, which gave him a significant lead in pledged delegates. Although his momentum slowed in early March when Clinton won significant victories in Ohio and Texas, Obama still maintained his edge in delegates. On June 3, following the final primaries in Montana and South Dakota, the number of delegates pledged to Obama surpassed the total necessary to claim the Democratic nomination.

On August 27 Obama became the first African American to be nominated for the presidency by either major party. Bolstered by a fever of popular support, he eschewed federal financing of his campaign and raised hundreds of millions of dollars, much of it coming in small donations and over the Internet from a record number of donors. Obama's platform included his call for a swift withdrawal of most combat forces from Iraq and a restructuring of tax policy that would bring more relief to lower- and middle-class voters. Obama and his vice presidential running mate, Delaware Sen. Joe Biden (*q.v.*), handily won the general election, capturing nearly 53% of the vote. Not only did Obama hold all of those states that John Kerry had won in the 2004 election, but he also won a number of states (*e.g.*, Colorado, Florida, Nevada, Ohio, and Virginia) that the Republicans had carried in the last two presidential elections. Shortly after his victory, Obama resigned from the Senate. (DAVID MENDELL)

Odinga, Raila Amolo

(b. Jan. 7, 1945, Maseno, Nyanza province, Kenya) Kenyan opposition politician and businessman Raila Odinga was named prime minister of the country on April 13, 2008, and was sworn in on April 17. The appointment followed violent tribal attacks in late 2007 that occurred in the wake of Odinga's being declared the loser (amid major voting irregularities) in his run for the presidency of the country against incumbent Mwai Kibaki of the Party of National Unity. During his campaign, Odinga sought to dispel the perceived grievances of some western Kenyan ethnic groups by denouncing corruption in high places and by campaigning for a fairer distribution of land and the devolvement of power to largely single-ethnic district councils. Though official results gave Kibaki the victory, an exit poll taken by U.S. observers and released in July 2008 suggested that Odinga was the winner.

Of Nilotic Luo descent, Odinga was the son of Jaramogi Oginga Odinga, the first vice president of independent Kenya. After earning a degree in mechanical engineering in East Germany, Odinga returned to Kenya in 1970 to become a lecturer at the University of Nairobi. He left that post to pursue a career in politics, and in 1982 he was accused of plotting against Pres. Daniel Arap Moi; he was imprisoned without trial for six years. After Odinga's release, he was twice arrested for campaigning against one-party rule, and in 1991 he sought refuge in Norway. He returned to Kenya in 1992, however, and was elected a member of the parliament that year.

In 1997 Odinga stood unsuccessfully for election as president of Kenya. He thereafter gave his support to Moi and the ruling Kikuyu-dominated Kenya African National Union (KANU), becoming energy minister in 2001. Odinga's hope of succeeding Moi as KANU's candidate for the presidency in the 2002 elections was shattered when Moi called upon the party to support Uhuru Kenyatta, son of former president Jomo Kenyatta. Quitting KANU, Odinga formed the National Rainbow Coalition of Kenya, which, after a series of mergers, linked up with another coalition group under the leadership of former vice president Mwai Kibaki, himself a Kikuyu.

Riccardo Gangale/AP

Kenyan politician Raila Odinga

Odinga played a significant role in securing the election of Kibaki as president in 2002 but was disappointed not to be made prime minister, a post for which there was no constitutional provision at that time. When Odinga successfully led a campaign against a government bill, apparently aimed at strengthening still further the powers of the president, Kibaki dismissed his cabinet.

Odinga then formed the Orange Democratic Movement (ODM), which won a resounding majority in the December 2007 parliamentary elections. A delay in the announcement of the result of the presidential election, which Odinga also believed he had won, led him to accuse the government of electoral malpractice and was followed by riots in western Kenya and in the multiethnic slums in Nairobi, which resulted in the death of hundreds of Kikuyu, while thousands more were driven from their homes. The Kikuyu responded in areas where they were in the majority, and it was some weeks before order was restored. Former UN secretary-general Kofi Annan eventually brokered an agreement in February 2008 between Kibaki and Odinga that led to Odinga's being sworn in to the newly created post of prime minister under Kibaki's presidency and with a power-sharing cabinet. (KENNETH INGHAM)

Ortega, Amancio
(b. March 28, 1936, Busdongo de Arbas, León, Spain) In 2008 fashion executive Amancio Ortega, the founding chairman of Spanish clothing merchandiser Inditex (Industria de Diseño Textil, SA), saw his company become the world's largest fashion retailer after it surpassed its chief competitor, American retailer Gap Inc., in first-quarter sales. Inditex, a holding company with more than 3,900 stores in 70 countries, was the brainchild of Ortega, who ranked among the world's top 25 billionaires in 2008 with a net worth of roughly $20 billion.

As a youth in La Coruña, Amancio Ortega Gaona gained an entry into the garment business by working as a delivery boy for a men's shirt store and as an assistant in a tailor's shop. Each job exposed him to the costs of manufacturing and delivering clothing directly to customers. He later managed a clothing store that, like the men's shirt store, catered to a wealthy clientele. Ortega saw an opportunity to expand his client base by using cheaper materials and more efficient manufacturing systems and by competitively pricing garments. He first applied these concepts to a bathrobe business, Confecciones Goa (his initials, reversed), which he founded in 1963.

The full realization of this concept, known as fast fashion, was Zara, the internationally famous chain of ready-to-wear clothing stores. Ortega founded the first Zara store in La Coruña in 1975. It became the flagship of holding company Inditex, which he founded 10 years later. He remained the majority owner of the concern, which in 2008 included the brands Stradivarius, Pull and Bear, Uterqüe, Massimo Dutti, and Oysho. All Inditex businesses operated on the same principle: at fashion shows trend spotters picked up design ideas, in-house designers copied the best concepts, and Inditex's highly efficient manufacturing operations, most of which were based in Spain, produced and delivered new fashions to stores just a few weeks after they had been spotted on fashion runways. In an era in which most clothing manufacturers outsourced production to China and other low-cost locations, Inditex produced two-thirds of its garments in Spain and surrounding countries.

New arrivals reached Zara stores not just in the traditional fashion seasons of fall, winter, spring, and summer, but on a yearlong weekly basis. Styles that did not sell were quickly removed from stores. The fast-fashion concept was so popular with customers that Zara, with more than 1,000 outlets worldwide, spent relatively little on advertising. Despite Ortega's international success in a business that fed on public images and publicity, however, he himself dressed simply, shunned the press, and lived a strictly private life. On the day of Inditex's public offering in 2001, Ortega reportedly worked a regular schedule and ate lunch in the company's cafeteria—despite the fact that his net worth had risen by $6 billion.

(SARAH FORBES ORWIG)

Palin, Sarah
(b. Feb. 11, 1964, Sandpoint, Idaho)
In 2008 Alaska Gov. Sarah Palin was chosen by U.S. Sen. John McCain (*q.v.*) of Arizona, the Republican candidate in the November presidential election, to be his vice presidential running mate. Palin, who had served as Alaska's governor since 2006, was the first woman to appear on a Republican presidential ticket.

Sarah Louise Heath was less than a year old when her family relocated from Idaho to Skagway, Alaska. She was athletic as a youth, earning the nickname "Sarah Barracuda" with her tenacious play on Wasilla High School's 1982 state championship basketball team. She also competed in cross-country and often accompanied her father on hunting trips. She completed (1987) a degree in journalism at the University of Idaho before returning to Alaska to work as a sports reporter at an Anchorage television station. She married Todd Palin, a commercial fisherman and North Slope oil-field worker, in 1988 and four years later entered politics, winning a seat on the Wasilla city council. In 1996 she launched a successful campaign to become Wasilla's mayor. During her six years in office as mayor, she ushered through a series of infrastructure improvements funded by a sales-tax increase, and the city's operating budget soared.

Republican vice presidential candidate Gov. Sarah Palin of Alaska

Elise Amendola/AP

In 2002 Palin campaigned for the Republican nomination for the office of lieutenant governor of Alaska. Although she was ultimately unsuccessful, Palin elevated her profile within the party, and she was appointed to the Alaska Oil and Gas Conservation Commission by newly elected Republican Gov. Frank Murkowski. Palin's time on the commission was short-lived, however. She resigned after encountering resistance to her investigation of Randy Ruedrich, the state Republican Party chair and a fellow commissioner; Ruedrich later admitted to ethics violations. In 2004 Palin further distanced herself from the party when she joined Democratic lawmakers in their call for an investigation of the Alaska attorney general, who had close ties to Murkowski. This and other issues hurt Murkowski politically, and Palin challenged him for the Republican nomination for governor in August 2006. She defeated him handily, winning 51% of the vote in a three-way race, before moving on to a comfortable victory in the general election three months later. Palin became the youngest governor in Alaska's history, as well as the first woman to hold that post.

On August 29 Palin made her debut on the national stage when McCain selected her from among a field of higher-profile candidates to be his running mate. She quickly energized her party's conservative base. The mother of five children—including an infant, born in April, with Down syndrome—Palin drew particular support from right-to-life activists. She delivered an acceptance speech that was enthusiastically received at the Republican national convention in early September, during which she cast herself as "just your average hockey mom" and touted her reformist credentials. Critics, however, questioned her readiness to assume the office of the vice presidency. Her shaky performances in some primetime inter-

views were famously lampooned by comedienne Tina Fey (*q.v.*) on *Saturday Night Live*. Reports that the Republican Party had spent some $150,000 on designer clothing and other accessories for Palin also provided fodder for her critics, although Palin insisted that she had not shopped for the clothes herself and that they would be donated to charity after the campaign. On November 4 the McCain-Palin ticket was defeated by Barack Obama (*q.v.*) and his running mate, Joe Biden (*q.v.*). (EDITOR)

Patrick, Danica Sue
(b. March 25, 1982, Beloit, Wis.)
On April 19, 2008, in her 50th start in the open-wheel Indy Racing League (IRL), American race car driver Danica Patrick secured the first big win of her career, in the Firestone IndyCar 300 race at the Twin Ring Motegi circuit in Japan. Patrick, driving a Dallara-Honda for Andretti Green Racing, skillfully avoided taking a late pit stop in the race and finished 5.86 seconds ahead of former IRL titlist Helio Castroneves of Brazil to become the first woman to win an IndyCar championship event. Patrick's victory—and her sixth-place finish in the season-long drivers' championship—silenced many of her critics, but the question still remained in some minds: was she just a marketing phenomenon or a talented harbinger of how professional auto racing would evolve?

Patrick—a petite 1.57-m (5-ft 2-in), 45-kg (100-lb) brunette—was comely enough to command four pages in the 2008 swimsuit issue of *Sports Illustrated* magazine, host a cable television show, and market a clothing line that included sunglasses and bikinis. Meanwhile, she was a talented-enough race car driver to have collected a plethora of "firsts" for her sex since she began racing go-karts in Beloit, Wis., at the age of 10. At 16, after national success in go-karts, Patrick left high school to race Formula Fords and Vauxhalls in the U.K. In the 2000 Formula Ford festival, she was second, the best-ever finish for an American in that spawning ground for future professionals.

Patrick returned to the U.S. in 2002 after former Indy driver Bobby Rahal signed her. She was then promoted to Toyota Formula Atlantic open-wheel cars. Although she never won in that series, she finished third in the drivers' overall ranking in 2004. That led to a coveted position with the Rahal Letterman Racing team and a chance to qualify for the Indianapolis 500. Three other women—Janet Guthrie, Lyn St. James, and Sara Fisher—had previously qualified for the most prestigious race in the U.S. In her first appearance at Indy in 2005, Patrick set the fastest lap in practice (229.88 mph [369.956 km/hr]), but she could not duplicate this feat during official qualifying. She became the first woman to lead the classic race (three times for a total of 19 laps) and eventually finished fourth. She was named Rookie of the Year and voted IRL Most Popular Driver.

Racing fans repeated the latter honour for 2006 and 2007, when Patrick switched allegiance to Andretti Green Racing. After the 2008 IRL season, it was reported that Ferrari had asked her to test for a Formula 1 ride. Whether she changed to F1 or remained exclusively on the IndyCar circuit, it was clear that Patrick's blend of driving skill, athleticism, and sexuality would continue to bring new exposure to auto racing. (ROBERT J. FENDELL)

Pitt, Brad
(b. Dec. 18, 1963, Shawnee, Okla.)
American superstar Brad Pitt continued to demonstrate his versatility as an actor in 2008, with two new films: the zany *Burn After Reading*, in which he portrayed a somewhat dim-witted would-be blackmailer, and *The Curious Case of Benjamin Button*, a poignant fantasy about a man who ages backward. Each was also a big departure from Pitt's most recent outings: the Oscar-nominated drama *Babel* (2006), the period western *The Assassination of Jesse James by the Coward Robert Ford* (2007), and *Ocean's Thirteen* (2007), the latest sequel to the comedy caper films *Ocean's Eleven* (2001) and *Ocean's Twelve* (2004).

William Bradley Pitt was reared in Springfield, Mo., and attended (1983–87) the University of Missouri before dropping out just short of graduation to move to California and pursue an acting career. After playing minor television and movie roles, Pitt captured the public's attention as a charming scoundrel in the film *Thelma & Louise* (1991). He followed up with such popular movies as *A River Runs Through It* (1992), *Interview with the Vampire* (1994), and *Legends of the Fall* (1994), after which *People* magazine named him that year's Sexiest Man Alive (he held the title again in 2000). Refusing to be typecast by his good looks, however, Pitt starred as a police detective in the gritty thriller *Se7en* (1995) and as a demented malcontent in the fantasy *Twelve Monkeys* (1995), for which he won a Golden Globe and was nominated for an Academy Award. He again deliberately played against type as Austrian mountain climber Heinrich Harrer in *Seven Years in Tibet* (1997), an Irish Republican Army terrorist in *The Devil's Own* (1997), a modern-day Grim Reaper in *Meet Joe Black* (1998), an underground boxer in *Fight Club* (1999), and the Greek warrior Achilles in *Troy* (2004).

The action comedy *Mr. & Mrs. Smith* (2005) paired Pitt with actress Angelina Jolie. They soon began an offscreen relationship (though Pitt was married) and became a media sensation, earning the joint tabloid monicker "Brangelina." After Pitt divorced his wife, actress Jennifer Aniston, he adopted Jolie's two children. The pair had their first biological child in May 2006. The next year they adopted a boy from Vietnam, and in 2008 they added biological twins to their growing family.

Pitt and Jolie often used their celebrity status as a platform for speaking out on behalf of causes about which they cared. Pitt cofounded and was actively involved in Not on Our Watch, a campaign that directed resources to areas of the world suffering humanitarian crises (notably the Sudanese province of Darfur). In 2006 he established Make It Right, a multimillion-dollar project to construct environmentally friendly homes in New Orleans for people displaced by Hurricane Katrina, to which he pledged to match $5 million in contributions. He also headed his own film-production company, Plan B Entertainment. With as many as three new movies due out in 2009 and more in the planning stages, however, Pitt clearly was not neglecting his many-sided acting career. (ANNE SISKA)

Prachanda
(b. Dec. 11, 1954, Lewadi, Nepal)
On Aug. 15, 2008, Prachanda, former leader of the 11-year Maoist insurgency, was elected the first prime minister of the new republic of Nepal by the Constituent Assembly, securing 464 of the 577 votes cast. Under Prachanda's leadership, the Communist Party of Nepal (Maoist) had won 220 seats to become the single largest party in the Assembly when it was voted into office on April 10. As prime minister, Prachanda, who had no previous experience with parliamentary politics, was faced with the task of rebuilding his country.

Pushpa Kamal Dahal was born into a poor farming family in the mountainous Kaski district of central Nepal. At

Nepalese Prime Minister Prachanda

the age of 11 he moved with his family to Chitwan district, where a schoolteacher indoctrinated him in communism. In 1975 he graduated from the Institute of Agriculture and Animal Science in Rampur, Chitwan district. He continued to work in the Communist Party.

In 1980 Prachanda (a nom de guerre meaning "fierce") was charged with leading the All Nepal National Free Students' Union (Revolutionary), which was affiliated with the radical Communist Party of Nepal (Masal ["flame" in Nepalese]). In 1983 he was elected to the central committee of the CPN (Masal), which soon split into the CPN (Masal) and the Communist Party of Nepal (Fourth Convention). CPN (Masal) divided again (1985) into CPN (Masal) and CPN (Mashal ["flame" in Sanskrit]). Prachanda joined the latter, becoming a member of the politburo and rising to the position of general secretary in 1989. Several leftist parties merged in 1990 to form the Communist Party of Nepal (Unity Centre), with Prachanda as a general secretary, but in 1994 it also split in two. In March 1995 Prachanda renamed his branch to reflect its Maoist leanings.

The Maoist party launched its insurgent campaign to abolish the monarchy with an attack on several police stations on Feb. 13, 1996. During 10 years of insurgency, Prachanda remained underground, spending 8 of those years in India. Though the campaign led by Prachanda did not enjoy consistent good fortune, it was ultimately successful in its goal of ending Nepal's 237-year-old monarchy.

Because Prachanda had spent nearly his entire career underground, he at first held little political appeal for the Nepalese public, which tended to view him with suspicion. After his June 2006 public appearance in a meeting with then prime minister Girija Prasad Koirala and opposition leaders to negotiate the creation of the country's new government, however, his popularity began to increase. From the signing of the Comprehensive Peace Agreement in November 2006, the CPN (Maoist) sought to have Prachanda installed as the head of the new government, a campaign that succeeded less than two years later. (KESHAB POUDEL)

Ramirez, Manny

(b. May 30, 1972, Santo Domingo, Dom.Rep.) Slugger Manny Ramirez, a 36-year-old outfielder, was the primary component in one of the most noteworthy trades during the 2008 Major League Baseball (MLB) season. Although batting .299 with a team-leading 20 home runs—including the 500th of his career—for the Boston Red Sox, he was sent to the Los Angeles Dodgers in a complex transaction that also involved Jason Bay of the Pittsburgh Pirates. The dreadlocked Ramirez, a somewhat controversial individual while starring in Boston, declared during the early summer that "the Red Sox don't deserve a player like me." Management expressed dismay with his remark and paid the $7 million remaining on his contract to trade him to Los Angeles. He joined the Dodgers at the trading deadline, July 31, and quickly endeared himself to Los Angeles fans. He was also credited with bringing a looser attitude to his new team, which went from a 54–54 record when he arrived to 84–78 and the National League West Division title. In 53 games with the Dodgers—approximately a third of the regular-season schedule—Ramirez hit .396 with 17 home runs and 53 runs batted in (RBIs) and thereby supplied the team with some much-needed right-handed power. Although the Dodgers failed to make the World Series, in the team's eight playoff games, Ramirez batted .520, with 10 RBIs, 11 walks, and 4 home runs, bringing his career record of postseason homers to 28. He was due to become a free agent during the winter of 2008–09, which meant that the Dodgers would have to sign him to a new contract or risk losing him to another team.

American baseball player Manny Ramirez

Keith Srakocic/AP

Manuel Aristides Ramirez left the Dominican Republic in 1985 for New York City's Bronx, where he graduated from George Washington High School in 1991. He was signed by the Cleveland Indians, and in his first professional season, he was voted Appalachian League Player of the Year while playing for Cleveland's Burlington, N.C., minor-league affiliate. Ramirez joined the Indians in 1993 and established himself as one of the most productive batters in either league. Although sidelined by a hamstring injury for part of the 2000 season, he amassed 38 home runs and 122 RBIs for the Indians in 118 games while compiling a .351 average. During that winter he signed with the Red Sox as a free agent.

Ramirez built a solid résumé in Boston and was voted Most Valuable Player of the 2004 World Series, the first MLB title for the Red Sox since 1918. During that Series Ramirez had seven hits in 17 at bats, including a home run and four RBIs, for a .412 average during a four-game sweep of the St. Louis Cardinals. In 2007 Ramirez batted .296 during the regular season with 20 home runs and 88 RBIs, and the Red Sox went on to win another World Series, sweeping the Colorado Rockies in four games. (ROBERT VERDI)

Ramsay, Gordon

(b. Nov. 8, 1966, Glasgow, Scot.) Notorious for his fiery temper and for his outbursts of profanities in the kitchen—and celebrated for his passion

Frazer Harrison/Getty Images

British chef and restaurateur Gordon Ramsay

for fresh locally grown seasonal ingredients—world-renowned British chef and restaurateur Gordon Ramsay continued to expand his culinary empire in 2008. Early in the year he opened Gordon Ramsay's Plane Food (in the new Terminal 5 of London's Heathrow Airport) and Gordon Ramsay au Trianon (in Versailles outside Paris). He also announced plans to open restaurants in such far-flung cities as Amsterdam and Melbourne, adding to those in London, New York City, Los Angeles, Prague, Tokyo, Dubai, and County Wicklow, Ire.

Ramsay was born in Scotland and raised in Stratford-Upon-Avon after his family moved to England. There he played association football (soccer) for Oxford United. At the age of 15 Ramsay was recruited by the Scottish Premier League Glasgow Rangers, but a knee injury ended his three-year stint (1982–85) with the team. After earning (1987) a higher national diploma in hotel management from North Oxon Technical College, he moved to London and began honing his culinary skills under chef Marco Pierre White at the restaurant Harvey's and under chef Albert Roux at La Gavroche. During the early 1990s Ramsay traveled to France, where he prepared classic French cuisine in the kitchens of master chefs Joël Robuchon and Guy Savoy. In 1993 Ramsay returned to London and became head chef of Aubergine, which by 1996 had won two Michelin stars.

In 1998 he embarked on running his own restaurant, the acclaimed Gordon Ramsay, which within three years had won its third Michelin star (the *Guide Michelin*'s highest honour) and been acclaimed as one of the best restaurants in the world. In 1999 he opened Pétrus, which earned a Michelin star within seven months, and in 2001 he established Gordon Ramsay at Claridge's, which won a Michelin star two years later. A growing succession of Michelin star-winning restaurants followed, including the Savoy Grill, the Boxwood Café, Menu, the Grill Room, Maze, and La Noisette. In 2001 he launched his first international restaurant, Verre, in Dubai. His first American location, Gordon Ramsay at the London, opened in 2006 in New York City.

In addition to his multimillion-dollar restaurant business, Ramsay achieved star status as a television personality. In 2004 he launched the BAFTA Award-winning series *Ramsay's Kitchen Nightmares*, in which he endeavoured to turn failing restaurants into profitable enterprises. Later that year he introduced *Hell's Kitchen*, in which he took on the challenge of turning aspiring restaurateurs into quality chefs. *The F-Word* (a pun on the word *food* and Ramsay's well-known fondness for a particular expletive) premiered in 2005.

Ramsay authored several best-selling cookbooks, including *Passion for Flavour* (1996), *Passion for Seafood* (1999), *A Chef for All Seasons* (2000), *Just Desserts* (2001), *Secrets* (2003), and *Gordon Ramsay Makes It Easy* (2005), as well as the autobiography *Humble Pie* (2006). He was made OBE in 2006.

(BARBARA A. SCHREIBER)

Rashad, Phylicia

(b. June 19, 1948, Houston, Texas) American actress Phylicia Rashad, the first black woman to win (2004) a Tony Award for best actress (for her role as Lena Younger, the matriarch of a struggling African American family in 1950s Chicago, in Lorraine Hansberry's *A Raisin in the Sun*), made history once again on Broadway when Tennessee Williams's *Cat on a Hot Tin Roof* opened with its first all-black cast in March 2008. With costar James Earl Jones, Rashad—in the role of Big Mama—anchored the production, which set Williams's tale of a wealthy Southern planter's morally foundering family at a remove from its original Jim Crow-era time frame to accommodate the African American cast. In February ABC broadcast Rashad's Tony-winning performance, in a television adaptation of *A Raisin in the Sun*. Well received by critics, the adaptation also featured Rashad's costars from the 2004 Broadway production, including Audra McDonald and Sean Combs.

Phylicia Ayers Allen was the second of four children born to Andrew Arthur Allen, a dentist, and Vivian Ayers Allen, a Pulitzer Prize-nominated poet. Phylicia's older brother, Andrew Arthur ("Tex") Allen, Jr., went on to become a jazz musician, and her sister, Debbie Allen, was a dancer, actress, and television producer and director, notably for *Cat on a Hot Tin Roof*. In 1970 Phylicia graduated from Howard University, Washington, D.C., with a B.F.A. in theatre. Soon thereafter she found work with the Negro Ensemble Company in New York City. She made her first appearance on Broadway in 1972 and had minor roles in the hit musicals *The Wiz*

American actress Phylicia Rashad

Carl Juste—Miami Herald/Landov

(1975) and *Dreamgirls* (1981) before making the transition to television. In 1982 she landed a regular role on the daytime soap opera *One Life to Live*. Two years later comedian Bill Cosby chose her for the role of his wife, attorney Clair Huxtable, in the groundbreaking situation comedy *The Cosby Show* (1984–92). After marrying (1985) sports broadcaster Ahmad Rashad, she began using his name professionally (the couple divorced in 2001). Her role as Clair—graceful but assertive, dignified but devoted—became a defining one for Rashad and earned her two Emmy Award nominations, two People's Choice Awards, and an NAACP Image Award. She also played Cosby's wife in the series *Cosby* (1996–2000). During the 1990s and early 2000s, Rashad returned to the stage while continuing to work steadily on TV. Her portrayal of the semimythical Aunt Ester in August Wilson's *Gem of the Ocean* (2003) in productions in Los Angeles and on Broadway won enthusiastic praise. Rashad's performance in *A Raisin in the Sun* also earned a 2004 Drama Desk Award. In 2007 Rashad made her directorial debut at the helm of the Seattle Repertory Theatre's production of *Gem of the Ocean*, and in 2008 she began working on the film *The Middle of Nowhere*, in which she had a starring role, scheduled for release in 2009.

(JANET MOREDOCK)

Rivers, Glenn

(b. Oct. 13, 1961, Chicago, Ill.)

On June 17, 2008, Glenn ("Doc") Rivers, in his fourth season as head coach of the Boston Celtics, became the franchise's sixth head coach to win a National Basketball Association (NBA) championship. Rivers, who had never won a play-off series in eight previous seasons as a coach in the league, guided the Celtics on a dramatic journey to a 66–16 season that culminated in defeating the Los Angeles Lakers 4–2 in the best-of-seven finals.

Glenn Anton Rivers first emerged on the basketball scene as a star at Proviso East High School in Maywood, Ill., where he seemed destined to become the fourth member of his extended family to become a successful professional athlete: Jim Brewer, his uncle, and a cousin, Byron Irvin, both played in the NBA, and another cousin, Ken Singleton, was a Major League Baseball player. Rivers was nicknamed "Doc" by then Marquette University assistant coach Rick Majerus because Rivers wore a "Dr. J" T-shirt (in honour of NBA star Julius Erving) at a summer basketball camp.

While attending Marquette, Rivers helped the U.S. team capture a silver medal at the 1982 Fédération Internationale de Basketball Association world championships. After three seasons at Marquette, he left to become a second-round draft choice of the Atlanta Hawks in 1983 (he completed his degree in political science in 1985). He played 13 seasons, the first 8 with the Hawks, remaining their all-time leader in assists with 3,866. Rivers went on to play 864 regular-season games in the NBA, including stops with the Los Angeles Clippers (1991–92), the New York Knicks (1992–94), and the San Antonio Spurs (1994–96). He retired after the 1995–96 season with career averages of 10.9 points, 5.7 assists, and 3 rebounds.

Rivers became a head coach for the first time in 1999–2000, taking an Orlando Magic team that was projected to finish near the bottom of its division to a 41–41 record and becoming NBA Coach of the Year. Fired after a 1–10 start in 2003–04, he worked as a TV analyst before resuming coaching with the Celtics in 2004–05.

That was where the lessons of his father, Grady, a former police lieutenant in Chicago, became most evident. The Celtics were 24–58 in 2006–07, with critics calling for Rivers's job. When his father died in November 2007 after a brief illness, Rivers missed one game to attend the funeral and then took back to his team the lifelong lessons of consistency and patience he had received from his father. With blockbuster trades in which the Celtics acquired Kevin Garnett from the Minnesota Timberwolves and Ray Allen from the Seattle SuperSonics, Rivers engineered the greatest turnaround in league history, winning the franchise's record 17th championship—and its first since 1985–86—just one day before Grady would have celebrated his 77th birthday.

(PHIL JASNER)

Robinson, Peter David

(b. Dec. 29, 1948, Belfast, N.Ire.)

On June 5, 2008, Peter Robinson became Northern Ireland's first minister, succeeding Ian Paisley, who had retired at the age of 82. It was the culmination of a career that had seen Robinson, one of the fiercest opponents of Irish republicanism, finally reconciled to the need to share power with the main republican party, Sinn Fein, the political arm of the Provisional Irish Republican Army (IRA).

Democratic Unionist Party

Northern Ireland's first minister Peter Robinson

Robinson grew up in Belfast in an era when Northern Ireland's mainly Protestant unionists completely dominated the politics of the province through the Ulster Unionist Party (UUP). After studying at Belfast's Metropolitan College, he became a real-estate agent. Following the death in 1971 of a school friend at the hands of the recently revived IRA, however, Robinson helped to set up the Democratic Unionist Party (DUP), which demanded tougher policies against terrorism than those advanced by the UUP. He became the DUP's general secretary in 1975 and entered the U.K.'s Parliament in 1979 as MP for Belfast East, narrowly defeating (by just 64 votes) one of the UUP's most prominent politicians. In 1986 Robinson demonstrated his militancy by leading a "raid" of 500 unionists across the border into Clontibret, Ire., to confirm what he alleged was weak border security. Irish police arrested him, and he was fined £17,500 (about $30,000). He also briefly stood aside as the DUP's deputy leader, a post he had held since 1980.

He was one of the DUP's leading critics of the Good Friday Agreement, a deal concluded in 1998 between the British and Irish governments, along with Northern Ireland's main parties, including Sinn Fein. When the agreement led to the establishment (1999) of a new Northern Ireland executive, however, he agreed to serve as minister for regional development. Britain restored direct rule over Northern Ireland in October 2002 amid a breakdown of relations between republicans and unionists. Despite the acrimony, that same month Robinson was the first

DUP politician to appear in a live television studio debate with a Sinn Fein politician, Martin McGuinness. It was an angry debate—at one point Robinson denounced McGuinness as a "former IRA commander," while McGuinness retorted that Robinson should stop "acting like a bigot"—but a taboo had been broken.

Robinson went on to become a leading negotiator in the talks that led to the 2006 St. Andrew's Agreement, which paved the way for a full restoration of the Northern Ireland executive and assembly, with Paisley, the DUP's leader since its founding, as first minister and McGuinness as deputy first minister. When Paisley announced in March 2008 that he was stepping down in May, there was little doubt that Robinson would succeed him. On May 31, after 28 years as Paisley's deputy, Robinson was confirmed as DUP leader, and less than a week later he was named first minister.

(PETER KELLNER)

Ryan, Kay
(b. Sept. 27, 1945, San Jose, Calif.)
Quintessentially American poet Kay Ryan, who wrote punchy, wry verses about commonplace things with consummate craft, humour, and intelligence, in 2008 was named the 16th U.S. poet laureate. Her lines and verses were short and suggested Asian forms to many readers. She excelled at using words precisely and reveled in internal rhyme, slant rhyme, alliteration, and other wordplay; some critics were reminded of the verse of Emily Dickinson. Unlike most of her contemporaries, Ryan rarely wrote in the first person.

U.S. poet laureate Kay Ryan

Jennifer Loring—Library of Congress/AP

Though Ryan generally described herself as an "outsider," she was not unknown. She produced six books; was published regularly in *The New Yorker, The Atlantic Monthly, The New York Review of Books, Poetry,* and *Paris Review;* and won major grants and prizes, including the $100,000 Ruth Lilly Poetry Prize (2004), three Pushcart Prizes, and awards from the Guggenheim Foundation and the National Endowment for the Arts.

Ryan grew up in a succession of small towns in California's Central Valley, where her father worked at a variety of jobs (including oil well driller, chromium miner, and Christmas-tree salesman), and her mother was a part-time grade-school teacher. Ryan enrolled at Antelope Valley College, Lancaster, Calif., but soon transferred to the University of California, Los Angeles, where she earned a B.A. (1967) and an M.A. (1968) in English. She moved to northern California in 1971 and took a part-time job teaching remedial English at the College of Marin, Kentfield, Calif., a course she still taught in 2008. Having written poetry since age 19 but still unsure of her true calling, in 1976 Ryan embarked on a cross-country bicycle trip. High in the Colorado Rockies, it came to her that she could pursue a career as a writer. For the next 20 years, she laboured in virtual literary isolation, but she gradually began attracting notice from readers, critics, and the mainstream poetry establishment.

Nonetheless, at least until 2008 Ryan lived the quiet life of a community college teacher. The poem "Hide and Seek" from Ryan's collection *The Niagara River* (2005) might reveal something of the poet's mindset: "It's hard not / to jump out / instead of / waiting to be / found. It's / hard to be / alone so long / and then hear / someone come / around. It's / like some form / of skin's developed / in the air / that, rather / than have torn, / you tear."

(CHARLES TRUMBULL)

Salmond, Alex
(b. Dec. 31, 1954, Linlithgow, Scot.)
On May 14, 2008, almost exactly one year after the Scottish National Party (SNP) ended decades of Labour Party dominance in Scottish politics, First Minister Alex Salmond addressed the Scottish Parliament to review his first year at the head of the SNP's minority government. Salmond emphasized his government's ongoing emphasis on such issues as sustainable economic growth, fairer taxes, education, and environmental awareness. He also reiterated his earlier pledge to move forward with a national referendum on Scottish independence to be submitted in 2010.

Alexander Elliot Anderson Salmond studied economics at the University of St. Andrews and joined the civil service before taking a job as an economist (1980–87) with the Royal Bank of Scotland. From an early age he gained a reputation as something of a rebel. He joined the SNP as a student and was a prominent member of the 79 Group, a socialist republican faction that called for the SNP to become more aggressively radical following the 1979 U.K. general elections. Salmond was expelled from the SNP in 1982 when the 79 Group was banned. His exclusion lasted just one month, however, and by 1985 he was one of the SNP's leading strategists. In the 1987 general election, he won the constituency of Banff and Buchan, a seat previously held by the Conservative Party. As an MP, he was ordered out of the House of Commons for a week in 1988 when he interrupted the chancellor of the Exchequer's annual budget speech to protest the Conservative government's decision to introduce a poll tax in Scotland while reducing income tax for more affluent people across the U.K.

In 1990 Salmond succeeded Gordon Wilson as the national convener (leader) of the SNP. He cooperated with Labour and Liberal Democrat politicians in Scotland to produce a shared plan for devolution and was a prominent and articulate campaigner in the successful 1997 referendum to establish a Scottish Parliament, with limited tax-levying powers but virtually complete control over Scotland's legislation and public services. Salmond was elected the MSP for Banff and Buchan in 1999 in the new Scottish Parliament's first election and became leader of the opposition. The next year he suddenly resigned as SNP leader, following an internal dispute over the party's finances, and was replaced by John Swinney.

After the SNP lost seats in 2003 in the second Scottish Parliament elections, Swinney stepped down (2004) and Salmond was reelected, winning 75% of the party members' votes. He waged a highly effective campaign in the 2007 general elections, and the SNP gained 20 seats for a total of 47 MSPs in the 129-seat Scottish Parliament, one more than Labour. Despite lacking an outright majority, Salmond secured his election as first minister on May 16, 2007. He quickly implemented a number of popular measures, such as freez-

ing council tax rates, and began to promote his main ambition: full Scottish independence. (PETER KELLNER)

Samak Sundaravej
(b. June 13, 1935, Bangkok, Thai.)
On Jan. 28, 2008, by a vote of 310 to 163, the parliament of Thailand elected Samak Sundaravej, leader of the People Power Party (PPP) and a former mayor of Bangkok, as the country's new prime minister. King Bhumibol Adulyadej ratified the election the following day. Samak was the first Thai prime minister to be democratically elected since the ousting of Thaksin Shinawatra as prime minister in a September 2006 military coup.

Samak grew up in Bangkok, studied law at Thammasat University, and worked for a number of years as a newspaper columnist before entering politics. Originally a member of the Democrat Party, he was elected to the parliament in 1973. He stirred controversy three years later by spearheading a radio campaign against pro-democracy activists at Thammasat University and voicing support for the October 1976 crackdown that claimed the lives of dozens of students. After serving (1976–77) as interior minister, Samak founded his own political party, the Prachakorn Thai Party, which he led from 1979 to 2000.

In 1992, after a military junta had toppled the Thai government, Samak was appointed deputy prime minister. In May of that year he again conspicuously supported a bloody suppression of pro-democracy demonstrators by the Thai army. Samak later served with Thaksin in the cabinet of Prime Minister Banharn Silpa-archa. In 2000 Samak scored a resounding victory in the Bangkok mayoral race, but his four-year term in office ended amid allegations of corruption. He went on to host political talk shows as well as a popular cooking show on television, returning to politics in 2006 with a successful run for the Senate, where he served until Thaksin's overthrow. After a military-appointed tribunal dissolved Thaksin's Thai Rak Thai (TRT) party and many top-ranking TRT members were banned from politics, Samak helped establish the pro-Thaksin PPP in August 2007.

Under Samak's leadership, the PPP achieved a comfortable plurality win in Thailand's general election the following December and subsequently was able to form a multiparty governing coalition. One month after Samak assumed the prime ministership, Thaksin returned to Thailand from exile in the U.K. How much power Thaksin would wield in Samak's government was the subject of much speculation. Critics alleged that Thaksin would control the government from behind the scenes. After Samak signaled his intention to amend Thailand's postcoup constitution, the opposition People's Alliance for Democracy (PAD) launched a mass protest against him, describing the move as an attempt to lay the groundwork for a return to power by Thaksin. Samak resisted the PAD's calls for his resignation, but in early September he was forced to step down after the Constitutional Court found him guilty of having illegally accepted payment for TV cooking show appearances that he had made while serving as prime minister. Samak also lost a defamation suit later that month. A bid by some of Samak's supporters in the PPP to renominate him eventually lost steam. Amid renewed protests by the opposition, the PPP named Somchai Wongsawat, Thaksin's brother-in-law, as Samak's successor, but he was soon ousted and the PPP dissolved by the Constitutional Court.

(SHERMAN HOLLAR)

Pornchai Kittiwongsakul—AFP/Getty Images

Thai Prime Minister Samak Sundaravej

Satrapi, Marjane
(b. 1969, Rasht, Iran)
In 2008 illustrator and writer Marjane Satrapi had reached a level of worldwide fame that would have seemed unlikely in the 1980s, when she nearly died, homeless, in Vienna; her best-known book, *Persepolis*, topped one million in sales and was available in two dozen languages. Satrapi's film adaptation of the work was also released on DVD in 2008, a year after it had been nominated for an Academy Award for best animated feature.

Satrapi grew up in Tehran, the only child of Westernized parents. Her father was an engineer and her mother a clothing designer. Satrapi attended the Lycée Français in Tehran, but life became more difficult after the Iranian Revolution of 1979, when her family's Western way of life increasingly drew the attention of Iranian authorities. By 1984 Satrapi's parents had decided to send her to Austria to attend school. A failed relationship there exacerbated her sense of alienation and contributed to a downward spiral that found her living on the streets and using drugs. She returned to Tehran at age 19, studied art, and, after a short-lived marriage, moved back to Europe in 1993. In France she earned a degree in art, and by the mid-1990s she was living permanently in Paris.

Satrapi began working on *Persepolis* in 1999. It was published first in France in two volumes, as *Persepolis 1* (2000) and *Persepolis 2* (2001), which were combined as *Persepolis: The Story of a Childhood* when translated into English in 2003. The work was described as a graphic memoir, a genre that melds the format of a graphic novel with a prose-only memoir. Through a stripped-down visual style that shows the influence of German Expressionism, Satrapi tells the story of her childhood in Tehran. It is a story that Western readers found at once familiar—a restive adolescent who loves Nike shoes and rock music—and foreign—she is stopped and threatened with arrest for wearing those shoes as she walks through a city damaged by bombing raids during the Iran-Iraq War (1980–88).

Persepolis 3 and *Persepolis 4* were published in France in 2002 and 2003, respectively, and were translated together into English as *Persepolis 2: The Story of a Return* in 2004. *Persepolis 2* begins where *Persepolis* ends, with Satrapi living in Europe so as to experience more safety and freedom than her parents felt Iran could offer. The family friend with whom Satrapi was intended to live instead shuffles her to a boarding house, however, and Satrapi's life gradually dissolves. She returns to Iran but feels out of place,

and she eventually leaves again for Europe. *Persepolis* and *Persepolis 2* were praised for their analysis of the gaps and junctures between East and West and for their candour, their engaging narratives, and their humour.

Satrapi, who wrote in French, continued to probe the boundaries between the graphic novel and the memoir with *Broderies* (2003; *Embroideries*) and *Poulet aux prunes* (2004; *Chicken with Plums*). The former consists of stories told by Satrapi's mother, grandmother, and other female relatives and friends about their experiences as women living in Iran; the latter recounts the story of her great-uncle, a renowned *tar* (lute) player who resolves to die when he cannot adequately replace his broken instrument. (J.E. LUEBERING)

Shirakawa, Masaaki
(b. Sept. 27, 1949, Kitakyushu, Japan)
The confirmation of Masaaki Shirakawa as the new governor of the Bank of Japan (BOJ) on April 9, 2008, ended a monthlong political showdown between the government of Prime Minister Yasuo Fukuda and the opposition-dominated upper house of the Diet (parliament) that had left Japan without a permanent central bank governor for the first time in decades. The two sides traded bitter recriminations over who was to blame for the deadlock, which came at an increasingly turbulent time for the Japanese economy and the global financial system as a whole. Ultimately, however, as a scheduled meeting of finance ministers and central bank leaders from the Group of Seven (G-7) countries approached, the two sides settled on Shirakawa, a BOJ veteran who had won approval as the bank's deputy governor in March and who had served as the BOJ's acting governor while the nomination drama played out.

The 58-year-old Shirakawa brought to the governor's office more than three decades of experience at the central bank. He joined the BOJ in 1972 after graduating with a bachelor's degree in economics from the University of Tokyo. He later studied in the U.S. at the University of Chicago, earning a master's degree in economics in 1977 before returning to Japan. Shirakawa was named general manager of the central bank's Oita branch in 1994. The following year he was selected to lead the BOJ's New York City office as general manager for the Americas. He was appointed an executive director at the central bank in 2002.

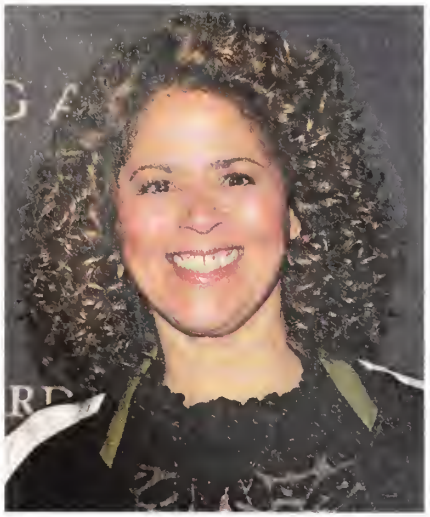
Shirakawa was widely respected for his expertise in monetary policy planning. Many observers saw him as the mastermind behind the unorthodox policy of "quantitative easing" that the central bank had introduced in March 2001. Intended to combat crippling deflation, the policy involved infusing cash into the Japanese banking system while at the same time pegging interest rates at 0%. The BOJ abandoned quantitative easing in 2006 once the economy had stabilized. Shirakawa left the central bank that year to accept a professorship at the Kyoto University School of Government, where he remained until 2008.

As Shirakawa formally assumed office as BOJ governor, fears of a recession in Japan were mounting. Ahead of the meeting of G-7 finance leaders in mid-April, Shirakawa specifically cited higher energy and commodities prices as major drags on the economy. While vowing to maintain a "flexible" approach to monetary policy, he also emphasized the need to "closely examine both upside and downside risks" of any policy changes. (SHERMAN HOLLAR)

Smith, Anna Deavere
(b. Sept. 18, 1950, Baltimore, Md.)
Anna Deavere Smith, who rose to prominence in the early 1990s while performing highly acclaimed one-woman shows dealing with race and class in the late 20th-century United States, returned in 2008 to the form that made her famous. In *Let Me Down Easy*, Smith broadened her perspective to explore the resiliency and vulnerability of the human body; she portrayed more than 20 characters who spoke out about current events such as genocide in Rwanda, steroid use among athletes, AIDS in Africa, and the U.S. health care system; the play opened in January in New Haven, Conn. Although she could be categorized as a playwright, an actress, an author, a journalist, or an educator, Smith appeared to have the main ambition of serving as a kind of mirror, reflecting American society back on itself.

Smith was raised in a racially segregated middle-class section of Baltimore. She was a shy child who nonetheless developed a talent for mimicry. She studied linguistics at Beaver College (now Arcadia University) near Philadelphia, earning a B.A. (1971) before moving to San Francisco to study acting at the American Conservatory Theatre, where she earned an M.F.A. degree (1977). The following

Peter Kramer/Getty Images



American playwright and actress Anna Deavere Smith

year she took a position teaching drama at Carnegie Mellon University in Pittsburgh. While there, Smith explored methods for actors to create characters by studying real people engaged in actual conversations. Inspired by her research, she launched her own ongoing project, *On the Road: A Search for American Character.*

In addition to landing a role on the television soap opera *All My Children*, Smith wrote and performed several well-received plays as part of the *On the Road* project, but her breakthrough work was *Fires in the Mirror: Crown Heights, Brooklyn and Other Identities* (1992), which told the story of the racial tension that rocked the Crown Heights neighbourhood of Brooklyn following an incident in 1991 in which the car of a Hasidic Jew went out of control and hit and killed a black child. Smith crafted the play from her own in-depth interviews, and she performed all 29 roles, moving seamlessly from one character to the next. The show received high critical praise and was a finalist for the Pulitzer Prize. In 1993 her next offering, *Twilight: Los Angeles, 1992*, was a well-executed and well-received exploration of the violence that erupted after the acquittal of four white police officers charged in the beating of Rodney King, a black man.

As an actress Smith appeared on television shows such as *The West Wing* and *Presidio Med* and had roles in the films *The American President, The Human Stain,* and *Dave.* She also authored two books: *Talk to Me: Travels in Media and Politics* (2000) and *Letters to a Young Artist* (2006). She was awarded

a John D. and Catherine T. MacArthur Foundation fellowship (a "genius grant") in 1996. After 10 years as a professor of the arts, Smith left her tenured position at Stanford in 2000 and later joined the faculty at New York University's Tisch School of the Arts.
(ANTHONY G. CRAINE)

Steinmeier, Frank-Walter
(b. Jan. 5, 1956, Detmold, North Rhine–Westphalia, W.Ger. [now in Germany]) On Sept. 7, 2008, German Vice-Chancellor and Foreign Minister Frank-Walter Steinmeier was announced as the official candidate of the Social Democratic Party (SPD) for the chancellorship in the 2009 parliamentary elections. The SPD had been in ideological uncertainty for almost a decade, and the new leftist party Die Linke had preyed on those voters who felt that the SPD had moved too far from its centre-left roots. The criticism that the SPD had become virtually indistinguishable from the centre-right Christian Democratic Union (CDU) was biting and was not helped by SPD's participation in the grand coalition under Chancellor Angela Merkel of the CDU. Although many people considered Steinmeier the proper choice to give the SPD a new direction and regain voter confidence, to others the former civil servant who had never held elective office seemed an unlikely pick.

Steinmeier was the son of a carpenter and a factory worker. As a student he attended meetings of the young socialists regularly, and after finishing high school in Blomberg in 1974, he joined the SPD. Following his completion of mandatory conscription in 1976, he received (1980) a law and politics degree from the University of Giessen, where he joined the faculty in 1986 while working on his Ph.D. dissertation (1991) on state intervention and homelessness. He left academia shortly thereafter and turned to politics.

He took a position in the media law and policy division of the state Chancellery of Lower Saxony, where he quickly progressed to head the office of then-premier Gerhard Schröder in 1993. When Schröder became federal chancellor in 1998, Steinmeier also moved to Bonn to take a job in the Chancellery and to become the commissioner for the federal intelligence service. After the head of the Chancellery withdrew, Steinmeier took over the position. He became one of Schröder's most trusted advisers, the author of a white paper on retirement reform and tax reform, and a decisive voice in a series of economic reforms known as Agenda 2010.

Carsten Koall/Getty Images

German Vice-Chancellor and Foreign Minister Frank-Walter Steinmeier

When Merkel took office and established her grand coalition cabinet in November 2005, she unexpectedly turned to Steinmeier—the confidant of Schröder, her predecessor and political rival—to head the Foreign Office. Although the choice seemed unorthodox, in political and diplomatic circles Steinmeier's appointment was greeted with approval, and in 2007 he added the role of vice-chancellor to his responsibilities. That same year he also served as the president of the European Council.

Despite his overall popularity, Steinmeier had not escaped criticism. He was accused of human rights violations regarding German alleged terrorists who were apprehended by U.S. authorities and transported to Guantánamo Bay in Cuba. This cost him approval from the general public and led some people to question whether he was enough of a Social Democrat to redefine the SPD and move it back into favour with voters. (NICOLA CORKIN)

Stewart, Patrick
(b. July 13, 1940, Mirfield, West Yorkshire, Eng.) In 2008 British actor Patrick Stewart's masterful performance of the title role in Shakespeare's *Macbeth* brought unexpected freshness to the play. The production, which started in London and later moved to Broadway, was set in a claustrophobic Stalinist U.S.S.R., which seemed well suited to the play's atmosphere of paranoiac treachery. Stewart won raves—and a Tony Award nomination—for his rich realization of the central character.

Stewart was the son of a military man, but while his brothers completed military service of their own, he began acting onstage at the age of 12. He performed in playhouses around England before making his London theatrical debut in 1966; he joined the prestigious Royal Shakespeare Theatre the next year and made his first Broadway appearance in 1971, as Snout in another Shakespeare classic, *A Midsummer Night's Dream*.

Despite taking small roles in American and British films and on television from 1973 on, Stewart remained primarily a stage actor for the first quarter century of his career. Then, in 1987, he first appeared in the part that made him a familiar face for audiences around the world: Capt. Jean-Luc Picard in the science-fiction series *Star Trek: The Next Generation* (*TNG*), following veteran *Star Trek* actor William Shatner into the captaincy of the starship *Enterprise*, arguably the most famous spaceship in popular culture. Although it was a surprising choice for someone considered to be a "serious" actor, the role brought Stewart an unprecedented level of fame. His cultured voice and natural gravitas lent great credence to the role and made him the urbane and deeply moral centre of *TNG*. The show ran for seven seasons and spawned four feature films between 1994 and 2002.

In 2000 Stewart brought his powerful presence to the American blockbuster film *X-Men*, playing paraplegic genius Professor Xavier. The professor—like Picard, a peace-loving and intelligent man—similarly helped to ground a fantastical franchise, and Stewart reprised the role in two successful sequels (2003 and 2006).

In the 1990s he took on a greater role behind the scenes, serving as both the star and the executive producer of the made-for-TV movies *The Canterville Ghost* (1996), *A Christmas Carol* (1999), *King of Texas* (2002), and *The Lion in Winter* (2003). Often, Stewart used his majestic tones and perfect British diction to comedic effect in animated shows, and in 2006 his hilarious guest turn on the HBO comedy series *Extras* earned him an Emmy nomination.

Despite these successes on-screen, Stewart never gave up the stage, and he never stopped performing Shakespeare. In the 1990s he played Prospero in *The Tempest* and the title role in an innovative take on *Othello*. In the wake of great praise for his 2008 *Macbeth*, the actor tackled the role of Claudius in a new production of Hamlet.

(MELISSA ALBERT)

Tata, Ratan

(b. Dec. 28, 1937, Bombay [now Mumbai], India) Indian business mogul Ratan Tata, chairman of the privately owned Tata Group, a Mumbai-based conglomerate of nearly 100 companies, made international headlines in 2008 with some of the year's most ambitious moves in the automotive industry. On January 10 Tata Motors officially launched the Nano, a tiny rear-engined, pod-shaped vehicle that was expected to sell for 100,000 Indian rupees, or about $2,500. Although only slightly more than 3 m (10 ft) long and about 1.5 m (5 ft) wide, the highly touted "People's Car" could seat up to five adults and, in Tata's words, would provide a "safe, affordable, all-weather form of transport" to millions of middle- and lower-income consumers both in India and abroad. Tata had his eye on the luxury auto market as well, announcing on March 26 that Tata Motors had agreed to purchase the elite British car brands Jaguar and Land Rover from the Ford Motor Co. The $2.3 billion deal, completed in early June, marked the largest-ever acquisition by an Indian automotive firm. The global financial crisis and plummeting car sales, however, delayed the Nano's introduction and forced Tata to seek new investors.

Ratan Naval Tata was a member of a prominent family of Indian industrialists and philanthropists. He was educated at Cornell University, Ithaca, N.Y., where he earned a B.S. (1962) in architecture before returning to work in India. He gained experience in a number of Tata Group businesses and was named director in charge (1971) of one of them, the National Radio and Electronics Co. He became chairman of Tata Industries a decade later and in 1991 succeeded his uncle, J.R.D. Tata, as chairman of the Tata Group.

Upon assuming leadership of the conglomerate, Tata aggressively sought to expand it, and increasingly he focused on globalizing its businesses. In 2000 the group acquired London-based Tetley Tea for $431.3 million, and in 2004 it purchased the truck-manufacturing operations of South Korea's Daewoo Motors for $102 million. In 2007 Tata Steel completed the biggest corporate takeover by an Indian company when it acquired the giant Anglo-Dutch steel manufacturer Corus Group for $11.3 billion.

Among many other honours accorded him during his career, Tata received the Padma Bhushan, one of India's most distinguished civilian awards, in 2000. *Fortune* magazine included him on its 2007 list of the 25 most powerful people in business, and in 2008 *Time* magazine listed him among the 100 most influential people in the world. Although Tata had talked of the possibility of his stepping down from the chairmanship of the Tata Group following the launch of the Nano, he was not officially scheduled to retire until 2012.

(SHERMAN HOLLAR)

Indian business magnate Ratan Tata

Saurabh Das/AP

Thaci, Hashim

(b. April 24, 1968, the village of Brocna, Yugos. [now Buroje/Brocna, Kosovo]) On Jan. 9, 2008, former rebel leader Hashim Thaci was elected prime minister of Kosovo by a majority vote in the parliament. The following month, on February 17, Kosovo declared its independence from Serbia.

Thaci was born in the Drenica valley, west of Pristina (the capital). This region, historically restive to Serbian rule, became the birthplace in the early 1990s of the Kosovo Liberation Army (KLA), an ethnically Albanian guerrilla movement fighting to end Serbian control of the province. Thaci studied philosophy and history at the University of Pristina and enrolled as a graduate student at the University of Zürich, where he studied Balkan history and international relations. In Pristina and Zürich he was active among Kosovo Albanian (Kosovar) political groups. He became cofounder of the organization People's Movement of Kosovo, which analysts believed created that group's paramilitary wing, the KLA. Known as "the snake," Thaci allegedly secured financing for the KLA's training and arms and engaged in a number of terrorist actions in Kosovo. Local and international media reported that Thaci's alleged criminal activities accounted for about 15% of the province's prostitution operations and arms, oil, and cigarette smuggling.

In July 1997 the District Court of Pristina sentenced Thaci in absentia to 10 years in prison for "criminal acts of terrorism." According to former KLA officials, Thaci allegedly ordered the assassination of his officers and other potential Kosovar political leaders and military commanders. Bujar Bukoshi, who served (1991–2000) as prime minister of the Kosovar government in exile, declared that "cadavers have never been an obstacle to Thaci's career." In 1997 several Western governments named the KLA a terrorist organization, but subsequent to Serbia's brutal crackdown (1998–99) on dissent, which was followed by NATO armed intervention, the KLA was seen as a resistance-liberation movement, with Thaci as its leader.

Thaci gained recognition at the international conference in Rambouillet, France, as leader of the Kosovar Albanian negotiating team and thus marginalized Ibrahim Rugova, who had long been regarded as a pacifist and architect of Kosovo's independence drive. During the negotiations between Koso-

var leaders and Serbia, Western diplomats came to see Thaci as a "voice of reason," and he emerged from the final diplomatic settlement not only as the leader of the strongest faction within a sharply divided KLA but also as the Kosovar political leader with the greatest influence. Serbia's refusal to sign the peace accords was followed by NATO air strikes that led to Serbia's withdrawal from Kosovo in June 1999. Thereafter, Kosovo became an international protectorate.

Thaci's tenure as prime minister was rife with controversy, however, and violence against opposition leaders continued. Organized crime remained a chief concern as the unemployment rate exceeded 40%. In addition, Thaci was unable to convince the country's Serb minority (and others, such as Romany and Turks) that Kosovo was not only home to the Albanian majority but their home as well.

(MILAN ANDREJEVICH)

Tillerson, Rex W.

(b. March 23, 1952, Wichita Falls, Texas) ExxonMobil Chairman and CEO Rex Tillerson opened 2008 in a good position to repeat his past successes. ExxonMobil, the world's largest petroleum company, closed 2007 with earnings of $40.6 billion, ensuring its rank as the world's most profitable firm for the second year in a row. That success did not prevent prominent shareholders—including descendants of oil tycoon John D. Rockefeller—from challenging Tillerson's control over the firm; they launched a proposal to split the CEO and chairman roles by naming an independent board member as chair. Central to their criticism was the oil company's reliance on traditional energy sources, especially in an age when most energy firms were directing a portion of their research funds to the development of biofuels and wind and solar energy. Tillerson brushed aside various charges that the firm emphasized short-term profitability at the expense of larger concerns such as pollution, global warming, and the development of sustainable resources. In May a majority of shareholders reflected full support of Tillerson's leadership as CEO and chairman by rejecting the proposal to split the two roles.

Having grown up in two of the country's leading oil- and gas-producing states, Oklahoma and Texas, Tillerson entered the engineering program at the University of Texas at Austin (B.A., 1975). He joined Exxon Corp. as a production engineer, and by the mid-1980s he was a business development manager in the firm's natural gas department. He later served as the general manager (1989–92) for Exxon's oil and gas production operation in a region that spanned Arkansas, Kansas, Oklahoma, and Texas. Tillerson took his first overseas assignment as president of Exxon Yemen, Inc., and next oversaw (1995–99) company operations in Thailand's Khorat Plateau, the Caspian Sea, and Russia's Sakhalin Island. After Exxon merged with Mobil Corp. in 1999 to form ExxonMobil, he held a number of senior executive positions. CEO Lee Raymond personally chose Tillerson as his successor, and the new CEO assumed leadership in 2006.

Tillerson's successes stemmed from a broad working knowledge of ExxonMobil's many oil and natural gas operations. His experience managing technologically and geologically challenging upstream (exploration and drilling) operations prepared him for the difficult conditions that became the norm for the oil industry in the 21st century, especially as the world's supplies of easy-to-reach crude oil diminished. Geopolitics posed yet another challenge, particularly in Venezuela's nationalization of oil fields (2007), which stripped ExxonMobil of its oil concessions in two Venezuelan projects. Tillerson asserted that fossil fuels represented the only resource capable of meeting growing global energy demands. Further evidence of the firm's commitment to oil production came in June 2008 when ExxonMobil revealed its plan to exit the low-profit-margin retail gasoline business. Seven weeks later Tillerson announced that ExxonMobil had broken its own record in the second quarter of 2008, with a net income of $11.68 billion; third-quarter net income was even higher, at $14.83 billion.

(SARAH FORBES ORWIG)

Timbaland

(b. March 10, 1972, Norfolk, Va.)

After two of the most successful years of his career, American hip-hop producer and performer Timbaland showed few signs of slowing down in 2008. In February he collected his second Grammy Award (best dance recording, for Justin Timberlake's "LoveStoned/I Think that She Knows"), following four other nominations, including best nonclassical producer. Timbaland's production work was prominent on new albums by pop singers Madonna and Ashlee Simpson, and Verizon Wireless announced that he would record a set of songs for the V CAST cell-phone network as its inaugural Mobile Producer in Residence.

He was born Timothy Z. Mosley. As a teenage hip-hop disc jockey, he became friends with an aspiring rapper named Missy Elliott, who asked the young DJ to assemble a demo recording for her rhythm and blues (R&B) group. Though the project soon fell apart, Mosley's production skills were noticed by popular R&B producer DeVante Swing, who encouraged him to pursue studio work and suggested the nickname Timbaland.

In 1996 Timbaland experienced a commercial breakthrough with the Ginuwine single "Pony." The song's off-kilter rhythm and creative use of electronic samples, unique among R&B recordings at the time, became hallmarks of Timbaland's production style. His reputation grew, thanks to the massive popularity of Aaliyah's album *One in a Million* (1996) and Elliott's solo debut album, *Supa Dupa Fly* (1997). Timbaland's distinctive involvement in their sound marked the start of a close association with both artists, and he was routinely hailed for his ability to craft hits that were both artistically innovative and commercially successful. Timbaland applied his singular touch to tracks from hip-hop's leading lights, including Jay-Z, Nas, and Snoop Dogg, and in 2001 he established a record label, Beat Club, to promote up-and-coming artists.

Although he was widely credited with reinventing the hip-hop landscape, true stardom eluded Timbaland until 2006, when he produced albums for pop stars Timberlake and Nelly Furtado. Not only did their worldwide fame expand the audience for his work, but Timbaland's more visible role—he rapped between the singers' verses and appeared in their videos—also made him one of the most sought-after producers in pop music as a whole. He soon took on projects with Icelandic avant-garde singer Björk and British former new-wave band Duran Duran.

In 2007 Timbaland unveiled a new solo record. Though he had already released four albums under his own name (including three with his childhood friend Melvin ["Magoo"] Barcliff), *Shock Value* was the first to gain considerable mainstream notice, owing in part to the record's extensive list of unexpected collaborators, such as rock band Fall Out Boy and British super-

star Elton John. By early 2008 *Shock Value* had sold more than a million copies in the U.S. and had spawned three top-five hits.

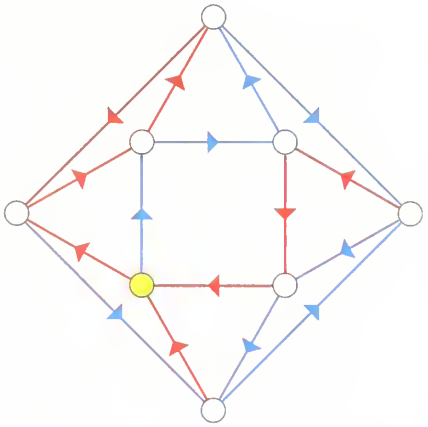
(JOHN M. CUNNINGHAM)

Trahtman, Avraham

(b. Feb. 10, 1944, Kalinovo, Sverdlovsk oblast, U.S.S.R. [now in Russia])

The astonishing news emerged in 2008 that in September 2007 a 63-year-old Israeli mathematician, Avraham Trahtman, had solved a long-standing problem in graph theory. The road-colouring conjecture, as it was known before being solved by Trahtman, was first suggested in 1970 by the Israeli-American mathematician Benjamin Weiss and the American mathematicians Roy L. Adler and L. Wayne Goodwyn. The theorem concerns a special type of graph, or network, that fulfills certain conditions. The network must have a finite number of vertices (specific locations, or points) and directed edges (one-way paths), be strongly connected (a path must exist from any vertex *a* to any other vertex *b* and a path from *b* to *a*), and aperiodic (essentially, the cycles, or complete routes following different directions, must be independent). The road-colouring theorem asserts that for such a network, there always exists a synchronized colouring, or method of labeling the edges, to create a map with a simple set of directions, possibly involving many repetitions of the directions, that will lead from any starting point to any other given point. In other words, by following simple directions, such as to take a "red-blue-red" path, it is possible to start from any location and be certain to end up at the desired destination. The existence of such "universal maps" has theoretical implications for real-life problems in computer science, though having a universal map is not the same as having the most efficient route for any individual case.

Trahtman (also known as Trakhtman) earned an undergraduate degree (1967) and a graduate degree (1973) in mathematics from Ural State University, in Sverdlovsk (now Yekaterinburg, Russia). He taught in that same city at the Ural State Technical University (1969–84) and at the Sverdlovsk Pedagogical University (1991–92) before immigrating to Israel in 1992. Like many of the recent immigrants following the breakup of the Soviet Union, Trahtman had difficulty finding an academic position, and he first accepted work as a security guard and lectured (1994–95) part-time in the



In this sample network, starting from any circle, follow the arrows in the order "red-blue-red" to reach the yellow circle.

pre-education department at Hebrew University in Jerusalem. In 1995 Trahtman obtained a professorship at Bar-Ilan University in Ramat Gan, near Tel Aviv.

Trahtman's solution is notable for its brevity: at less than eight pages it is extremely concise and considered quite elegant. The proof is also rather noteworthy in that most major mathematical breakthroughs come from individuals before the age of 40, or even 30. Trahtman proved, however, that age was not a barrier to solving a nearly 40-year-old mathematical conundrum.

(WILLIAM HOSCH)

Tymoshenko, Yuliya

(b. Nov. 27, 1960, Dnipropetrovsk, Ukraine, U.S.S.R.) In May 2008 Yuliya Tymoshenko, Ukraine's newly appointed prime minister, was engaged in a direct contest for power with Pres. Viktor Yushchenko. The conflict over authority between the presidency and the parliament presaged a serious constitutional crisis that led to the formation of a new parliamentary coalition in December. As the two former allies clashed over various issues, surveys indicated that Tymoshenko had emerged as Ukraine's popular politician.

She was born Yuliya Volodymyrivna, and her family lineage was reported variously as Ukrainian, Russian, Latvian, and Jewish. She studied cybernetics at Dnipropetrovsk State University and in 1984 received a degree in economics. She had married Oleksandr Tymoshenko in 1979 and given birth to a daughter the following year.

In 1995 Tymoshenko became president of United Energy Systems of Ukraine (UESU). The company imported gas from Russia, which could then be reexported to the West or sold internally. In return, UESU exported metals, pipes, and other goods to Russia. The business earned her the epithet of "the gas princess." She amassed a fortune and was linked to other successful entrepreneurs, including Pavlo Lazarenko.

Tymoshenko moved smoothly into a political career, exploiting her business connections and natural beauty and eventually adopting what became her trademark "Ukrainian" braided hairstyle. She was first elected to the Ukrainian Parliament in 1996 and in 1999 was appointed deputy prime minister for fuel and energy under Yushchenko, who was then prime minister. Two years later, in early 2001, she was dismissed, arrested, and briefly jailed on corruption charges. Tymoshenko always maintained that the charges were politically motivated, and they were later dropped.

In November 2001 she founded the Yuliya Tymoshenko Bloc (BYT; originally the National Rescue Forum) in opposition to Pres. Leonid Kuchma. Although Tymoshenko had previously been considered a strong candidate for the presidency, she formed an alliance with Yushchenko's Our Ukraine and supported his bid for president in 2004. During the events of the Orange Revolution, Tymoshenko was a key figure, denouncing Viktor Yanukovych's presidential election campaign and the alleged electoral fraud that resulted in Yanukovych's victory being overturned. After Yushchenko was installed as president, he named her prime minister in January 2005. Her cabinet was dismissed nine months later, however, after fractious disputes with the head of the Security and Defense Council and her controversial attempts to reprivatize companies that had been sold at less than market value.

The BYT formed the main opposition after the collapse of the Orange coalition in the summer of 2006 and finished in second place in the 2007 parliamentary campaign. On Oct. 15, 2007, Our Ukraine–People's Self-Defense and the BYT agreed to form a majority in the new parliament, and on December 18 Tymoshenko regained her position as prime minister. By this time the most recognizable figure in Ukraine, she campaigned for changes to the constitution that would transform the country into a parliamentary republic.

(DAVID R. MARPLES)

Vonn, Lindsey
(b. Oct. 18, 1984, St. Paul, Minn.)
A few years earlier, even Lindsey Kildow Vonn would not have predicted that her 2007–08 Alpine skiing season would be her finest. At the World Cup final, held in Bormio, Italy, in mid-March, Vonn and teammate Bode Miller became the first Americans to sweep the overall World Cup titles since Phil Mahre and Tamara McKinney accomplished the feat in 1983. At the season's penultimate competition, in Crans-Montana, Switz., Vonn won her 10th career World Cup downhill race to break the American record set by Picabo Street and Daron Rahlves; by then she had already clinched the downhill title, the first American woman to do so since Street in 1996. Barely a week after competing in Bormio, Vonn won the women's slalom at the U.S. Alpine championships in Carrabassett Valley, Maine, for her fourth national title—a welcome turnaround for someone whose career had been filled with setbacks in 2006 and 2007.

Vonn, born Lindsey Kildow, burst onto the scene in 1999 at age 14 when she won the slalom race at Italy's Trofeo Topolino competition for skiers aged 11–14, becoming the first American female to have captured the event. She skied in the 2002 Winter Olympics in Salt Lake City, Utah, racing in Alpine combined and slalom, but she managed only a sixth-place finish in combined. She secured a silver medal in downhill at the 2003 junior world championships and again took silver in downhill one year later at the U.S. championships. Vonn triumphed in a World Cup race for the first time in 2004, winning in downhill at Lake Louise, Alta. That victory served as a springboard to five more top-three finishes at the next few World Cup events, and she finished the 2004–05 season ranked sixth overall.

She was a medal favourite going into the 2006 Olympic Winter Games in Turin, Italy, but she crashed during a downhill training run and was airlifted to a hospital. Vonn, who said at the time that she thought she had broken her back and that her career was over, miraculously returned and within two days was competing despite the injury. She did not win a medal, but her gutsy showing earned her the U.S. Olympic Spirit Award. Vonn recovered in time to win silver medals in downhill and supergiant slalom at the 2007 Alpine world championships, but she partially tore the anterior cruciate ligament in her right knee in a crash during a training session to put an early end to her season.

Her determination did not waver, however. After taking a brief time-out in September 2007 to marry fellow skier Thomas Vonn, she earned six World Cup victories to finish the 2007–08 season with 1,403 points, more than 200 points ahead of her nearest competitor. (PAUL DIGIACOMO)

Winehouse, Amy
(b. Sept. 14, 1983, London, Eng.)
"No, no, no," British singer Amy Winehouse's sultry refusal to enter drug and alcohol treatment in her song "Rehab," elicited big yeses in 2008 from consumers, critics, and notables in the music industry, who made her album *Back to Black* a massive hit, lavishly praised its retro soul, and honoured it with five Grammy Awards, including two (best song and best recording) for "Rehab." Winehouse's rise to fame, however, was accompanied by a very public slide into personal chaos. That slide—marked by dramatic anorexic weight loss, drunken performances, an arrest in Norway for marijuana possession, and the incarceration of her husband, Blake Fielder-Civil, after a bar fight—culminated in January in the posting on the Internet by the *Sun* newspaper of a video in which Winehouse appeared to be smoking crack cocaine. In May she finally said "yes" to rehab.

Born to a Jewish family, Winehouse was raised primarily by her mother, a pharmacist, who divorced her father, a taxicab driver, when Winehouse was nine. Early on she demonstrated an interest in the arts, but she was expelled from Sylvia Young theatre school for wearing a forbidden nose ring. At the prestigious BRIT School, Winehouse showed ability as an actor as well as a singer, and by age 16 she was performing with jazz groups. On her critically acclaimed debut album, *Frank* (2003), she proved herself to be a shrewd, caustic lyricist, and her smoky, evocative vocals drew comparisons to jazz legendary singers Sarah Vaughan, Dinah Washington, and Billie Holiday.

A series of tumultuous romances followed for Winehouse, none more fevered than her on-again, off-again relationship with Fielder-Civil, about whom many of the heartbreak songs on her next album, *Back to Black* (2006), were written. A very different-looking Winehouse began appearing in the tabloids as the new album took off in Britain and broke through in the U.S. (largely because of the infectious "Rehab"), entering the American charts at number seven, the highest debut position ever for a British woman. The now stick-thin, tattooed Winehouse began piling her jet-black hair in an enormous beehive that, along with heavy Cleopatra-style eye makeup, became her trademark look. Her singing on *Back to Black*, more in the vein of Motown and 1960s and '70s soul, delighted critics. After marrying Fielder-Civil in May 2007, Winehouse began behaving increasingly erratically and canceling shows. When, in the wake of the *Sun* video, Winehouse was unable to obtain a visa to appear at the Grammy Awards ceremony in Los Angeles, a special satellite performance was arranged in London. In November she was named Best Selling Pop/Rock Female at the World Music Awards. Her volatile marriage, however, appeared to be on the rocks.
(JEFF WALLENFELDT)

Shaun Curry—AFP/Getty Images

British pop singer Amy Winehouse

Wolfe, Nathan
(b. Aug. 24, 1970, Detroit, Mich.)
At a meeting sponsored by the American Association for the Advancement of Science in February 2008, American virologist and epidemiologist Nathan Wolfe announced his plans for a Global Viral Forecasting Initiative (GVFI) to monitor the transmission of viruses from animals to humans in countries worldwide. The initiative was launched to reduce the threat of disease to public health by detecting the emergence of infectious agents in humans and to control them before the

agents gave rise to diseases of epidemic proportions. The GVFI stemmed from a project Wolfe conducted in rural villages in central Africa. His investigation of the hunting and butchering practices in these villages showed that viruses can jump from wild animals to humans through animal-to-hunter contact. Wolfe indicated that he would need to raise $50 million to expand his monitoring project in central Africa to other countries around the world. By spring 2008, 100 scientists in nine countries had begun to collaborate for the GVFI.

Wolfe received a bachelor's degree (1993) in human biology from Stanford University. He then attended Harvard University, where he received a master's degree (1995) in biological anthropology and a doctorate (1998) in immunology and infectious disease. From 1999 to 2006 Wolfe was a postdoctoral student and then an assistant professor at Johns Hopkins University, Baltimore, Md. There he worked with American epidemiologist Donald Burke, who suspected that the practice of hunting bushmeat (primates and other wild animals hunted for food) in Africa had exposed a source of the human immunodeficiency virus (HIV). Based in Cameroon, Wolfe studied the local hunters and their hunting practices. Although research conditions sometimes proved difficult, Wolfe was undaunted. In 2004 he and his colleagues found that 1% of bushmeat hunters were infected with simian foamy virus—a virus that is closely related to HIV and is carried by nonhuman primates. This groundbreaking study demonstrated that infectious agents common to wild animals can be transmitted to humans via contact with the animal's blood and that these agents can potentially give rise to new strains of infectious pathogens in humans.

In 2006 Wolfe joined the department of epidemiology at the University of California, Los Angeles. He began pursuing ways to monitor, predict, and prevent animal-to-human transfer of viruses and soon recognized the need for a program such as the GVFI. Wolfe had ongoing projects not only in Africa but also in Southeast Asia. In China he was collaborating with other scientists in investigating wet markets (food markets that sell live animals) as a source of zoonoses (diseases from wild animals). Wolfe was also involved in wildlife conservation and habitat preservation as a means to limit the hunting of wild animals and thus the spread of infectious viruses. Among awards that Wolfe received was the National Institutes of Health Director's Pioneer Award (2005).

(KARA ROGERS)

Yamanaka, Shinya

(b. Sept. 4, 1962, Osaka, Japan)

In 2008 Japanese physician and stem-cell researcher Shinya Yamanaka advanced the front lines of stem-cell research yet again when he reported a new breakthrough in his research—the generation of induced pluripotent stem (iPS) cells from mouse liver and stomach cells. In 2006 Yamanaka had single-handedly revolutionized the field of stem-cell research when he first announced that he had succeeded in generating iPS cells. The cells had the properties of embryonic stem cells but were produced by inserting four specific genes into the nuclei of mouse adult fibroblasts (connective-tissue cells). The following year Yamanaka reported that he had derived iPS cells from human adult fibroblasts—the first successful attempt at generating human versions of these cells. This discovery marked a turning point in stem-cell research because it offered a way of obtaining human stem cells without the controversial use of human embryos. Yamanaka's technique to convert adult cells into iPS cells up to that time employed a retrovirus that contained a gene called *c-Myc*. This gene was believed to play a fundamental role in reprogramming the nuclei of adult cells. Yamanaka recognized, however, that the activation of the *c-Myc* gene during the process of creating iPS cells led to the formation of tumours when the stem cells were later transplanted into mice. He subsequently proceeded to create iPS cells without *c-Myc* in order to render the cells noncancerous and thereby overcome a major concern in the therapeutic safety of the iPS cells.

Japanese physician Shinya Yamanaka

Chris Goodfellow

Yamanaka received a medical degree from Kobe University in 1987 and a Ph.D. in pharmacology from the Osaka City University Graduate School in 1993. That year he joined the Gladstone Institute of Cardiovascular Disease, San Francisco, where he began investigating the *c-Myc* gene in specific strains of knockout mice (mice in which a specific gene has been rendered nonfunctional in order to investigate the gene's function). In 1996 Yamanaka returned to Osaka City University, where he remained until 1999, when he took a position at the Nara Institute of Science and Technology. During these years his research became increasingly focused on stem cells. In 2004 Yamanaka moved again, this time to the Institute for Frontier Medical Sciences at Kyoto University, where he began his landmark studies on finding ways to induce pluripotency in cells. Yamanaka again sought research opportunities in the United States. He subsequently was awarded funding that allowed him to split his time between Kyoto and the Gladstone Institute. In 2007 Yamanaka became a senior investigator at the Gladstone Institute.

(KARA ROGERS)

Zardari, Asif Ali

(b. July 26, 1955, Karachi, Pak.)

Asif Ali Zardari, the husband of former Pakistani prime minister Benazir Bhutto, was elected president of Pakistan on Sept. 6, 2008. Zardari had assumed de facto leadership of the Pakistan People's Party (PPP) following Bhutto's assassination on Dec. 27, 2007.

Zardari was educated at St. Patrick's School in Karachi and later studied business in London. He gained a reputation as a playboy and gadfly for his easygoing lifestyle. Zardari was an avid polo player and an intense competitor but demonstrated little interest in the political scene. His betrothal to Bhutto, who was the daughter of former president (1971–73) and prime minister (1973–77) Zulfikar Ali Bhutto and whom he had first met five days prior to the public announcement of their engagement, surprised many observers. On Dec. 18, 1987, the two were married in an arranged and relatively sim-

Anjum Naveed AP

Pakistani Pres. Asif Ali Zardari

ple ceremony. The couple had three children: a son, Bilawal, and two daughters, Bakhtwar and Asifa.

The couple had been married less than a year when Pres. Mohammad Zia-ul-Haq was killed, ending more than a decade of military rule. Bhutto's subsequent success at the polls ushered her into office as prime minister. In 1990 her tenure was cut short by corruption-related scandals, however, and both she and Zardari were the focus of attacks from opposition politicians as well as disgruntled members of the PPP, Bhutto's own party. Arrested on kidnapping and extortion charges, Zardari was imprisoned in 1990, and following his release in 1993, corruption allegations against him multiplied (some labeled him "Mr. Ten Percent," alleging that he had taken kickbacks on large government contracts during Bhutto's tenure in office).

Zardari served as a member of the National Assembly from 1990 to 1993—during which time he was periodically released from prison to attend sessions—and from 1993 to 1996. After Bhutto's return to power in 1993, he served as minister of the environment (1993–96) and federal minister for investment (1995–96) in her government. Zardari aggressively sought control of the PPP, but he was the subject of ever-increasing criticism from opponents within and outside the party. In addition, Zardari was deeply involved in a Bhutto family feud led by Bhutto's brother, Murtaza, and mother, Nusrat; the conflict between Zardari and Murtaza over leadership of the Bhutto clan ruptured the PPP and destabilized Bhutto's government. The Murtaza-Zardari rivalry ended abruptly on Sept. 20, 1996, when Murtaza was shot and killed by police.

Zardari was implicated in Murtaza's death, and following the dissolution of Bhutto's second government in November 1996, he was arrested on charges that included corruption, money laundering, and murder. Although never convicted, Zardari was imprisoned from 1997 to 2004; he was elected to the Senate from his jail cell during this time. The toll exacted on Zardari's health by his imprisonment was considerable. Following his release he sought medical treatment in the United States for psychological distress. He returned to Pakistan with Bhutto's resumption of political activity in 2007 and was given amnesty for his alleged offenses. Following Bhutto's assassination Zardari named his son, Bilawal, chairman of the PPP and made himself the party's cochairman.

(LAWRENCE ZIRING)

Zuma, Jacob

(b. April 12, 1942, Inkandla, Natal, S.Af.) Although Jacob Zuma was elected president of the African National Congress (ANC) in December 2007, his chances of replacing outgoing South African Pres. Thabo Mbeki as president of the country in the 2009 election remained unclear in 2008. Shortly after his overwhelming victory over Mbeki as ANC president, Zuma was recharged with corruption and fraud, and additional charges of money laundering, racketeering, and tax evasion were brought against him.

Zuma was the son of a policeman. He received no formal schooling, and he joined the ANC in 1959 and its military wing, Umkonto We Sizwe (MK), in 1962. He was arrested in 1963 and sentenced to 10 years in prison on Robben Island for conspiring to overthrow the apartheid government. After Zuma's release he set up underground networks to recruit for MK, fleeing the country in 1975 to escape arrest. He was based in Swaziland and later Mozambique, becoming (1977) a member of the ANC's national executive committee. In 1987 he moved to ANC headquarters in Lusaka, Zambia, where he served as head of underground structures and head of the intelligence department.

When the South African ban on the ANC was lifted in 1990, he was elected chairperson of the southern Natal region, and in 1991 he became ANC deputy general secretary. Following South Africa's first multiracial elections in 1994, Zuma became a member of the executive committee for economic affairs and tourism in KwaZulu-Natal.

In December 1997 he was elected deputy president of the ANC, and in June 1999 he was appointed deputy president of the country. In June 2005, however, President Mbeki relieved him of this position following the fraud and corruption conviction of a close Zuma colleague, businessman Schabir Shaik. The judge in that case ruled that there was a generally corrupt relationship between Shaik and Zuma, who was subsequently charged with two counts of corruption.

Zuma initially recused himself from all ANC activities, but the ANC national general council defied Mbeki by reinstating him as an active member and, eventually, as ANC deputy president. The Congress of South African Trade Unions (COSATU) and the South African Communist Party (SACP)—the ANC's two allies in a tripartite alliance—with the ANC Youth League claimed that the charges against Zuma were politically motivated to prevent his succession as president.

Supported by thousands of demonstrators, in March 2006 Zuma faced an additional trial on a rape charge, of which he was acquitted in May. Although a Durban court struck the corruption case from the roll in September 2006, the charges were reinstated in December 2007. In September 2008 a judge threw out the charges based on evidence that Mbeki had conspired with prosecutors. Mbeki was forced to resign as president, but at year's end it was still uncertain if Zuma's trial would resume in 2009 just ahead of the presidential election.

The support of influential COSATU and SACP leaders led some to maintain that if Zuma were elected president, he would introduce socialist, or at least more left-wing, economic policies. There was little evidence to support this theory, however, and Zuma stated that he would continue to implement existing ANC policies. His election as ANC president rather reflected deep unhappiness with Mbeki.

(MARTIN LEGASSICK)

Obituaries

In 2008 the world LOST many LEADERS, pathfinders, NEWSMAKERS, heroes, CULTURAL ICONS, and ROGUES. The pages below RECAPTURE the lives and accomplishments of those we REMEMBER best.

Abu Ghazala, 'Abd al-Halim, Egyptian military leader (b. Jan. 15, 1930, Al-Zohour, Egypt—d. Sept. 6, 2008, Cairo, Egypt), used his position as Egypt's field marshal to help preserve the fragile 1979 peace treaty between his country and Israel after the assassination in 1981 of Egyptian Pres. Anwar el-Sadat. Abu Ghazala joined the Egyptian army in 1948, participated in the 1952 coup that overthrew King Farouk, and fought in the 1967 and 1973 wars against Israel. In 1981 Abu Ghazala was appointed minister of defense and commander of the army; the next year he was promoted to field marshal. He was fired as defense minister in 1987, however, following allegations of involvement in a plot to illegally acquire U.S. missile technology. He retired from public life in 1993. Abu Ghazala's honours included Egypt's Medal of Liberation, Order of Independence, Medal of Honour, and Medal of the Republic.

Adams, Edie (ELIZABETH EDITH ENKE), American singer (b. April 16, 1927, Kingston, Pa.—d. Oct. 15, 2008, Los Angeles, Calif.), was a sultry blonde beauty who served as the comic foil for her husband, Ernie Kovacs, in his TV comedy-show sketches; she also spent more than two decades appearing in Muriel cigar advertisements, in which she sang and breathily invited, "Why don't you pick one up and smoke it sometime?" Though Adams, a graduate of the Juilliard School of Music, New York City, initially pursued a career in opera, she attracted the attention of Kovacs's director, who was impressed with her performance on the *Arthur Godfrey's Talent Scouts* TV show and offered her an audition. Though her repertoire of popular songs was slim, she was selected to join Kovacs's show. In 1954 she and Kovacs eloped to Mexico. Adams also found success on Broadway in *Wonderful Town* (1953) and then earned (1957) a Tony Award for her featured (supporting) role as Daisy Mae in *Li'l Abner.* That same year Adams and Kovacs were nominated for Emmy Awards for best performance in a comedy series. In the late 1950s the couple moved to Hollywood, and Adams began appearing in films. Some of her credits include *The Apartment* (1960), *It's a Mad Mad Mad Mad World,*

AP

Singer and actress Edie Adams

Love with the Proper Stranger, and *Under the Yum Yum Tree* (all in 1963). After Kovacs's death (1962) in an automobile crash, she worked to pay her husband's massive back-tax bill and won a highly publicized custody battle for his children from a previous marriage. She briefly (1963–64) hosted her own TV musical comedy show, *Here's Edie,* and later made cameo appearances and played bit parts in a number of prime-time TV shows.

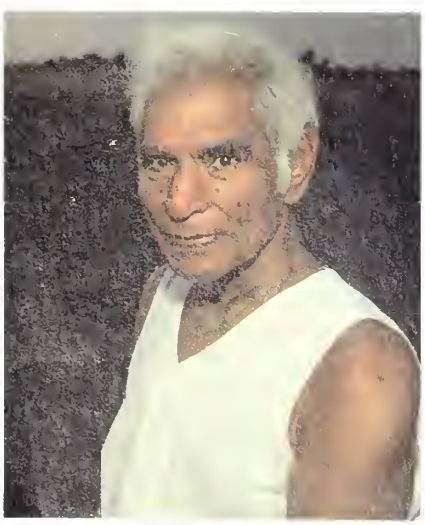
Aleksey II (ALEKSEY MIKHAILOVICH RIDIGER, OR RÜDIGER), Russian Orthodox prelate (b. Feb. 23, 1929, Tallinn, Est.—d. Dec. 5, 2008, near Moscow, Russia), as the Russian Orthodox patriarch of Moscow and all Russia from 1990, was the spiritual leader of more than 140 million people and the first patriarch in Soviet history to be chosen without government pressure. (Candidates were nominated from the floor, and for the first time the election was conducted by secret ballot.) He graduated from the Leningrad Theological Academy in 1953. He was consecrated an archbishop in 1964, served (1968–86) as metropolitan of Tallinn and Estonia, and in July 1986 became metropolitan of Leningrad (St. Petersburg) and Novgorod. He was a permanent member of the Holy Synod and administrator of affairs for the Moscow patriarchate before succeeding Patriarch Pimen on June 7, 1990. Aleksey quickly became an outspoken advocate of the rights of the church, asking the Soviet government to allow the option of religious education in the state schools and urging it to pass a "freedom of conscience" law legalizing religious worship. He also issued statements condemning anti-Semitism and refusing to identify the church with Russian nationalism.

Allen, Paula Gunn (PAULA MARIE FRANCIS), American poet, novelist, and scholar (b. Oct. 24, 1939, Albuquerque, N.M.—d. May 29, 2008, Fort Bragg, Calif.), combined the influences of feminism and her Native American heritage (her mother was part Laguna-Sioux) in writings that focused on the experiences of Native American women. While completing her Ph.D. (1975) at the University of New Mexico, she published her first book of poetry, *The Blind Lion* (1974). Allen's first novel, *The Woman Who Owned the Shadows* (1983), weaves traditional tribal songs, rituals, and legends into the story of a woman of mixed heritage whose struggle for survival is aided by Spider Grandmother, a figure from ancient tribal mythology. In *The Sacred*

Hoop: Recovering the Feminine in American Indian Traditions (1986), Allen argued that feminist and Native American perspectives on life are compatible, claiming that traditional tribal lifestyles were never patriarchal and were generally based on "spirit-centered, woman-focused worldviews." Allen helped establish a Native American literary presence in the U.S. with several anthologies, including *Spider Woman's Granddaughters: Traditional Tales & Contemporary Writing by Native American Women* (1989), *Voice of the Turtle: American Indian Literature, 1900–1970* (1994), and *Song of the Turtle: American Indian Literature, 1974–1994* (1996). She also edited several general works on Native American writing, including the pioneering *Studies in American Indian Literature* (1983) and *Grandmothers of the Light: A Medicine Woman's Source Book* (1991). Allen's other books of verse include *Coyote's Daylight Trip* (1978), *Skins and Bones* (1988), and *Life Is a Fatal Disease: Collected Poems 1962–1995* (1997). Allen's biography *Pocahontas: Medicine Woman, Spy, Entrepreneur, Diplomat* (2004) told the story of that historical figure from the Native American viewpoint.

Amte, Baba (MURLIDHAR DEVIDAS AMTE), Indian lawyer and social activist (b. Dec. 26, 1914, Maharashtra district, British India—d. Feb. 9, 2008, Anandvan, Maharashtra, India), devoted his life to India's Harijan (untouchables) and especially to the care of those individuals who suffered from leprosy (Hansen's disease). His work earned him numerous international awards, notably the 1971 Padma Shree, the 1988 UN Human Rights Prize, a share of the 1990 Templeton Prize, and the 1999 Gandhi Peace Prize. Amte was born into an affluent Brahmin family and acquired the nickname Baba as a child. He trained as a barrister but, influenced by Mahatma Gandhi's nonviolent fight for justice, abandoned his legal career in the 1940s. He settled with his wife in a labour ashram, then studied leprosy at the Calcutta (now Kolkata) School of Tropical Medicine, and in 1951 founded Anandvan, an ashram dedicated to the treatment and rehabilitation of leprosy patients. Amte, who suffered from cancer, died at the Anandvan ashram and was given a Maharashtra state funeral.

Indian social activist Baba Amte



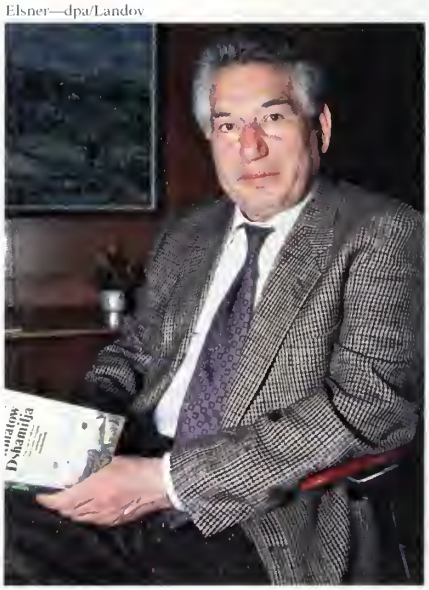
Marie Dorigny—REA/Redux

Arnold, Eddy (RICHARD EDWARD ARNOLD; "THE TENNESSEE PLOWBOY"), American singer and guitarist (b. May 15, 1918, Henderson, Tenn.—d. May 8, 2008, Franklin, Tenn.), ushered country music, which had been labeled as hillbilly music, into the mainstream with his gentlemanly appearance and mellow tenor voice, which he modeled after Bing Crosby and Perry Como; during Arnold's six-decade-long career, he sold more than 85 million recordings and reigned on the *Billboard* country charts, with the highest number of top 10 hits (92) and number of weeks at number one (145). Arnold's breakthrough hit, "I'll Hold You in My Heart (till I Can Hold You in My Arms)" (1947), was followed by such blockbusters as "Bouquet of Roses" (1948), "Texarkana Baby" (1948), "Take Me in Your Arms and Hold Me" (1949), and "Cattle Call" (1955). Though the advent of rock and roll temporarily diluted his popularity, he incorporated the smooth country-pop Nashville Sound by using a string section as his backup, and during the 1960s he regained prominence with such songs as "What's He Doing in My World" (1965), "Somebody like Me" (1966), and "Then You Can Tell Me Goodbye" (1968). His appearances on television and his performances in Las Vegas cemented his career. In 1999 Arnold officially retired, but in 2005 he recorded his 100th album, *After All This Time*. He was inducted into the Country Music Hall of Fame in 1966 and was crowned the Country Music Association's Entertainer of the Year in 1967.

Arpino, Gerald (GENNARO PETER ARPINO), American ballet choreographer (b. Jan. 14, 1923, Staten Island, N.Y.—d. Oct. 29, 2008, Chicago, Ill.), was a leader of the Joffrey Ballet from its founding in 1956 until 2007. He joined the Coast Guard in 1942, and while stationed in Seattle in 1945, he met dancer Robert Joffrey and began his study of dance. After training and performing in New York City, he toured with the Ballet Russe and appeared in Broadway musicals before helping Joffrey found the Joffrey Ballet. In 1961 Arpino created his first choreography, *Ropes*, and soon afterward he became the company's resident choreographer. He was best known for his fast, youthful ballets, including *Olympics*, *Trinity*, *Kettentanz*, and *Viva Vivaldi*, but also created such pieces as the anti-nuclear-war *Clowns* and the romantic *Sea Shadow* and *Secret Places*. Arpino became artistic director after Joffrey's death in 1988 and, except for a period in 1990, continued serving in that position. He moved the company to Chicago in 1995, and in 2007 he became director emeritus.

Aytmatov, Chingiz (CHINGIZ TOREKULOVICH AYTMATOV), Kyrgyz author and diplomat (b. Dec. 12, 1928, Sheker, Kirgiz A.S.S.R. [now Kyrgyzstan], U.S.S.R.—d. June 10, 2008, Nürnberg, Ger.), explored such themes as love and friendship, the trials and heroism of wartime, and the emancipation of Kyrgyz youth from restrictive custom and tradition; he was awarded the Soviet state prize for literature in 1968, 1977, and 1983. Aytmatov's literary career started in 1952, and in 1959 he began

Elsner—dpa/Landov



Kyrgyz author Chingiz Aytmatov

writing for the newspaper *Pravda*. He achieved major recognition (and the Lenin Prize) for the short story collection *Povesti gor i stepey* (1963; *Tales of the Mountains and Steppes*). Among Aytmatov's most important Kyrgyz-language works are *Trudnaya pereprava* (1956; "A Difficult Passage"), *Pervy uchitel* (1967; "The First Teacher"), and *Proshchay, Gulsary!* (1967; *Farewell, Gulsary!*). His novels written originally in Russian include *I dolshe veka dlitsia den* (1981; *The Day Lasts More than a Hundred Years*), *Plakha* (1986; *The Place of the Skull*), and *Tavro Kassandry* (1995; "The Mark of Cassandra"). He also co-wrote, with Kaltai Mukhamedzhanov, *Voskhozhdenie na Fudziyamu* (1973; *The Ascent of Mount Fuji*), a play that was considered provocative during the Soviet era for its examination of the themes of authority and dissent. Aytmatov was a member (1966–89) of the Supreme Soviet of the U.S.S.R. and an adviser (1990–91) to Soviet Pres. Mikhail Gorbachev, and he also served as Soviet ambassador to Luxembourg and Belgium. After Kyrgyzstan gained independence (1991), Aytmatov served in the Kyrgyz diplomatic corps and as a member of the parliament.

Azcona, Rafael, Spanish novelist and screenwriter (b. Oct 24, 1926, Logroño, Spain—d. March 24, 2008, Madrid, Spain), penned some 100 screenplays, notably for *La Grande Bouffe* (1973) and *Belle Epoque* (1992), which won the Academy Award for best foreign-language film. Many of Azcano's scripts—including his first two, *Se vende un tranvía* and *El pisito* (both 1959)—were adapted from his own novels and short stories. In 1988 he won the first of five Goya Awards for best screenplay, for *El bosque animado* (he was simultaneously nominated for *Moros y cristianos*). He was granted Spain's Fine Arts Gold Medal in 1994 and was awarded an honorary Goya for lifetime achievement in 1998. Azcona's last film, *Los girasoles ciegos* (2008), was an adaptation of a novel by Alberto Méndez.

Barnato Walker, Diana, British pilot (b. Jan. 15, 1918, London, Eng.—d. April 28, 2008, Surrey, Eng.), as a prominent member of the Atagirls, the women's branch of the World War II Air Transport Auxiliary (ATA), delivered some 250 Spitfires and other planes to Royal Air Force (RAF) squadrons, often in poor weather or under enemy attack and without weapons or functioning instruments. She was born into a wealthy family, the daughter of Woolf Barnato (chairman of Bentley Motors and three-time winner of the Le Mans 24-hour automobile race) and the granddaughter of South African diamond baron Barney Barnato. She took private flying lessons for fun in the 1930s and in 1941 joined the ATA because women were not accepted as RAF pilots. In 1944 she married Spitfire pilot Derek Walker, but he was killed in a plane crash less than a year later. After the war Barnato Walker obtained a commercial pilot's license and worked with the Women's Junior Air Corps. On Aug. 26, 1963, she broke the sound barrier in a Lightning fighter jet, setting a world record for women of Mach 1.65 (2,031 km/hr; 1,262 mph). Barnato Walker was made MBE in 1965. Her autobiography, *Spreading My Wings*, was published in 1994.

Barnes, Clive, British-born American theatre and dance critic (b. May 13, 1927, London, Eng.—d. Nov. 19, 2008, New York, N.Y.), championed critical dance coverage and made the stage medium accessible to a generation of theatregoers. Following his graduation from the University of Oxford, where he worked as an editor for a university dance periodical, Barnes led the charge among young critics aiming to legitimize specialized dance criticism. He freelanced for a time before being hired (1961) as the first full-time dance critic for *The Times* (London). In 1965 he was hired by the *New York Times*, where he spent the next 13 years writing about theatre and dance and growing in stature to become one of the city's most influential critics. When in 1978 he was asked to confine his coverage to dance, he left for the *New York Post*. There he was allowed to continue dual critical duties. Barnes also continued throughout his career to freelance for other publications. Always independent in his tastes, he was an early supporter of such choreographers as George Balanchine and Martha Graham and of Russian dancer Mikhail Baryshnikov.

Baronova, Irina, Russian-born ballerina (b. March 13, 1919, Petrograd [now St. Petersburg], Russia—d. June 28, 2008, Byron Bay, N.S.W., Australia), was the youngest and most graceful of the "baby ballerinas," a trio of teenage dancers who in the 1930s captured public attention and attracted audiences to the Ballet Russe de Monte Carlo. Baronova, remembered by many for her golden locks and delicate features, conveyed elegance and energy on stage. In 1920 her family fled from the Russian Revolution, living first in Romania before moving (1928) to Paris so that she could study dance under former prima ballerina Olga Preobrajenska. George Balanchine saw Baronova dance at the Paris Opéra and cast her in his staging of *Orpheus in the Underworld* (1931), for which she received sensational reviews. The following year he invited her to join the Ballet Russe de Monte Carlo, and during her 15-year career, she toured worldwide with that company and Ballet Theatre (later American Ballet Theatre). Baronova danced in a wide variety of ballets, including *Les Présages* (in a role she originated in 1933) and the 1941 premiere of *Bluebeard*. She also appeared in several films, including the 2005 documentary *Ballets Russes*. Baronova retired from dancing in 1946 and eventually settled in Australia. Her memoirs, *Irina: Ballet, Life and Loves*, were published in 2005.

Herbert Gehr—Time Life Pictures/Getty Images

Russian-born ballerina Irina Baronova

Baugh, Sammy (SAMUEL ADRIAN BAUGH), American football player (b. March 17, 1914, Temple, Texas—d. Dec. 17, 2008, Rotan, Texas), led the National Football League (NFL) in forward passing in 6 of his 16 seasons (1937–52) with the Washington Redskins and was considered the first outstanding quarterback in the history of American professional gridiron football. On two oc-

casions (Oct. 31, 1943, and Nov. 23, 1947), he passed for six touchdowns in a single game. He also excelled as a punter and as a defensive back. In 1943 Baugh led the NFL in passing, punting, and interceptions (as a defensive back). At Texas Christian University, Baugh became the greatest passer in the Southwest Conference, and he led his team to victory in the 1936 Sugar Bowl and the 1937 Cotton Bowl. After graduation in 1937, Baugh joined the Redskins and also the St. Louis Cardinals baseball organization, for which he played shortstop in the minor leagues for a few years. Nicknamed "Slingin' Sammy," Baugh led the NFL in passing in his first season and helped Washington achieve an 8–3 record and a spot in the championship game, where he threw three touchdown passes in a 28–21 upset of the Chicago Bears. He led the NFL in passing again in 1940, 1943, 1945, 1947, and 1949 and in average yards per punt in 1940–43. As a defensive back, he led the NFL in pass interceptions in 1943 with 11. He had a career record of 1,693 pass completions in 2,995 attempts (56.5%) for 21,886 yd and 187 touchdowns. Baugh was head coach of two American Football League teams, the New York Titans (afterward Jets) in 1960–61 and the Houston Oilers in 1964. He was elected to the Pro Football Hall of Fame in 1963.

Bessmertnova, Natalya Igoryevna, Russian ballerina (b. July 19, 1941, Moscow, U.S.S.R.—d. Feb. 19, 2008, Moscow, Russia), brought elegance, technical expertise, and a deeply romantic style to some 30 different roles during her long career (1961–95) with the Bolshoi Ballet. Bessmertnova was particularly admired for her subtle interpretation of the title character in *Giselle* (which she first performed in 1963) and for the roles created for her by the Bolshoi's artistic director and chief choreographer Yury Grigorovich, whom she married in 1968. An internal dispute at the Bolshoi in 1995 led to Grigorovich's resignation and a one-day strike by some of the dancers (including Bessmertnova) that forced the ballet company's first canceled performance. Bessmertnova was fined and dismissed, though she later returned as a teacher and coach.

Bevel, the Rev. James Luther, American civil rights leader (b. Oct. 19, 1936, Itta Bena, Miss.—d. Dec. 19, 2008, Springfield, Va.), was a pivotal and passionate figure during the early 1960s and, as the project director of the Southern Christian Leadership Conference, became one of the most influential advisers to the Rev. Martin Luther King, Jr., who headed the SCLC. On Bevel's recommendation, hundreds of youngsters were mobilized in 1963 in the "children's crusade" to participate in peaceful antisegregation protests in downtown Birmingham, Ala. The news coverage, which featured children being water-hosed by police and more than 600 youngsters arrested, prompted a groundswell of support for the civil rights movement. Bevel was later instrumental in organizing the historic march in Alabama from Selma to Montgomery. The event was credited with helping to usher in the 1965 Voting Rights Act. Though Bevel initially intended to pursue a recording career, he recognized a calling to the ministry and was ordained after attending the American Baptist Theological Seminary in Nashville. Bevel was forced from his position with the SCLC after exhibiting erratic behaviour. His contention that convicted assassin James Earl Ray was not guilty of King's murder embarrassed many in the movement. In 2008 Bevel's legacy was further tarnished when he was found guilty of having engaged in an incestuous relationship with a teenage daughter in the 1990s.

Birla, K(rishna) K(umar), Indian industrialist and philanthropist (b. Nov. 12, 1918, Pilani, Rajasthan state, British India—d. Aug. 30, 2008, Kolkata [Calcutta], India), guided the Birla international conglomerate (originally founded by his father, Ghanshyam Das Birla), with holdings ranging from sugar to shipping to the nationally distributed daily newspaper *Hindustan Times*. Birla attended Lahore University (B.A., 1939) before joining the family business in 1940. He also represented Mahatma Gandhi's Congress Party in the Rajhya Sabha (upper house of parliament) for 18 years (1984–2002). Birla's philanthropic work included the Birla Institute of Science and Technology and the International Centre for Excellence (both established by his father), the K.K. Birla Foundation, the K.K. Birla Academy of Scientific, Historical and Cultural Research, and the Lakshmi Narayan Hindu temple in Delhi.

Böselager, Count Philipp von, German army officer (b. Sept. 6, 1917, Burg Heimerzheim, near Bonn, Ger.—d. May 1, 2008, Altenahr, Ger.), provided the plastic explosives for the briefcase bomb that was used in the assassination attempt on Adolf Hitler by German officers on July 20, 1944. Böselager attended Jesuit Roman Catholic schools and hoped to study law, but his aristocratic family suggested that he enlist in the cavalry instead, in part to avoid joining the National Socialist Party. He was approached by antiwar conspirators as part of a plot to shoot Hitler and SS chief Heinrich Himmler at a conference in March 1943, but the plan was called off at the last minute. In 1944 Böselager was involved in research on captured British-made explosives, which he hand delivered to the plotters. He and his brother George, a coconspirator, avoided arrest after the bomb failed to kill Hitler, and their roles in the episode were not revealed until much later. After the war Böselager completed his studies in law and economics, worked with the West German army, and addressed young people on Nazi atrocities. He later revealed that he regretted not shooting Hitler in 1943 when he had the chance.

Bowman, Christopher, American figure skater (b. March 30, 1967, Los Angeles, Calif.—d. Jan. 10, 2008, North Hills, Calif.), was dubbed "Bowman the Showman" because of his flamboyance on the ice and his ability to thrill a crowd with his dynamic performances. During his career Bowman, who captured the U.S. men's figure skating titles in 1989 and 1992, took a silver (1989) and a bronze medal (1990) at the world championships. He also competed in the 1988 and 1992 Winter Olympics, placing seventh and fourth, respectively. Bowman later performed with the Champions on Ice tour and the Ice Capades. After his professional skating career ended, Bowman admitted that he had a serious cocaine addiction; his death was attributed to a drug overdose.

Brant, Henry Dreyfuss, American composer (b. Sept. 15, 1913, Montreal, Que.—d. April 26, 2008, Santa Barbara, Calif.), was a musical prodigy who had begun composing by age nine (for an ensemble of instruments of his own invention) and went on to produce avant-garde compositions whose performances often relied upon the spacial placement of instruments. Some of his earliest works included unconventional acoustic sound sources, notably *Music for a Five and Dime Store* (1932), which incorporated a collection of kitchen im-

plements as well as a violin and piano. His *Antiphony I* (1953) widely dispersed five different orchestral groups; *Voyage Four* (1963) positioned musicians beneath the floor as well as on walls; and *Orbits* (1979) featured 80 trombones. Brant's Pulitzer Prize-winning *Ice Field* (2001) drew on a childhood experience in which he traveled the Atlantic aboard an ocean liner that maneuvered around many icebergs. He taught composition in New York City at Columbia University and the Juilliard School before serving (1957–80) as an instructor at Bennington (Vt.) College. In 2007 Brant completed *Textures and Timbres,* a textbook on orchestration.

Brecht, George (GEORGE MACDIARMID), American conceptual artist and sculptor (b. Aug. 27, 1926, New York, N.Y.—d. Dec. 5, 2008, Cologne, Ger.), created art from an approach that valued fluid boundaries between artistic disciplines and playful engagement with the viewer. Brecht attended (1946–50) the Philadelphia College of Pharmacy and Science and took a job as a research chemist but soon became inspired by the works of avant-garde composer John Cage. Although Brecht's own attempts at composition were short-lived, he retained from Cage both an interest in chance and a focus on multimedia "events" as defining elements of his work, and by the early 1960s he was affiliated with the Fluxus movement, a like-minded group of conceptual artists. Brecht was especially known for his sculptural installations of everyday objects and for his use of written instructions, which he called "event scores," in the creation of art.

Brown, Bill (WILLIAM ALFRED BROWN), Australian cricketer (b. July 31, 1912, Toowoomba, Queens., Australia—d. March 16, 2008, Brisbane, Australia), was the last pre-World War II Australian Test player and one of the last of the Invincibles of captain Don Bradman's 1948 touring side that was unbeaten in England. Brown, a right-handed opening batsman, made his first-class debut for New South Wales in 1932 and his Test debut in 1934 against England at Trent Bridge (Nottingham). He captained (1946) Australia in the first postwar Test match, against New Zealand. In his war-shortened career, Brown appeared in 189 first-class matches, scoring 13,838 runs in 284 innings (average 51.44), with 15 not outs, 39 centuries, and a high score of 265 not out. He played in 22 Tests, scoring 1,592 runs in 35 innings (average 46.82), with a high score of 206 not out. His partnerships with Jack Fingleton for Australia were especially productive, averaging 63.75 in 10 Tests, including the first opening partnership of more than 200 for Australia: a 233 against South Africa at Cape Town in 1936. In the field Brown took 110 first-class catches, including 14 in Tests. He retired from Test cricket in 1948 and from first-class cricket after the 1949–50 season. In 2000 Brown was awarded the Medal of the Order of Australia.

Buckley, William Frank, Jr., American editor, commentator, and writer (b. Nov. 24, 1925, New York, N.Y.—d. Feb. 27, 2008, Stamford, Conn.), became an important intellectual influence in politics as the founder (1955) and editor in chief of the journal *National Review,* which he used as a forum for conservative views and ideas. The oil fortune amassed by Buckley's immigrant grandfather enabled the boy to be reared in comfortable circumstances. His early education was by private tutors and at two English boys schools. Buckley spent a year at the University of Mexico and then served three years in the U.S. Army during World War II before entering Yale University. There he taught Spanish, distinguished himself in debate, and was chairman of the *Yale Daily News.* He later joined the staff of *The American Mercury* literary magazine. His column of political commentary, "On the Right," was syndicated in 1962 and appeared regularly in more than 200 newspapers. Starting in 1966, Buckley served as host of *Firing Line,* a weekly television interview program dealing with politics and public affairs. He wrote more than 50 books, among them *God and Man at Yale* (1951), *Up from Liberalism* (1959), and *Rumbles Left and Right* (1963). He coauthored *McCarthy and His Enemies* (1954), and in the late 1970s he turned his hand to writing spy novels, which include *Saving the Queen* (1976), *Stained Glass* (1978), *Marco Polo, if You Can* (1982), and *See You Later Alligator* (1985). His political novel *The Rake* was published in 2007, and at the time of his death, Buckley was working on books about politicians Barry Goldwater and Ronald Reagan.

Cachao (ISRAEL CACHAO LÓPEZ), Cuban-born bassist, composer, and bandleader (b. Sept. 14, 1918, Havana, Cuba—d. March 22, 2008, Coral Gables, Fla.), was credited, along with his brother, Orestes, with the creation of the mambo. Cachao studied music as a child, and by age 13 he was playing double bass with the Havana Philharmonic Orchestra. In the late 1930s, with the Arcaño dance band, Cachao and Orestes infused the sedate Cuban *danzón* with a new Afro-Cuban beat that they called mambo, which by the 1950s represented Cuban music worldwide. Jam sessions that Cachao began in 1957 helped Cuban musicians develop salsa. In 1962 he left Cuba, first for Spain and then for New York City, where he performed and recorded into the 1970s. By 1980, after a short period in Las Vegas, he had moved to Miami. To bring the musician wider exposure, Cuban-born actor and director Andy García produced recording sessions that resulted in *Master Sessions I and II* (the first volume received a 1994 Grammy Award) and directed a documentary titled *Cachao. . .como su ritmo no hay dos* (1994). Cachao returned to the international stage in the 1990s. He received a Grammy for the album *¡Ahora Sí!* (2004), and he was the subject of a 2008 documentary, *Cachao: uno más.*

Carlos Barria—Reuters/Landov

Mambo pioneer Cachao

Calder, Angus Lindsay, Scottish critic, poet, and historian (b. Feb. 5, 1942, Sutton, Surrey, Eng.—d. June 5, 2008,

Edinburgh, Scot.), published numerous literary criticisms, collections of poetry, and historical analyses, but he was especially admired for his critical work *T.S. Eliot* (1987). Calder's impact as a historian was mainly based on his doctoral thesis, *The People's War: Britain, 1939–1945* (1969, reissued 1992), in which he questioned British tactics during World War II through the eyes of ordinary citizens; the book garnered him a *Mail on Sunday*/John Llewellyn Rhys Prize in 1970. He wrote several other works concerning British history, including *Revolutionary Empire: The Rise of the English-Speaking Empires from the Fifteenth Century to the 1780s* (1981) and *The Myth of the Blitz* (1991). In 1967 Calder won an Eric Gregory Award for his poetry, and in 1984 he helped establish the Scottish Poetry Library.

Calvo Sotelo y Bustelo, Leopoldo, Spanish politician (b. April 14, 1926, Madrid, Spain—d. May 3, 2008, Pozuelo de Alarcón, near Madrid), was Spain's second prime minister (February 1981–December 1982) to preside over the country's difficult transition from Francisco Franco's military dictatorship to a modern constitutional monarchy. Calvo Sotelo survived an attempted right-wing coup during his inauguration on Feb. 23, 1981; within two days King Juan Carlos had rallied support for the government, and Calvo Sotelo was sworn in on February 25. Although he served as prime minister for less than two years, he was credited with instituting much-needed reforms in post-Franco Spain, negotiating the country's entry into NATO, and authorizing a degree of autonomy that temporarily quelled rebellion in the factious Basque region. Trained as a chemical engineer, he represented an industry trade union in Franco's government before joining the cabinet under Prime Minister Adolfo Suárez. Calvo Sotelo cofounded the coalition political party Union of the Democratic Centre, which won a majority in the 1979 parliamentary elections, and was named to succeed Suárez when the latter resigned in February 1981. When Felipe González's Socialist Party won a parliamentary majority in 1982 elections, Calvo Sotelo stepped down in a peaceful handover of power.

Caminer, David (DAVID TREISMAN), British computer software engineer (b. June 26, 1915, London, Eng.—d. June 19, 2008, London) developed (with hardware designer John Pinkerton), the world's first business computer, LEO (Lyons Electronic Office), which revolutionized the speed and accuracy with which routine business data could be processed. Caminer, with Pinkerton, completed LEO in 1951. It was first utilized to estimate the cost of tea-shop baked goods, and within two years Lyons became the first company to issue computerized paychecks. Caminer designed two additional generations of LEO and from 1959 helped run LEO Computers, a corporate spin-off. He remained with the organization through a series of mergers and led the development of a communications network designed for the European Commission. Caminer was made OBE in 1980.

Capa, Cornell (KORNEL FRIEDMANN), American photographer (b. April 10, 1918, Budapest, Hung.—d. May 23, 2008, New York, N.Y.), as a *Life* magazine photojournalist (1946–67), made issues of social justice and politics the focus of images that provided an appreciation of the beauty of simple, ordinary events; he also founded (1974) the International Center of Photography in New York City. Capa's best-known photo depicts three elegant ballerinas (1958) at the Bolshoi Ballet School in Moscow. Following the death (1954) in Vietnam of his brother Robert, a wartime photographer, Capa joined Magnum Photos (which Robert cofounded). Some of Cornell Capa's most arresting works were of the presidential campaigns of Adlai Stevenson and John F. Kennedy. In addition, he captured in stills the education of mentally handicapped children, Christian missionaries in Latin America, and activities related to the regime of Pres. Juan Perón in Argentina. Some of Capa's books include *Farewell to Eden* (1964), *The Concerned Photographer* (1968), and *Cornell Capa: Photographs* (1992).

Cardoso, Ruth (RUTH VILAÇA CORRÊA LEITE CARDOSO), Brazilian anthropologist, educator, and public figure (b. Sept. 19, 1930, Araraquara, Braz.—d. June 24, 2008, São Paulo, Braz.), as the prominent wife of Brazilian Pres. Fernando Henrique Cardoso, and thus Brazil's first lady from 1995 to 2003, advocated and initiated important social-reform programs. Perhaps Cardoso's greatest achievement was establishing (1995) Community Solidarity (later called Comunitas), an organization devoted to combating illiteracy, poverty, and hunger through public and private economic investment. Her model for the organization was imitated worldwide, owing in part to its success at teaching some three million Brazilians to read. Cardoso studied anthropology at the University of São Paulo (B.A., 1953; Ph.D., 1972), where she met Fernando Cardoso. They were married in 1952. After a 1964 coup overthrew Brazil's government, the pair went into exile, living in several countries, including the U.S., where she completed her postdoctoral studies as a Fulbright scholar at Columbia University, New York City. She taught at various universities, including the University of California, Berkeley. After Cardoso and her husband returned to Brazil in the 1970s, they founded the Brazilian Centre for Analysis and Planning (Cebrap), a social science research and advocacy organization. She also spent several years on the board of the United Nations Foundation.

Carey, Ron (RONALD ROBERT CAREY), American labour leader (b. March 22, 1936, New York, N.Y.—d. Dec. 11, 2008, New York, N.Y.), as president (1992–97) of the International Brotherhood of Teamsters (IBT), was one of the foremost American labour figures of the decade; although he spearheaded efforts to clean up corruption within the union, he was eventually forced from office after becoming embroiled in a campaign-finance scandal.

Carlin, George (GEORGE DENIS PATRICK CARLIN), American comedian (b. May 12, 1937, New York, N.Y—d. June 22, 2008, Santa Monica, Calif.), began working in the late 1950s as a wise-cracking radio disc jockey and low-key stand-up comedian known for such whimsical routines as "Wonderful WINO" and the "Hippy Dippy Weatherman"; beginning in the 1970s, however, he transformed himself into a provocative and incisive antiestablishment comic icon. Carlin was most closely identified with the monologue "Seven Words You Can Never Say on Television," in which he satirically analyzed the use and misuse of seven of the raunchiest obscenities in the English language (which were still banned on American commercial television and radio in 2008). Carlin was arrested in 1972 for performing the monologue onstage, but a judge dismissed the case. In 1973 New York City radio station WBAI-FM triggered a lawsuit by the Federal Communications Commission (FCC) after it aired a recorded version of the routine called "Filthy Words"; the landmark "Carlin case" was finally settled in 1978

Vincent Laforet—The New York Times/Redux

Antiestablishment comedian George Carlin

by the U.S. Supreme Court, which gave the FCC the right to determine when to censor radio and TV broadcasts. Carlin released more than 20 comedy record albums and starred in 14 HBO cable TV specials, the last of which, *It's Bad for Ya*, aired in March 2008. As an actor, he usually played a character inspired by his own comic persona (notably in the short-lived situation comedy *The George Carlin Show* [1994]), with the notable exception of his stint in the 1990s as the amiable narrator (and onscreen host, Mr. Conductor) of the children's programs *Thomas the Tank Engine and Friends* and *Shining Time Station*. Carlin was honoured with the American Comedy Awards' Lifetime Achievement Award (2001) and the Mark Twain Prize for American Humor (2008). In 2004 cable TV's Comedy Central network ranked Carlin second on its list of the "100 Greatest Stand-Ups of All Time," behind African American actor-comedian Richard Pryor and just ahead of the legendary Lenny Bruce.

Cartan, Henri (Henri-Paul Cartan), French mathematician (b. July 8, 1904, Nancy, France—d. Aug. 13, 2008, Paris, France), made fundamental advances in the theory of analytic functions. Cartan was also a founding member of the secretive group of mathematicians who published the multivolume *Éléments de mathématique* (begun in 1939) under the joint pseudonym Nicolas Bourbaki. Cartan, the son of the distinguished mathematician Élie Cartan, earned a Ph.D. in 1928 from the École Normale Supérieure in Paris (ENS-Ulm) and began his academic career as professor of mathematics (1928–29) at the Lycée Caen. He was appointed deputy professor at the University of Lille in 1929 and two years later became professor of mathematics at the University of Strasbourg. In 1940 he joined the ENS-Ulm faculty, where he remained until 1965; from 1970 to 1975 he taught at the University of Paris-Sud at Orsay. His major works include *Homological Algebra* (1956; written with Samuel Eilenberg) and *Elementary Theory of Analytic Functions of One or Several Complex Variables* (1963). Cartan was the recipient of the 1980 Wolf Foundation Prize in Mathematics, and in 1989 he was made commander of the Legion of Honour.

Caymmi, Dorival, Brazilian singer and songwriter (b. April 30, 1914, Salvador, Bahia state, Braz.—d. Aug. 16, 2008, Rio de Janeiro, Braz.), became a national icon with his deep velvety voice and romantic lyrics that evoked the charm of Bahia's fishing villages, its beaches, and its beautiful women. Caymmi vaulted to fame when his song "O que é que a Baiana tem?" became a hit in 1938 for Brazilian bombshell Carmen Miranda, whom Caymmi instructed to move her arms and hands to the beat of the music—movement that became her trademark. Caymmi, who contributed more than 100 tunes to his country's songbook, notably "O samba da minha terra," "Marina," and "Das rosas," performed as a regular on Rádio Nacional and released some 20 albums. He was awarded France's Order of Arts and Letters in 1984.

Césaire, Aimé-Fernand-David, Martinican poet, playwright, and politician (b. June 26, 1913, Basse-Pointe, Martinique—d. April 17, 2008, Fort-de-France, Martinique), was cofounder of Negritude, an influential movement to restore the cultural identity of black Africans; he was often credited with having coined the movement's name. Césaire left Martinique in 1931 to be educated in Paris, where he became associated with Léopold Sédar Senghor (later president of Senegal) and others involved in the Negritude movement. In 1939 Césaire returned to Martinique and engaged in political action supporting the decolonization of the French colonies of Africa. In 1945 he became mayor of Fort-de-France, the capital of Martinique, and he retained that position until 2001 (he was briefly out of office in 1983–84). In 1946 Césaire became a deputy for Martinique in the French National Assembly, where he remained until 1993. Viewing the plight of the blacks as only one facet of the proletarian struggle, he joined (1946) the Communist Party, but he quit a decade later and formed the Martinique Progressive Party. As a poet, Césaire found that Surrealism, which freed him from the traditional forms of language, was the best expression for his convictions. He voiced his ardent rebellion in a French that was heavy with African imagery. In the fiery poems of *Cahier d'un retour au pays natal* (1939, rev. ed. 1956; *Return to My Native Land*, 1947) and *Soleil cou-coupé* (1948), he lashed out against the oppressors. Césaire later turned to the theatre, discarding Negritude for black militancy. His tragedies are vehemently political, notably *La Tragédie du Roi Christophe* (1963; *The Tragedy of King Christophe*), a drama of 19th-century Haiti; *Une Saison au Congo* (1966; *A Season in the Congo*), an epic look at the political career and assassination of Congolese leader Patrice Lumumba; and *Une Tempête* (1969; *The Tempest*, 1985), which was an adaptation of William Shakespeare's *The Tempest*.

Chahine, (Gabriel) Youssef, Egyptian filmmaker (b. Jan. 25, 1926, Alexandria, Egypt—d. July 27, 2008, Cairo, Egypt), crafted more than 40 films, including musicals, dramas, comedies, and historical epics. Much of his work, however, was critical of the Egyptian

Egyptian film director Youssef Chahine

Mohamed al Sehety/AP

government and condemned social oppression and religious fanaticism; his willingness to tackle risky subjects caused some of his films to be censored, notably *Al-Mohager* (1994; *The Emigrant*), which was banned in Egypt after militant Islamists denounced it as blasphemous. Chahine directed his first film, *Baba Amin* (*Father Amine*), in 1950. Perhaps his most prominent works were *Bab el hadid* (1958; *Cairo: Central Station*), in which he played the leading role, and the autobiographical Alexandria trilogy and its follow-up, *Alexandria . . . New York* (2004). He was honoured in 1997 with a lifetime achievement award at the Cannes Festival, and his final film, *Heya fawda* (2007; *Chaos*), was screened at the Toronto and Venice film festivals.

Charisse, Cyd (TULA ELLICE FINKLEA), American dancer and actress (b. March 8, 1921/22, Amarillo, Texas—d. June 17, 2008, Los Angeles, Calif.), won acclaim for her glamorous looks and sensual, technically flawless dancing in a handful of 1950s movie musicals, notably *The Band Wagon* (1953) and *Silk Stockings* (1957), both with Fred Astaire. As a teenager, she toured with the Ballet Russe de Monte Carlo before debuting in a ballet sequence in the film *Something to Shout About* (1943), under the stage name Lily Norwood. She garnered the attention of MGM Studios, which hired her in 1946 and changed her name to Cyd Charisse, based on a childhood nickname. Charisse achieved star status with her dialogueless dance routine opposite Gene Kelly in the musical *Singin' in the Rain* (1952). She later partnered with Kelly in the smash musicals *Brigadoon* (1954) and *It's Always Fair Weather* (1955), but she had limited success as a straight actress. In 1963 Charisse and her husband, singer Tony Martin, formed a nightclub act and began touring internationally. The couple wrote *The Two of Us* (1976), a combined autobiography. She appeared on television and made a stage comeback in the Broadway musical *Grand Hotel* (1992). U.S. Pres. George W. Bush awarded Charisse a National Medal of the Arts in 2006.

American dancer Cyd Charisse in The Band Wagon

Hulton Archive/Getty Images

Chopra, B(aldev) R(aj), Indian filmmaker (b. April 22, 1914, Punjab, British India—d. Nov. 5, 2008, Mumbai [Bombay], India), was respected for producing and directing socially relevant Hindi-language films, including the musical *Naya daur* (1957), in which a village resists the advent of mechanized transport; *Sadhna* (1958), which dealt with prostitution; the murder mystery *Kanoon* (1960); *Gumrah* (1963), which addressed adultery and won an Indian National Film Award as best Hindi film; *Hamraaz* (1967), for which Chopra won the first Indian National Film Award for best director; and *Insaf ka tarazu* (1980), which focused on rape. In 1988 Chopra directed the popular television serial *Mahabharat*, based on the Sanskrit epic the *Mahabharata*. Chopra received the 1998 Dadasaheb Phalke Award for his contributions to Indian cinema.

Christodoulos (CHRISTOS PARASKEVAIDIS), Greek religious leader (b. Jan. 17, 1939, Xanthi, Greece—d. Jan. 28, 2008, Psychiko, Greece), won adulation and stirred controversy as leader of the Greek Orthodox Church (archbishop of Athens and All Greece) from 1998. He was perhaps best known outside Greece for receiving Pope John Paul II in 2001, in a first step toward healing the rift between the Roman Catholic and the Orthodox churches, and for his 2006 visit to Pope Benedict XVI. Within Greece, Christodoulos was a political

Lefteris Pitarakis/AP

Greek Orthodox Church leader Christodoulos

conservative and extreme nationalist known for his failed crusade in 2001 against the removal of religious affiliation from national identity cards and for his embrace of the Internet and the concerns of teenagers, which raised the popularity of the church among the young. He became a priest in 1965 and was elected metropolitan of Demetrias in 1974 before becoming the youngest man ever to be named head of the Greek Orthodox Church.

Clarke, Sir Arthur Charles, British author (b. Dec. 16, 1917, Minehead, Somerset, Eng.—d. March 19, 2008, Colombo, Sri Lanka), wrote more than 100 fiction and nonfiction books, but he was best known for such visionary science-fiction novels as *Childhood's End* (1953), *The City and the Stars* (1956), *Rendezvous with Rama* (1973; winner of Nebula and Hugo awards), *The Fountains of Paradise* (1979; winner of Nebula and Hugo awards), and *The Songs of Distant Earth* (1986) and for his work on Stanley Kubrick's hugely successful motion picture *2001: A Space Odyssey* (1968). The cult film was based on Clarke's short story "The Sentinel" (1951), which Clarke and Kubrick subsequently developed into a novel (1968) published under the same name as the movie. Clarke later wrote three sequels, *2010: Odyssey Two* (1982; filmed 1984), *2061: Odyssey Three*

(1988), and *3001: The Final Odyssey* (1997). As a young man, Clarke worked as a government auditor (1936–41) and joined a small advanced group called the British Interplanetary Society. While serving (1941–46) in the Royal Air Force as a radar instructor and technician, he published his first science-fiction stories. In 1945 he wrote the article "Extra-Terrestrial Relays" for *Wireless World*, in which he envisioned a communications satellite system that would relay radio and television signals throughout the world; this system, which was in operation two decades later, was the first of many scientific advances that Clarke predicted. Collections of his essays and lectures include *Voices from the Sky* (1965), *The View from Serendip* (1977), *Ascent to Orbit: A Scientific Autobiography* (1984), *Astounding Days: A Science Fictional Autobiography* (1989), *By Space Possessed* (1993), and *Greetings, Carbon-Based Bipeds!* (1999). The Arthur C. Clarke Center (later Institute) for Modern Technologies was established in Sri Lanka in 1984. Clarke was awarded a knighthood in 1998, but it was not officially conferred until 2000.

Claus, Hugo Maurice Julien, Belgian novelist, playwright, and poet (b. April 5, 1929, Bruges, Belg.—d. March 19, 2008, Antwerp, Belg.), was a towering figure in Belgian literature and was regarded as a leading 20th-century Renaissance man. Claus was best known for his semiautobiographical novel *Het verdriet van België* (1983; *The Sorrow of Belgium*, 1990), set in Flanders in the years surrounding World War II. His novels, which also include *De metsiers* (1950; *The Duck Hunt*, 1955) and *De verwondering* (1962; "Bewilderment"), are experimental in nature and use a variety of narrative structures. The themes of his poetry, as in the rest of his oeuvre, are antiauthoritarian and frequently shocking, as exemplified in *Oostakkerse gedichten* (1955). Among his many notable plays are *Suiker* (1958; *Sugar*, 2007), *Vrijdag* (1969; *Friday*, 1972), and *Het leven en de werken van Leopold II* (1970). Claus was also a respected short-story writer, translator, scriptwriter, theatre director, and painter.

Conner, Bruce, American artist (b. Nov. 18, 1933, McPherson, Kan.—d. July 7, 2008, San Francisco, Calif.), explored themes of light and dark in a wide variety of media, including assemblages, experimental film, drawings, and photograms. Associated with the San Francisco Bay Area Beat scene in the late 1950s, he first attracted attention with his complex assemblages of found objects. The best known of his short films (also collages of found and new footage) was the 12-minute *A Movie* (1958), which in 1991 was added to the National Film Registry at the Library of Congress. Other works include intricate mandala drawings, photograms of his body, ink-blot drawings, and small collages. Conner's art was acquired by several museums.

Conté, Lansana, Guinean strongman (b. *c.* 1934, Loumbaya-Moussaya, Dubréka prefecture, French Guinea—d. Dec. 22, 2008, Conakry, Guinea), was the autocratic ruler of his country for almost 25 years after initially taking control as the head of the Military Committee for National Recovery (CMRN) that assumed power in April 1984, shortly after the death of Pres. Ahmed Touré. Conté, a member of the Susu ethnic group and a Muslim, received his military training in Côte d'Ivoire and Senegal before enlisting (1955) in the French army. He took part in the defense of Conakry during the attempted invasion from neighbouring Portuguese Guinea (now Guinea-Bissau) in November 1970, though he fought with Guinea-Bissau nationalists in 1971 during their struggle for independence from Portugal. After taking a technical course (1974) in Minsk, U.S.S.R. (now in Belarus), he was made (1975) chief of staff of land forces, a post that he retained until Touré's death. President Conté promised the restoration of human rights and full democratic elections and was reelected three times (1993, 1998, and 2003) in ostensibly multiparty ballots, but he grew increasingly authoritarian amid growing accusations of fraud and intimidation of the opposition. During the last three years of his life, Conté, who was believed to be diabetic and possibly suffering from leukemia, sought medical treatment outside of the country.

Cook, Beryl (BERYL FRANCES LANSLEY), British artist (b. Sept. 10, 1926, Egham, Surrey, Eng.—d. May 28, 2008, Plymouth, Devon, Eng.), painted humorous scenes of plump people enjoying themselves in common social situations, such as shopping, drinking in bars, or dancing in clubs. Cook had no professional training and did not begin painting until she was in her 40s. After a friend persuaded her to allow him to sell some of her paintings, Cook's reputation grew. In 1975 she had her first exhibition at the Plymouth Arts Centre and was featured in *The Sunday Times* magazine. Her first London exhibition followed at the Portal Gallery in 1976. Cook earned widespread fame when she was featured in 1979 in an episode of the TV program *The South Bank Show*. She was made OBE in 1995; because she was intensely shy, however, she refused to travel to Buckingham Palace to accept the award in person. To honour the Queen's Golden Jubilee in 2002, Cook painted *The Royal Couple*, which was featured in the Golden Jubilee Exhibition. In 2004 BBC TV aired *Bosom Pals*, an animated series featuring popular characters from some of Cook's paintings. The Portal Gallery in London hosted (2006) an exhibition of Cook's work to honour her 80th birthday.

Cornioley, Pearl (CECILE PEARL WITHERINGTON), British wartime agent (b. June 24, 1914, Paris, France—d. Feb. 24, 2008, Loire Valley, France), as an operative of the British Special Operations Executive (SOE), commanded a network of French Resistance forces during World War II. After her British expatriate parents returned to England in 1940, Pearl Witherington worked for the British Air Ministry until June 1943, when she joined the SOE. The following September she parachuted into occupied France under the code name Pauline, and by May 1944 she was overseeing some 3,000 Resistance fighters engaged in guerrilla warfare against German troops, who reportedly offered a reward of 1 million francs for her capture. In October 1944 she returned to England and married her longtime French fiancé and fellow Resistance member, Henri Cornioley. After the war she was deemed ineligible for a Military Cross for bravery because she was a woman, but she refused to accept a civilian MBE. The official snub was finally rectified 60 years later when she was made CBE (2004) and awarded (2006) her parachute wings by the Royal Air Force. Cornioley was also a member of the French Legion of Honour.

Court, Hazel, British actress (b. Feb. 10, 1926, Sutton Coldfield, Warwickshire [now part of Birmingham], Eng.—d. April 15, 2008, near Lake Tahoe, Calif.), shrieked her way to an enduring fan base and the sobriquet

"queen of scream" for her work in such Hammer studio cult horror films as *The Curse of Frankenstein* (1957), *Premature Burial* (1962), *The Raven* (1963), and *The Masque of the Red Death* (1964). The glamorous green-eyed redhead began acting in a Birmingham repertory company and made her film debut in 1944. Her screen appearances, which ranged from comedy to melodrama in addition to the horror classics, included a short-lived situation comedy, *Dick and the Duchess* (1957–58), and numerous television guest spots. After retiring from acting in the 1970s, Court became a successful sculptor.

Crichton, (John) Michael, American author, physician, and television and motion picture producer-director (b. Oct. 23, 1942, Chicago, Ill.—d. Nov. 4, 2008, Los Angeles, Calif.), used his medical training and vivid imagination to pen wildly popular fictional tales that blended scientific and technological themes amid a fast-paced narrative; he was also the creator of the Emmy Award-winning television series *ER* (1994–2009). Among Crichton's blockbuster thrillers were the novels *The Andromeda Strain* (1969; filmed 1971, TV miniseries 2008), which focused on an alien virus, and *Jurassic Park* (1990; co-writer of 1993 screenplay), the story of cloned dinosaurs run amok. Under the pseudonym John Lange, he penned eight thrillers, including *Odds On* (1966) and *Binary* (1972; teleplay *Pursuit*), and under the name Jeffrey Hudson, Crichton wrote the Edgar Award-winning medical detective novel *A Case of Need* (1968; filmed as *The Carey Treatment* [1972]), which centred on the moral issues surrounding abortion. After earning his M.D. (1969), Crichton conducted research briefly at the Salk Institute for Biological Studies, La Jolla, Calif., but on the merits of his success with *The Andromeda Strain*, he began writing full time. After publishing the nonfiction *Five Patients* (1970), he returned to the techno-thriller genre with *The Terminal Man* (1972; filmed 1974), *Sphere* (1987; filmed 1998), *The Lost World* (1995; filmed 1997), a sequel to *Jurassic Park*, and *Prey* (2002). Crichton's screenplays include *The Great Train Robbery* (1979), *Congo* (1995), and *Rising Sun* (1993)—all based on his books—and *Coma* (1978) and *Twister* (1996). Crichton's novel *State of Fear* (2004), which debunked the theory of global warming, was widely panned by scientists.

Best-selling author Michael Crichton

Jim Cooper/AP

Crumley, James, American writer (b. Oct. 12, 1939, Three Rivers, Texas—d. Sept. 17, 2008, Missoula, Mont.), penned violent mystery novels that featured vivid characterizations and sordid settings amid the natural splendour of the western United States; the works transcended the conventions of the genre. Crumley attended the Georgia Institute of Technology, Texas Arts and Industries University (B.A., 1964), and the Writers' Workshop at the University of Iowa (M.F.A., 1966). His U.S. Army service (1958-61) provided inspiration for his Vietnam War novel *One to Count Cadence* (1969). In his detective novels, down-and-out detective protagonists Milo Milodragovich and C.W. Sughrue live in the fictional mountain city of Meriwether, Mont. Both are also alcoholics and cocaine addicts; divorced war veterans who are fond of firearms, military tactics, and fistfights over small matters; loyal to moral codes at odds with those of conventional society; and prone to existential crises in the course of events. Other works include *The Wrong Case* (1975), *The Last Good Kiss* (1978), *Dancing Bear* (1983), *The Final Country* (2001), and *The Right Madness* (2005).

Dahlbeck, Eva, Swedish actress and writer (b. March 8, 1920, Saltsjö-Duvnäs, Swed.—d. Feb. 8, 2008, Stockholm, Swed.), portrayed strong, wise women in several early films by Swedish director Ingmar Bergman, notably *Sommarnattens leedne* (1955; *Smiles of a Summer Night*) and *Nära livet* (1958; U.S. title, *Brink of Life*), for which she, together with the film's other actresses, won the ensemble award for best actress at the Cannes Festival in 1958. Dahlbeck appeared in more than 50 movies from her debut in 1941 until her last role in 1970. She was also an accomplished stage actress during the same period, and she won the Eugene O'Neill Award in 1961. From the 1960s Dahlbeck devoted herself to writing, producing 10 novels as well as poetry, plays, and screenplays.

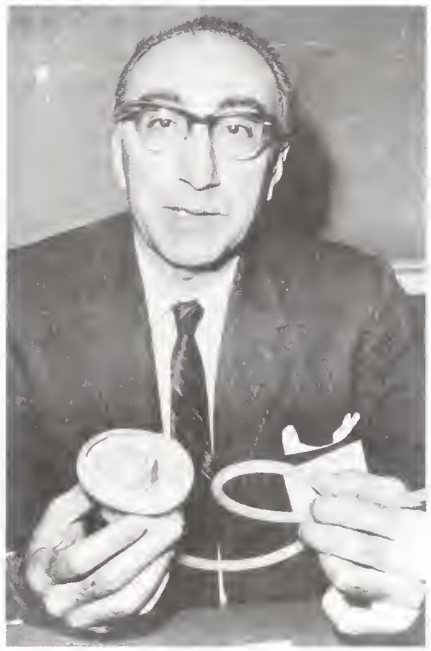
Darling, Erik, American folk musician (b. Sept. 25, 1933, Baltimore, Md.—d. Aug. 3, 2008, Chapel Hill, N.C.), was a masterful guitarist and banjo player who recorded with several prominent groups during the American folk music revival of the 1950s and '60s. Darling was a member of the Folksay Trio, whose 1951 recording of "Tom Dooley" heavily influenced the Kingston Trio's later hit version of the song. He was also a member of the Tarriers, who scored a top 10 hit in 1957 with their recording of "The Banana Boat Song," and in 1958 Darling replaced legendary folk artist Pete Seeger in the Weavers, with whom he played until 1962. The following year, with the Rooftop Singers, he recorded his most successful song, "Walk Right In," which became a number one hit. In addition, Darling released a number of solo albums, including *True Religion* (1961), *Train Time* (1962), *The Possible Dream* (1975), *Border Town at Midnight* (1994), and *Child, Child* (2000).

Darwīsh, Maḥmūd, Palestinian poet (b. March 13, 1942, Birwa, British Palestine [now in Israel]—d. Aug. 9, 2008, Houston, Texas), gave voice to the struggles of the Palestinian people through several books of prose and more than 20 collections of poetry. After the establishment of Israel (1948), Darwīsh witnessed massacres that forced his family to escape to Lebanon. A year later their clandestine return put them in limbo, as they were declared "present-absent aliens." Darwīsh left Birwa again in 1970 and traveled to the Soviet Union to complete his education in Moscow. He lived in Cairo, Beirut, London, and Paris, as well as Tunis, Tun., before returning home in 1996 to live in the West Bank town of Ramallah. Darwīsh's life in exile inspired his most creative work, and he often personified Palestine itself as a mother or a cruel beloved. In his single-poem volume *Halat hisar* (2002; "A State of Siege"), he explored the multiple reoccupations of Ramallah and the resulting sense of Palestinian isolation, though he foresaw a future of peaceful coexistence that could be achieved

through dialogue between Israelis and Palestinians. A member of the executive committee of the Palestine Liberation Organization (PLO), Darwīsh wrote the declaration of independence issued (1988) by the Palestine National Council, but he resigned from the PLO in 1993 to protest the signing of the Oslo Accords. In 2000 Israeli Prime Minister Ehud Barak vetoed a plan by his education minister to include Darwīsh's poems of reconciliation in Israel's school curriculum. Collections of Darwīsh's poems in English translation include *The Adam of Two Edens* (2000), *Unfortunately, It Was Paradise* (2003), and *The Butterfly's Burden* (2007). From 1981 he also served as editor of the literary journal *Al-Karmel*.

DeBakey, Michael Ellis, American cardiovascular surgeon, and educator (b. Sept. 7, 1908, Lake Charles, La.—d. July 11, 2008, Houston, Texas), pioneered surgical procedures for the treatment of defects and diseases of the cardiovascular system. In 1932 DeBakey devised the "roller pump," an essential component of the heart-lung machine that permitted open-heart surgery. He also developed an efficient method of correcting aortic aneurysms by grafting frozen blood vessels to replace diseased vessels, and by 1953 he had demonstrated a technique of using plastic tubing (Dacron) instead of arterial homographs to replace diseased vessels. In addition, he performed the first successful carotid endarterectomy for stroke (1953), the first successful coronary artery bypass (1964), and the first successful implantation of a ventricular assist device (1966). DeBakey received B.S. (1930), M.D. (1932), and M.S. (1935) degrees from Tulane University School of Medicine in New Orleans. His work with the U.S. surgeon general's office during and after World War II led to the development of mobile army surgical hospitals (MASH units) and the Department of Veterans Affairs (VA) hospital research system. In 1948 DeBakey became professor of surgery and chairman of the department of surgery at Baylor College of Medicine in Houston, where he later served as president (1969–79) and chancellor (1979–96). He edited the *Yearbook of Surgery* (1958–70), was the founding editor of the *Journal of Vascular Surgery*, and served on many medical editorial boards. Among his more than 1,600 professional and lay publications is *The New Living Heart* (1997). DeBakey's numerous awards include

AP



Cardiovascular surgeon Michael DeBakey

the American Medical Association Distinguished Service Award (1959), the Albert Lasker Award for Clinical Medical Research (1963; corecipient), the Eleanor Roosevelt Humanities Award (1969), the Presidential Medal of Freedom with Distinction (1969), the U.S.S.R. Academy of Sciences 50th Anniversary Jubilee Medal (1973), the National Medal of Science (1987), the Denton A. Cooley Cardiovascular Surgical Society's lifetime achievement award (2007), and the Congressional Gold Medal (2008), the highest civilian award given by the U.S. Congress.

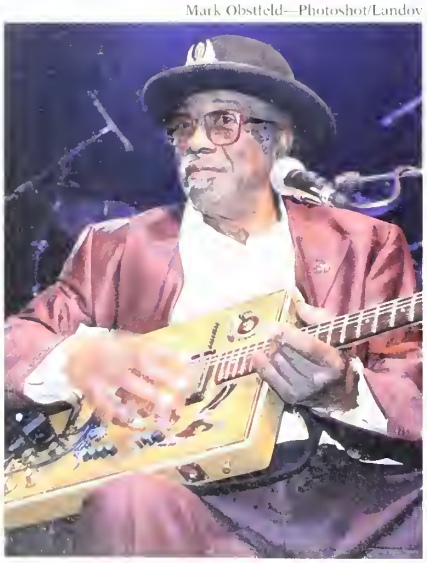
Delannoy, Jean, French filmmaker (b. Jan. 12, 1908, Noisy-le-Sec, France—d. June 18, 2008, Guainville, France), enjoyed tremendous popularity with French audiences for his films, many of which explored thought-provoking moral and philosophical issues, but he received intense criticism from French New Wave (Nouvelle Vague) directors for focusing on the script rather than imposing his own directorial vision on the final product. Delannoy studied philosophy at the Sorbonne and had stints in journalism, banking, and acting before he was hired (1930) as a film editor at the Paramount Studios in Joinville. Four years later he directed *Paris-Deauville*, the first of more than 70 motion pictures that he wrote and/or directed. In 1939 he began work on *Macao, l'enfer du jeu* (*Gambling Hell*), but the German occupation forces ordered the film reshot without Jewish actor-director Erich von Stroheim. Delannoy replaced Stroheim with French actor Pierre Renoir, and the Nazi-approved version of the film was released in 1942. Delannoy, however, kept the original, which he released in 1945 after World War II ended. *La Symphonie pastorale* (1946) earned the Grand Prix at the 1946 Cannes Festival, and *Dieu a besoin des hommes* (1950) received awards at both the Venice and Berlin film festivals. His last film was *Marie de Nazareth* (1995). In 1986 Delannoy was awarded an honorary César Award.

Di Stefano, Giuseppe, Italian lyric tenor (b. July 24, 1921, Motta Santa Anastasia, Sicily, Italy—d. March 3, 2008, Santa Maria Hoe, near Milan, Italy), was hailed as one of the finest operatic tenors of his generation. Di Stefano was admired for the warmth of his voice and for his bravura stage presence in such operas as *La traviata, Rigoletto, Faust, L'elisir d'amore, Un ballo in maschera,* and *Tosca.* Some of his greatest performances were opposite soprano Maria Callas, his frequent partner from 1951 to the mid-1960s; he later persuaded her to come out of retirement for a joint U.S., Asian, and European tour (1973–74). Di Stefano sang popular music as a child and during his World War II army service. In 1943 he fled to Switzerland, where he studied opera and sang recitals on the radio. He made his operatic debut in Massenet's *Manon* in Reggio Emilia, Italy, in 1946 and made his American debut two years later at New York City's Metropolitan Opera, where he went on to sing more than 100 performances over 17 seasons. In later years Di Stefano's voice darkened, and he ventured into heavier dramatic roles; he continued to perform occasionally until 1992.

Diddley, Bo (Otha Ellas Bates; Ellas McDaniel), American singer, songwriter, and guitarist (b. Dec. 30, 1928, McComb, Miss.—d. June 2, 2008, Archer, Fla.), was one of the most influential performers of rock music's early period. Raised mostly in Chicago by his adoptive family, from whom he took the surname McDaniel, he recorded for the legendary blues label Chess Records as Bo Diddley (a name most likely derived from the diddley bow, a one-stringed African guitar popular in the Mississippi Delta re-

gion). Despite scoring few major hits, he was nevertheless one of rock's most innovative artists because he had developed his own beat: chink-a-chink-chink, ca-chink-chink. That syncopated beat (also known as "hambone" or "shave-and-a-haircut-two-bits") had surfaced in a few big-band rhythm-and-blues charts of the 1940s, but Diddley stripped it down and beefed it up. He made it, with its obvious African roots, one of the irresistible dance sounds in rock and roll. It was appropriated by fellow 1950s rockers (Johnny Otis's "Willie and the Hand Jive" [1958]), 1960s garage bands (the Strangeloves' "I Want Candy" [1965]), and budding superstars (the Rolling Stones' version of Buddy Holly's Diddley-influenced "Not Fade Away" [1964]). Diddley's own songs hit the pop charts just five times and the Top 20 only once (even though his 1955 debut single, "Bo Diddley," backed

Mark Obstfeld—Photoshot/Landov

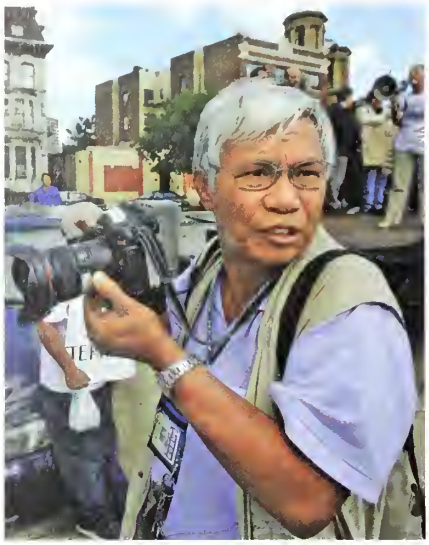


Rock and Roll Hall of Famer Bo Diddley

with "I'm a Man," was number one on the rhythm-and-blues charts). In 1987 Diddley was inducted into the Rock and Roll Hall of Fame.

Dith Pran, Cambodian photojournalist and interpreter (b. Sept. 27, 1942, Siemréab, Camb.—d. March 30, 2008, New Brunswick, N.J.), was the real-life model for the central character in the film *The Killing Fields* (1984), which was based on the 1980 article "The Death and Life of Dith Pran" by *New York Times* correspondent Sydney Schanberg. Dith acted as Schanberg's

Michael Nagle/Getty Images



Cambodian photojournalist Dith Pran

assistant (1972–75) as they covered the Cambodian civil war, and when the Khmer Rouge seized power in 1975, he risked his life to save Schanberg and other Western journalists, who then failed in their attempt to get him out of the country with them. He was taken prisoner, tortured, and put to work as a farm labourer, nearly starving in conditions of virtual slavery. In early 1979 Dith was liberated by invading Vietnamese forces, but after returning home he learned that some 50 members of his family had died in the Khmer "killing fields." Concerned that he was still in danger because he had worked with the Americans, he fled. On Oct. 3, 1979, after walking through the jungle for more than three months, he emerged in Thailand and sent word to Schanberg, who had been trying to find his friend for more than four years. Dith joined the *New York Times* staff as a photojournalist in 1980 and in 1994 founded the Dith Pran Holocaust Awareness Project. He became a U.S. citizen in 1986.

Dixon, Frank James, American immunologist (b. March 9, 1920, St. Paul, Minn.—d. Feb. 8, 2008, San Diego, Calif.), was the founding director (1961) of the Scripps Research Institute, La Jolla, Calif., where he developed isotope tracer techniques that were used to track the dynamics of protein. This work led to the analysis and classification of several conditions, including serum sickness, glomerulonephritis, and immunologic renal disease. For his work on the latter, he was honoured with the 1975 Albert Lasker Award for Basic Medical Research. Dixon also conducted fundamental work on analyzing and classifying tumours of the testes, pinpointing how systemic lupus erythematosus begins, studying the effects of viruses on the immune system, and exploring the causes of rheumatoid arthritis. He retired in 1987.

Donati, Enrico, Italian-born American painter and sculptor (b. Feb. 19, 1909, Milan, Italy—d. April 25, 2008, New York, N.Y.), was the last surviving member of the group of European artists who gathered in New York City at the outbreak of World War II and helped usher in the Surrealist movement in the U.S. Though he initially began his career as a composer, Donati fled fascist Italy and settled in Paris, where his musical career was eclipsed by his growing interest in anthropology. After exploring the American Southwest and Canada to collect Indian artifacts, he settled in New York City, working as a commercial artist and printer. Upon his return to Paris, he became fascinated by the Surrealist movement, but when war broke out in 1939, he moved back to New York City. There André Breton, the foremost disciple of Surrealism, welcomed Donati into the fold of followers. When Surrealism began to fade, Donati reinvented himself as a Constructivist, and he later dabbled in Abstract Expressionism. In the 1950s he began experimenting with surface and texture and frosted canvases with paint mixed with sand, dust, coffee grounds, and debris picked up from his vacuum cleaner, which was combined with pigment and glue. Donati's work was given a major retrospective in 1961 at the Palais des Beaux-Arts in Brussels. In addition to his art, Donati became (1965) the owner of the French perfume company Houbigant Inc., which he was credited with revitalizing; in 1978 the concern was valued at $50 million.

Drew, Ronnie, Irish folk musician (b. Sept. 16, 1934, Dun Laoghaire, Ire.—d. Aug. 16, 2008, Dublin, Ire.), founded (1962) the highly popular and influential musical group the Dubliners and served as its front man for more than 30 years. Drew's unique gruff voice and unkempt appearance, combined with his band's rambunctious behaviour and rowdy performances, enlivened traditional Irish music in the 1960s. The group released a succession of albums, notably *The Dubliners* (1964), *Finnegan Wakes* (1966), *A Drop of the Hard Stuff*

Niall Carson—PA Photos/Landov

Irish folk musician Ronnie Drew

(1967), and *Drinkin' and Courtin'* (1968). Drew's albums during his solo career (1978–79 and from 1994) included *Dirty Rotten Shame* (1995) and *The Humour Is on Me Now* (1999). Drew and the Dubliners were credited with inspiring younger Irish musicians such as U2, the Pogues, and Sinead O'Connor, many of whom united to record the tribute song "The Ballad of Ronnie Drew" (2008).

Drnovsek, Janez, Slovenian politician (b. May 17, 1950, Celje, Yugos. [now in Slovenia]—d. Feb. 23, 2008, Zaplana, Slvn.), helped lead Slovenia to a relatively peaceful independence from Yugoslavia and, as the new country's prime minister (May 14, 1992–May 3, 2000, and Nov. 17, 2000–Dec. 11, 2002) and president (2002–07), led it to membership in NATO and the European Union. In 1989 Slovenia for the first time held a regional plebiscite to choose its president; Drnovsek defeated the Communist Party's preferred candidate and became Slovenia's representative to the collective presidency just as the head position rotated to Slovenia. (From 1980 Yugoslavia was ruled by a collective presidency of regional representatives, with the top position rotating.) After Slovenia became independent in 1991, he was elected its second prime minister. He followed a program of gradual liberalization. During his presidency Drnovsek, who had recently been diagnosed with cancer, transformed himself into something of a New Age guru, pursuing quixotic peace initiatives and publishing several books on finding inner balance. These activities exasperated the country's government but endeared him to the people.

Dulles, Avery Robert Cardinal, American prelate and theologian (b. Aug. 24, 1918, Auburn, N.Y.—d. Dec. 12, 2008, Bronx, N.Y.), was one of the preeminent Roman Catholic theologians in the United States and an astute liaison between the church's liberal and conservative factions during the latter half of the 20th century. Born to a family of Protestant statesmen (his father was politician John Foster Dulles), Dulles converted to Catholicism while attending Harvard University and, after a stint in the navy, joined the order of the Jesuits. Following his ordination as a priest in 1956, he devoted himself to a life of teaching and took on professorships at Woodstock (Md.) College (1960–74; from 1969 located in New York City), the Catholic University of America, Washington, D.C. (1974–88), and Fordham University, New York City (1988–2008). He also penned more than 20 books of theology, including *Models of the Church* (1974), a best seller that addressed the profound social reforms that were then taking place within Roman Catholicism. In 2001 he was elevated to cardinal, thereby becoming the first American to be appointed to that position without first having served as bishop.

Elliott, Osborn ("Oz"), American journalist and editor (b. Oct. 25, 1924, New York, N.Y.—d. Sept. 28, 2008, New York City), advanced *Newsweek* magazine to a stature rivaling that of it chief rival, *Time*, during his tenure (1961–76) as its editor. After working as an associate editor for *Time*, in 1955 Elliott accepted a business editor position with *Newsweek*. Under his watch as *Newsweek*'s editor, the magazine gave high-profile coverage to civil rights issues, discarding neutrality to express support for the cause of equality, and circulation nearly doubled. He served (1977–86) as dean of Columbia University's Graduate School of Journalism, and he later became professor emeritus.

Ellis, Alton Nehemiah, Jamaican singer (b. Sept. 1, 1938, Kingston, Jam.—d. Oct. 11, 2008, London, Eng.), was called the "godfather of rocksteady," the Jamaican pop music style that followed ska and preceded reggae. One of the most soulful vocalists in the history of Jamaican music, Ellis began his career in 1959 as part of the duo Alton and Eddie (Perkins). As a solo performer, he recorded for the two giants of the Jamaican recording industry, Coxsone Dodd and Duke Reid. Ellis's "Girl I've Got a Date" (1966) was widely regarded as the first hit in the style for which he provided a name with "Get Ready Rock Steady" (also 1966), but throughout his life Ellis was critical of the rebellious violent "rude boy" subculture that emerged in conjunction with rocksteady. Although neither of these songs nor the hit "Cry Tough" appeared on *Mr. Soul of Jamaica* (1967), the album was widely considered both Ellis's defining work and the high point of rocksteady. In the early 1970s, as rocksteady waned and reggae waxed, hits came slower for Ellis, and he relocated to Canada and then Britain. In 1994 he received the Order of Distinction medal from Jamaica.

Fairhurst, Angus, British artist (b. Oct. 4, 1966, Pembury, Kent, Eng.—d. March 29, 2008, Bridge of Orchy, Argyll, Scot.), was a founding member (with Damien Hirst and Sarah Lucas) of the Young British Artists group that dominated British art in the 1990s; he was perhaps best known for a series of artworks featuring bronze representations of gorillas. Fairhurst participated in the seminal 1988 art show "Freeze" in London that launched the Young British Artists phenomenon. With incisive humour and great attention to form, he worked in collage, sculpture, painting, and installation and performance art. His work appeared in several important exhibitions, most recently in "In-a-Gadda-da-Vida" at Tate Britain in 2004.

Faraz, Ahmed (SYED AHMAD SHAH), Pakistani poet (b. Jan. 14, 1931, Nowshera, near Kohat, North West Frontier, British India [now in Pakistan]—d. Aug. 25, 2008, Islamabad, Pak.), crafted more than a dozen volumes of contemporary Urdu poetry, in which he expressed passionate feelings about love and revolutionary protests against both capitalism and militarism. His much-admired ghazals (romantic lyric poetry set to music) were popular in India as well as in Pakistan. Faraz, the son of classical poet Agha Syed Muhammad Shah Bark Kohati, studied Persian and Urdu at Edwards College in Peshawar and published the verse collection *Tanha Tanha* while still a student. He earned a master's degree at Peshawar University, where he later taught language. A strong supporter of assassi-

nated Pakistani leader Zulfikar Ali Bhutto, Faraz was briefly imprisoned and spent several years in self-imposed exile in Europe and Canada. During his time in exile, he wrote some of his best-loved poems, including *Mahasra* ("The Siege") and *Dekhtay Hain* ("Let Us Gaze"). Faraz was the founding director of the Pakistan Academy of Letters and the recipient (2004) of the Hilal-e-Imtiaz, but he returned the award in 2006 in protest against Pres. Pervez Musharraf.

Febres Cordero (Ribadeneyra), León, Ecuadoran politician (b. March 9, 1931, Guayaquil, Ecuador—d. Dec. 15, 2008, Guayaquil), developed a reputation as a larger-than-life strongman while serving a tumultuous term

Dolores Ochoa R./AP

Ecuadoran strongman León Febres Cordero

(1984–88) as president of Ecuador. Febres Cordero studied mechanical engineering in the United States before returning home and entering national politics in 1966 as a congressional deputy. As a member of the right-wing Social Christian Party, Febres Cordero was elected president and soon gained fame throughout Latin America for his tough-guy image, bolstered by an affinity for cigarettes and pistols. Though his free-market approach to economic policy won him the admiration of U.S. Pres. Ronald Reagan, his relationship with his own legislature was frequently contentious, and his brief kidnapping in 1987 at the hands of rebel commandos underscored Ecuador's political instability. Following his presidency, Febres Cordero served (1992–2000) as the mayor of his hometown, Guayaquil.

Felt, W(illiam) Mark, Sr., American government official (b. Aug. 17, 1913, Twin Falls, Idaho—d. Dec. 18, 2008, Santa Rosa, Calif.), served as the associate director of the FBI in the early 1970s and in 2005 captured public attention when he revealed in an interview with *Vanity Fair* magazine that he was "Deep Throat," the anonymous informant at the centre of the Watergate Scandal (1972–75). Felt joined the FBI as a freshly minted lawyer in 1942. By 1971 he was effectively in charge of the bureau's day-to-day operations, though he was unexpectedly passed over for its top post a year later upon the death of J. Edgar Hoover. Shortly thereafter he began to secretly cooperate with reporter Bob Woodward in the *Washington Post* newspaper's investigation into the abuses of presidential powers stemming from the break-in of the Watergate complex during the 1972 presidential election campaign; his inside information was considered instrumental in implicating the White House. Felt retired from the FBI in 1973. In 1980 he was convicted of having ordering illegal break-ins of homes in the pursuit of bombing suspects, but he was later pardoned.

Ferrer, Mel (MELCHOR GASTON FERRER), American actor, producer, and director (b. Aug. 25, 1917, Elberon, N.J.—d. June 2, 2008, Santa Barbara, Calif.), was a successful stage and film actor and director, though he was often better known as the first husband (1954–68) of actress Audrey Hepburn, with whom he costarred in the 1956 film version of *War and Peace*. Ferrer briefly attended Princeton University and wrote the children's book *Tito's Hats* (1940) before moving to New York City to pursue an acting career. Although he preferred directing, Ferrer was admired for his performances as Luis Bello, Mexico's most idolized matador, in *The Brave Bulls* (1951), a swashbuckling French nobleman in *Scaramouche* (1952), and a crippled puppeteer in the musical *Lili* (1953), which many considered his best role. In theatre Ferrer cofounded (1947) California's La Jolla Playhouse, with actors Gregory Peck and Dorothy McGuire, and starred on Broadway opposite Hepburn in Jean Giraudoux's *Ondine* (1954). Ferrer later enjoyed modest success on television, most notably in a recurring role on the CBS drama *Falcon Crest* in the 1980s.

Fischer, Bobby (ROBERT JAMES FISCHER), American-born chess master (b. March 9, 1943, Chicago, Ill.—d. Jan. 17, 2008, Reykjavík, Ice.), became the youngest grandmaster in history when he received the title in 1958. His youthful intemperance and brilliant playing drew the attention of the American public to the game of chess, particularly when, in a highly publicized match held in Reykjavík in 1972, he defeated Boris Spassky of the Soviet Union and became the first native-born American to hold the title of world champion. Fischer learned the moves of chess at age 6 and at 16 dropped out of high school to devote himself fully to the game. In 1958 he won the first of his many American championships. In world championship candidate matches during 1970–71, Fischer won 20 consecutive games before losing once and drawing three times to former world champion Tigran Petrosyan of the Soviet Union in a final match won by Fischer. In 1972 when he defeated Spassky, Fischer won the $156,000 victor's share of the $250,000 purse. In 1975 Fischer refused to meet his Soviet challenger, Anatoly Karpov, and the Fédération Internationale des Échecs (FIDE; the international chess federa-

Chess legend Bobby Fischer

John Lent/AP

tion) deprived him of his championship and declared Karpov champion by default. Fischer then withdrew from serious play for almost 20 years, returning to defeat Spassky in a privately organized rematch in Yugoslavia in 1992. After defeating Spassky, Fischer went into seclusion, in part because he had violated U.S. restrictions on participating in events in Yugoslavia. On July 13, 2004, he was detained at Narita Airport in Tokyo after authorities discovered that his U.S. passport had been revoked. Fischer fought deportation to the United States, where he faced criminal charges for violating sanctions against the former Yugoslavia. On March 21, 2005, Fischer was granted Icelandic citizenship, and within days he was flown to Reykjavík.

Foch, Nina (NINA CONSUELO MAUD FOCK), Dutch-born American actress and teacher (b. April 20, 1924, Leiden, Neth.—d. Dec. 5, 2008, Los Angeles, Calif.), specialized in portraying coolly manipulative women over a prolific seven-decade career. Foch grew up in New York City and studied at the American Academy of Dramatic Arts. She made her screen debut in the short film *Wagon Wheels West* (1943) and then appeared in a string of B-movies before winning recognition as a conniving socialite in *An American in Paris* (1951). Though Foch never became a star, she was cast in several high-profile Hollywood productions, including *The Ten Commandments* (1956) and *Spartacus* (1960), and earned a supporting actress Oscar nomination for her role in *Executive Suite* (1954). In addition to acting on stage and in television (she could be seen in more than 90 series between 1949 and 2007), Foch also taught for 40 years at the University of Southern California's film school.

Ford, Alan Robert, American swimmer (b. Dec. 7, 1923, Panama City, Panama Canal Zone [now Panama]—d. Nov. 3, 2008, Sarasota, Fla.), was admired for his lightning speed, tremendous strength, and perfect swimmer's physique; the "human fish," as Ford was dubbed, became (1944) the first person to break the 50-second barrier in the 100-yd freestyle, recording 49.4 sec. At age eight Ford won his first medal, presented to him by famed swimmer and celebrity Johnny Weissmuller; 11 years later, at age 19, he broke Weissmuller's record (of 51 sec flat) in the 100-yd freestyle. Ford spent his high-school years at Mercersburg (Pa.) Academy, drawn by the school's intensive swimming program. He continued to compete while pursuing a degree (B.A., 1945) at Yale University and won collegiate championships in the 50- and 100-yd freestyle events and the 150-yd backstroke. The cancellation of the 1944 Olympic Games due to World War II and Ford's own service in the U.S. Navy caused him to stop training for several years. After he completed his navy service, he resumed his regimen and made the 1948 Olympic team after only six months of intense physical work; he captured the silver medal in the 100-m freestyle. In 1966 he was inducted into the International Swimming Hall of Fame.

Fraser, George MacDonald, British writer (b. April 2, 1925 , Carlisle, Cumbria, Eng.—d. Jan. 2, 2008 , Strang, Isle of Man), was best known for his series of 12 comic historical novels, written in the form of an extended memoir, about the exploits of Harry Flashman, a hard-drinking, womanizing, vain, and cowardly character who played a leading role in many major events of the 19th century. The novels came from Fraser's imagining the adult life of the bully Flashman in the Thomas Hughes classic novel *Tom Brown's School Days* (1857). The first novel in the series, *Flashman: From the Flashman Papers, 1839–1842,* which was set in Afghanistan, appeared in 1969. A memoir of Fraser's wartime (1943–47) experiences, *Quartered Safe Out Here,* appeared in 1992. After World War II, Fraser went into journalism, and he eventually served (1964–69) as the deputy editor of the *Glasgow Herald* (now *The Herald*). Besides the Flashman novels, Fraser wrote five other historical novels, three books of short stories, and a scholarly study of the Anglo-Scottish border reivers, as well as a number of screenplays. He was made OBE in 1999.

Frontiere, Georgia Irwin, American sports executive (b. Nov. 21, 1927, St. Louis, Mo.—d. Jan. 18, 2008, Los Angeles, Calif.), became the first female owner of a National Football League team when she inherited the Los Angeles Rams following the death in 1979 of her husband, Carroll Rosenbloom. Enduring criticisms that a woman could not handle ownership of a professional football franchise, Frontiere garnered further reproach when in 1980 she moved the team to Anaheim, Calif., and again in 1995 when she relocated the Rams to St. Louis. Under her leadership the Rams went on to win the Super Bowl in 2000.

Al Bello/Getty Images

St. Louis Rams owner Georgia Frontiere with the Vince Lombardi Trophy after Super Bowl XXXIV

Fyodorov, Boris Grigoryevich, Russian economist and politician (b. Feb. 13, 1958, Moscow, Russia, U.S.S.R.—d. Nov. 20, 2008, London, Eng.), was one of post-Soviet Russia's leading exponents of free-market economic reforms. Fyodorov was cofounder (1994) of the investment bank United Financial Group (UFG) and UFG Asset Management, represented his country at the European Bank for Reconstruction and Development (1991–92) and the World Bank (1992), and from 2000 served as a reform-minded director of the government-owned natural gas company Gazprom. Fyodorov studied economics at the Moscow Finance Institute (graduated 1980) and the Soviet Academy's Institute of World Economy and International Relations (Ph.D., 1989). After working at the State Bank and as an economic adviser to Pres. Mikhail Gorbachev, he served as deputy prime minister (1992–94), finance minister (1993), and chief tax administrator (1998). Fyodorov was elected to the Duma (parliament) in 1993 and again in 1995 at the head of his own free-market party, Forward Russia.

Gajdusek, D(aniel) Carleton, American physician and medical researcher (b. Sept. 9, 1923, Yonkers, N.Y.—found dead Dec. 12, 2008, Tromsø, Nor.), was corecipient (with Baruch S. Blumberg) of the 1976 Nobel Prize for Physiology or Medicine for his research on the causal agents of various degenerative neurological disorders. Gajdusek graduated (1943) from the University of Rochester, N.Y. He received an M.D. (1946) from Harvard University and served (1949–52) as a fellow in pediatrics and infectious diseases at Harvard. In the next three years, he held positions at the Institute of Research of the Walter Reed Army Medical Center in Washington, D.C., and the Institut Pasteur, Tehran. It was in 1955, while he was a visiting investigator at the Walter and Eliza Hall Institute of Medical Research in Melbourne, that Gajdusek began the work that culminated in the Nobel Prize. Gajdusek co-discovered and provided the first medical description of a unique central nervous system disorder occurring only among the Fore people of New Guinea and known by them as kuru ("trembling"). Living among the Fore, studying their language and culture, and performing autopsies on kuru victims, Gajdusek came to the conclusion that the disease was transmitted in the ritualistic eating of the brains of the deceased, a Fore funeral custom. Gajdusek became (1958) the head of laboratories for virological and neurological research at the National Institutes of Health (NIH). After years of further research, much of it conducted with his NIH colleague Clarence Gibbs, Jr., he postulated that the delayed onset of the disease could be attributed to a virus capable of extremely slow action or, perhaps, having the ability to remain dormant for years. Gajdusek's study had significant implications for research into the causes of another degenerative brain disease, called Creutzfeldt-Jakob disease. After pleading guilty to having sexually molested a teenaged boy, Gajdusek served one year in prison.

Gencer, Leyla (AYSHE LEYLA CEYREKGIL), Turkish soprano (b. Oct. 10, 1928?, Istanbul, Tur.—d. May 9/10, 2008, Milan, Italy), performed more than 70 roles throughout her 35-year operatic career. Known as the Turkish Diva, Gencer was most famous for her roles in the operas of Gaetano Donizetti and Giuseppe Verdi. She trained in Turkey with the Italian opera greats Giannina Arangi-Lombardi and Apollo Granforte before making her debut (1950) in Ankara as Santuzza in Pietro Mascagni's *Cavalleria rusticana*. Gencer played Madame Lidoine in the 1957 premiere of Francis Poulenc's *Dialogues des Carmelites* at La Scala in Milan. She went on to perform a wide variety of roles internationally, including Violetta (*La traviata*), Leonora (*Il trovatore*), the Countess (*The Marriage of Figaro*), Donna Elvira (*Don Giovanni*), and the title characters in *Norma* and *Madama Butterfly*. Gencer retired from the operatic stage in 1985, though she continued to give occasional public performances until 1992. The Leyla Gencer Vocal Competition was established (1995) in Istanbul in her honour.

Geremek, Bronislaw, Polish historian and politician (b. March 6, 1932, Warsaw, Pol.—d. July 13, 2008, near Lubien, Pol.), was an outspoken supporter of government reform in the 1980s, a prominent adviser to Lech Walesa (then leader of the Solidarity labour movement), and a key negotiator in laying the groundwork for the national elections (1989) that unexpectedly brought Solidarity (and Walesa) to power. Later, as Poland's foreign minister (1997–2000), he signed the agreement that brought the country into NATO in 1999. Geremek, who was born Jewish, was smuggled out of the Warsaw Ghetto during World War II. He joined Poland's Communist Party in 1950 but became disillusioned and resigned in 1968. He studied at the University of Warsaw and in Paris, where he remained to teach French medieval history at the Sorbonne (1962–65) and the College of France (1992–93) and to serve as head of the Paris Polish Cultural Institute. Back in Warsaw, he joined (2002) the faculty of the College of Europe, Natolin. The turning point of Geremek's political career came in 1980 when he drove to Gdansk to deliver a letter to Walesa that a group of intellectuals had signed in support of Solidarity. In addition, Geremek served (1989–2001) as a representative in Poland's parliament and as a member (2004–08) of the European Parliament.

Geschonneck, Erwin, German actor (b. Dec. 27, 1906, Bartenstein, East Prussia, Ger. [now Bartoszyce, Pol.]—d. March 12, 2008, Berlin, Ger.), was one of East Germany's most respected character actors on the stage—in Hamburg (1946–49) and as a member (1949–56) of Bertolt Brecht's Berliner Ensemble—and on-screen (1946–95) in scores of movie and television appearances, notably as the tragic Kowalski in the Academy Award-nominated film *Jakob, der Lügner* (1975; *Jacob the Liar*). Geschonneck joined the German Communist Party in 1919, and when Hitler came to power (1933), he fled to the Soviet Union and eventually to Prague, where he was arrested by the Gestapo. After spending six years in German concentration camps, Geschonneck in 1945 was among some 4,000 prisoners being transported on the liner *Cap Arcona* when it was sunk by British forces. He was one of only about 350 survivors and later appeared in a 1982 East German TV movie and a 1995 documentary about the incident.

Getty, Estelle (ESTELLE SCHER GETTLEMAN), American actress, (b. July 25, 1923, New York, N.Y.—d. July 22, 2008, Los Angeles, Calif.), earned a legion of fans and seven straight Emmy Award nominations (1986–92; she won in 1988) for her portrayal of Sophia Petrillo, the tiny sharp-tongued Sicilian octogenarian in NBC television's popular situation comedy *The Golden Girls* (1985–92). Getty appeared in plays in small Off-Broadway theatres until 1981, when she was cast as Harvey Fierstein's mother in the hit Broadway production *Torch Song Trilogy*. Getty also played Sophia in two *Golden Girls* spin-offs, *Empty Nest* (1988–95) and *The Golden Palace* (1992–93). Her film credits include *Mask* (1985), *Stop! Or My Mom Will Shoot* (1992), and *Stuart Little* (1999).

Lennox McLendon/AP

Emmy Award-winning actress Estelle Getty

Giardello, Joey (CARMINE ORLANDO TILELLI), American boxer (b. July 16, 1930, Brooklyn, N.Y.—d. Sept. 4, 2008, Cherry Hill, N.J.), as undisputed world middleweight champion (1963–65), defended his title with a win by unanimous decision on Dec. 14, 1964, against Rubin ("Hurricane") Carter and later sued the makers of the film *The Hurricane* (1999) because of its depiction of the fight as unfairly awarded to him for racial reasons; the lawsuit ended in a settlement. Giardello defeated Dick Tiger of Nigeria on Dec. 7, 1963, to win the title, but Tiger regained it in their next bout, on Oct. 21, 1965. Giardello's first professional fight was in 1948. He retired in 1967 with a record of 101 wins (33 by knockout), 25 losses, and 8 draws. He was inducted into the International Boxing Hall of Fame in 1993.

Gibson, William, American playwright (b. Nov. 13, 1914, Bronx, N.Y.—d. Nov. 25, 2008, Stockbridge, Mass.), won instant acclaim for his play *The Miracle Worker* (1959), which was based on the life of Helen Keller, a deaf and blind child whose determined teacher, Annie Sullivan, taught her to communicate by using sign language. The original playscript, created as a teleplay, was significantly reworked for the stage. *The Miracle Worker* opened on Broadway on Oct. 19, 1959. It ran 719 performances and received four Tony Awards, including one for best play. Gibson's screenplay for the 1962 film adaptation received an Oscar nomination. Though his later works never received the same level of praise, plays such as *Golda* (1977) and *Golda's Balcony* (2003) were well received.

Giordano, Gus (AUGUST T. GIORDANO), American jazz dancer and choreographer (b. July 10, 1923, St. Louis, Mo.—d. March 9, 2008, Chicago, Ill.), was one of the pioneers of the style known as jazz dance and succeeded in gaining it the respect already enjoyed by ballet and modern dance. Following a Broadway career that included performances in *Paint Your Wagon* and *On the Town,* Giordano moved (1953) to the Chicago area and opened a dance studio. In 1962 he founded what became Giordano Jazz Dance Chicago, considered the first troupe to concentrate exclusively on jazz dance. Giordano organized (1990) the first Jazz Dance World Congress, an annual international convention featuring master classes and performances, choreographed hundreds of dance numbers, and wrote several books on jazz dance. A 1980 Emmy Award for his television special "The Rehearsal" was only one of his numerous honours.

Giroux, Robert, American editor and publisher (b. April 8, 1914, Jersey City, N.J.—d. Sept. 5, 2008, Tinton Falls, N.J.), introduced and guided many of the top authors of the 20th century in a lengthy career in which he ascended to partner (1964) and chairman (1973) of the distinguished publishing house Farrar, Straus and Giroux, which became known for its literary fiction. Giroux published the debut novels of numerous significant writers, including Jean Stafford, Robert Lowell, Bernard Malamud, Flannery O'Connor, Jack Kerouac, and Susan Sontag. Giroux began his editing career in 1940 at Harcourt, Brace, & Co., rising to become executive editor in 1948. He became disillusioned, however, when the company refused to allow him to publish J.D. Salinger's *The Catcher in the Rye,* and in 1955 he took his services to Farrar, Straus & Co. (from 1964 Farrar, Straus and Giroux). Such was the esteem in which writers held him that some 15 authors, notably T.S. Eliot, Malamud, and O'Connor, made the move with him.

Giuffre, Jimmy (JAMES PETER GIUFFRE), American jazz woodwind player and composer (b. April 26, 1921, Dallas, Texas—d. April 24, 2008, Pittsfield, Mass.), experimented with jazz sounds and structures and, with a series of combos named the Jimmy Giuffre Three, pioneered chamber jazz—at first in an original, subdued folk-jazz idiom (1956–59) and then in some of the first free-improvisation works. He first became renowned as composer of the Woody Herman band hit "Four Brothers" (1947) and then played saxophones and clarinet with Shorty Rogers and other West Coast figures before leading his own daring recording dates. In the early Three combos, Giuffre played quiet, low-register clarinet and saxophones, joined by guitar and bass or trombone. In the 1960s he concentrated on clarinet and played a bolder, more expressive music that abandoned themes, rhythms, and fixed harmonic structures. Though these later Threes were initially controversial, their influential recordings were hailed when reissued on CD in the 1990s. By then Giuffre, who had taught at colleges and experimented with jazz–world music fusions, was once again performing free jazz.

Glossop, Peter, British opera singer (b. July 6, 1928, Wadsley, Sheffield, Yorkshire, Eng.—d. Sept. 7, 2008, Rousdon, Devon, Eng.), was a powerful onstage presence with a robust, well-placed voice that made him one of the leading interpreters of Giuseppe Verdi great baritone roles; in 1965 he became the first Englishman to sing Verdi (*Rigoletto*) at Milan's La Scala. He was also a notable interpreter of Benjamin Britten, especially as the lead in *Billy Budd.* After his national service, Glossop worked as a bank clerk while studying singing and, from 1949, performing with the local Sheffield Operatic Society. He auditioned for the chorus at the Sadler's Wells Opera (now the English National Opera) in 1952, and by 1955 he was one of the company's principal baritones. He made his debut at the Royal Opera at Covent Garden in 1961 and soon was performing throughout Europe and the U.S. From 1979 until his retirement in 1985, Glossop expanded his repertoire to include Wagnerian roles. His autobiography, *Peter Glossop, the Story of a Yorkshire Baritone,* was published in 2004.

González Cruchaga, the Right Rev. Carlos, Chilean Roman Catholic bishop (b. June 8, 1921, Santiago, Chile—d. Sept. 21, 2008, Santiago), adamantly defended human rights during the Chilean military dictatorship (1974–90) of Augusto Pinochet. Following in the footsteps of his cousin, the Chilean saint Father Alberto Hurtado Cruchaga (beatified in 1994), González was ordained a priest in 1944. He was first appointed to the San Joaquín parish in Santiago and in 1966 became bishop of Talca. González was subjected to a campaign of intimidation when he confronted Pinochet about 15 missing individuals found in an unmarked grave during the dictator's reign. González established a self-help centre for Talca's peasants, and as president (1988–92) of the Chilean Episcopal Conference, he played a significant role in helping to drive Pinochet out of power and in establishing democracy. González authored the book *¿Y qué hiciste con tu hermano?* (2007).

González, Ángel, Spanish poet (b. Sept. 6, 1925, Oviedo, Spain—d. Jan. 12, 2008, Madrid, Spain), was greatly respected as a member of the "Generation of 1950" for his finely honed socially engaged poetic works as well as for lyrical poetry in which he explored his own nature and limitations. His po-

etry was informed by his experience growing up during the Spanish Civil War (1936–39) and living during the subsequent rule of Gen. Francisco Franco. González was an official (1955–72) of Spain's Ministry of Public Works in Madrid when he began writing verse and published *Áspero mundo* (1956; *Harsh World and Other Poems*, 1977); it won immediate critical acclaim. Other important works followed, including *Sin esperanza, con convencimiento* (1961), *Grado elemental* (1962), and *Tratado de urbanismo* (1967). In addition, he edited a number of anthologies and works of literary criticism. González was a professor of contemporary Spanish literature at the University of New Mexico in Albuquerque for almost 20 years (1974–93) and divided his time thereafter between the U.S. and Spain. Among his many honours, González was given the 1985 Prince of Asturias Award for Letters, served as a member of the Royal Spanish Academy from 1997, and won the inaugural Federico García Lorca International Poetry Prize in 2004.

Goodman, Dody (DOLORES GOODMAN), American actress (b. Oct. 28, 1914?, Columbus, Ohio—d. June 22, 2008, Englewood, N.J.), exploited her distinctive high-pitched voice and zany personality on television shows, notably as the main character's dotty mother in the cult hit *Mary Hartman, Mary Hartman* (1976–78) and its sequel, *Fernwood Forever* (1977–80), and as the school secretary in the movies *Grease* (1978) and *Grease 2* (1982). Goodman trained at the School of American Ballet and the Metropolitan Opera Ballet School in New York City and danced in the chorus at Radio City Music Hall and on Broadway before transitioning into TV. As a regular (1957–58) on *The Jack Paar Show*, she was well known for her quirky humour and her tendency to upstage the star.

Graham, Robert, Mexican-born American sculptor (b. Aug. 19, 1938, Mexico City, Mex.—d. Dec. 27, 2008, Santa Monica, Calif.), was celebrated for his civic monuments, many of them massive in scale and all of them sculpted in bronze. Among his best-known designs were the Olympic Gateway (1984) in Los Angeles, the Joe Louis Memorial (1986) in Detroit, the Franklin Delano Roosevelt Memorial (1997) in Washington, D.C., the Duke Ellington Monument (1997) in New York City, and the Charlie "Bird" Parker Memorial (1999) in Kansas City, Mo. Graham was also acclaimed for his many smaller-scale works, especially his sculptures of the nude female figure. After studying at San Jose (Calif.) State College and the San Francisco Art Institute, Graham had his first solo exhibition in 1964. He married actress Anjelica Huston in 1992. Graham received the California Governor's Award for the Arts in 1993, and he was inducted into the California Museum's Hall of Fame in 2008.

Gray, Simon (SIMON JAMES HOLLIDAY GRAY), British dramatist (b. Oct. 21, 1936, Havling Island, Hampshire, Eng.—d. Aug. 6, 2008, London, Eng.), wrote plays, often set in academia, that were noted for their challenging story lines, complex characterizations, and witty, highly literary dialogue. Gray's first stage play was *Wise Child* (1968), which features a criminal transvestite, but his best-known work—and first international success—was *Butley* (1971; filmed 1974), a play about a petulant university professor whose venomous wit masks an inner emptiness. Gray alternately lived in Canada and England, attending Westminster School in London; Dalhousie University, Halifax, N.S. (B.A., 1957); and Trinity College, Cambridge (B.A., 1961). While working as a university lecturer in both countries, he wrote satiric novels and farcical plays for stage and television, including *Spoiled* (1971), *Otherwise Engaged* (1975), *The Rear Column* (1978), *Quartermaine's Terms* (1981), *Hidden Laughter* (1990), *Fat Chance* (1995), *The Late Middle Classes* (1999), *The Old Masters* (2004), and *Little Nell* (2006). His autobiographical nonfiction works include *The Smoking Diaries* (2004), *The Year of the Jouncer* (2006), and *The Last Cigarette* (2008). Gray was made CBE (Commander of the British Empire) in 2005.

Griffin, Johnny (JOHN ARNOLD GRIFFIN III), American jazz tenor saxophonist (b. April 24, 1928, Chicago, Ill.—d. July 25, 2008, Availles-Limouzine, France), was noted for his fluency in the hard-bop idiom. He toured with Lionel Hampton's big band (1945–47) and with trumpeter Joe Morris (1947–50) before playing two years (1951–53) in a U.S. Army band. In Chicago and then in New York City, Griffin established a national reputation while playing with Art Blakey (1957) and Thelonious Monk (1958). Together with tenor saxophonist Eddie ("Lockjaw") Davis, Griffin led a quintet in 1960–62. He moved to France in 1963 and then maintained an active career touring European jazz centres, soloing with the Kenny Clarke–Francy Boland big band in the late 1960s and, from 1978, leading his quartet in annual tours in the U.S. Griffin's tenor saxophone improvising was in a transitional style that fused swing and bebop elements. In early recordings, such as *A Blowing Session* (1957) and *Way Out!* (1958), he was noted for his creativity and technical dexterity, even while creating complex harmonic structures (chord changes) at fast tempos.

Griffiths, Philip Jones, Welsh photojournalist (b. Feb. 18, 1936, Rhuddlan, Wales—d. March 19, 2008, London, Eng.), gained international recognition for his 1971 book *Vietnam, Inc.*, in which he used powerful images of wounded civilians and destroyed villages to challenge attitudes toward American involvement in the Vietnam War. Although Griffiths trained at Liverpool University to become a pharmacist, he worked as a freelance photographer from 1961. He first joined Magnum Photos, the co-op for freelance photographers, in 1966, became a full member in 1971, and served as president during 1980–85. Griffiths's work took him to more than 120 countries, including conflicts in Algeria, Bosnia, Cambodia, Iraq, Israel, and Northern Ireland. His later books include *Dark Odyssey* (1996) and *Vietnam at Peace* (2005).

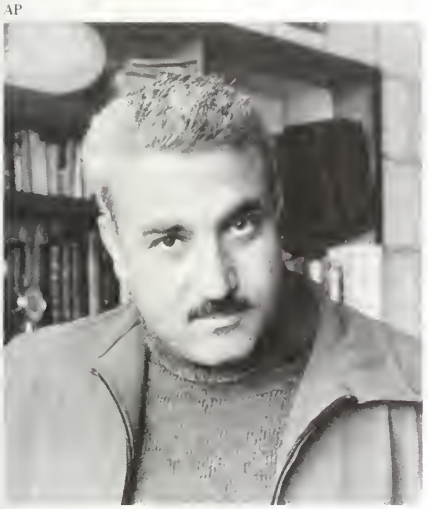
Groebli, Werner Fritz ("FRICK"), Swiss ice skater and comedian (b. April 21, 1915, Basel, Switz.—d. April 14, 2008, Zürich, Switz.), delighted audiences for more than 45 years (1934–80), first as half of the skating comedy team Frick and Frack and then as Mr. Frick after his partner, Hansruedi Mauch ("Frack"), was forced to retire in the 1950s because of health problems. The pair, who joined the Ice Follies in 1939, executed their slapstick comedy routines on the ice with perfect timing and exceptional athleticism, and Groebli continued to do his trademark cantilever spread eagle (in which he bent backwards at the knees to within inches of the ice) until well into his 60s. He was inducted into the World Figure Skating Hall of Fame in 1984.

Güines, Tatá (FEDERICO ARÍSTIDES SOTO ALEJO), Cuban percussionist (b. June 30, 1930, Güines, Cuba—d. Feb. 4, 2008, Havana, Cuba), was hailed as the King of the Congas and Golden Hands,

winning accolades for popularizing Afro-Cuban rhythms worldwide with his fiery drumming. After performing with top musicians in Cuba during the 1930s and '40s, Güines moved in 1957 to the U.S., where he was welcomed by such jazz greats as Dizzy Gillespie, Maynard Ferguson, and Miles Davis, with whom he jammed. Güines added percussion to studio recordings by Frank Sinatra and Josephine Baker and recorded (with bassist Cachao) the seminal album *Cuban Jazz Session in Miniature* (1957). Unhappy with the segregationist atmosphere in the U.S., Güines returned to Cuba after Fidel Castro's revolution in 1959. In later years Güines gained renewed attention when in 2004 he won a Latin Grammy for the album *Lagrimas Negras*, or *Black Tears*. In 2006 he was awarded Cuba's National Music Award.

Habash, George, Palestinian militant (b. 1925/26, Lydda, Palestine [now Lod, Israel]—d. Jan. 26, 2008, Amman, Jordan), was leader (1967–2000) of the Popular Front for the Liberation of Palestine (PFLP). Habash fled Palestine in 1948, after Israel was established there, and earned a medical degree at the American University of Beirut. In the early 1950s he was active in the Youth of Vengeance group, which advocated violent attacks on traditional Arab governments. Habash founded the militant PFLP after his goal to liberate Palestine through Arab unity proved unrealistic following Israel's victory in the Six-Day War (1967). Under his leadership, the PFLP staged several airplane hijackings, including the abduction of three Western passenger jets to a Jordanian airstrip in September 1970. These activities destabilized the Jordanian monarchy and triggered King Hussein's crackdown on Palestinian guerrillas operating in Jordan. In the bloody civil war that followed, the PFLP and other guerrillas were driven from the country. Following the Yom Kippur War (1973), Habash became the leading voice of the Rejection Front, four Palestinian groups that opposed any diplomatic settlement to the conflict with Israel. Under his leadership the PFLP successfully organized clandestine cells in the Israeli-occupied West Bank and Gaza Strip. Habash stepped down as leader of the PFLP in 2000.

AP



Palestinian militant George Habash

Haeberlin, Paul, French chef and restaurateur (b. 1923, Illhaeusern, France—d. May 10, 2008, Illhaeusern), transformed his family's inn in the Alsatian town of Illhaeusern into a Michelin three-star restaurant. L'Arbre Vert was established in 1878 by Haeberlin's grandparents but was destroyed during World War II. Haeberlin and his brother, Jean-Pierre, rebuilt it in 1950, renaming it L'Auberge de l'Ill. The brothers wanted the restaurant to revolutionize previous conceptions of French cuisine, and Haeberlin's cooking helped to define what became known as nouvelle cuisine. Some of Haeberlin's most famous creations include salmon soufflé, frog mousse, and Périgord truffle wrapped in foie gras. In 1976 he turned the kitchen over to his son, Marc, but he remained involved in the restaurant until 2007.

Chef Paul Haeberlin, French master of nouvelle cuisine

Yannick Bohn—Maxppp/Landov

Hagen, Earle Harry, American musician and songwriter (b. July 9, 1919, Chicago, Ill.—d. May 26, 2008, Rancho Mirage, Calif.), composed some of the most memorable music for television, including the themes for *The Andy Griffith Show*, *The Dick Van Dyke Show*, *Gomer Pyle, U.S.M.C.*, *Eight Is Enough*, *Make Room for Daddy*, and *The Dukes of Hazzard*. Hagen won (1968) an Emmy Award for his creative musical arrangements for the espionage series *I Spy*. Before writing for television, Hagen played trombone and toured with big band legends Benny Goodman and Tommy Dorsey. In 1939, while playing with the Ray Noble Orchestra, Hagen composed "Harlem Nocturne," later considered a jazz standard. He also wrote several books, including an autobiography, *Memoirs of a Famous Composer—Nobody Ever Heard Of* (2000), and two textbooks on composing music for films.

Haider, Jörg, Austrian politician (b. Jan. 26, 1950, Bad Goisern, Austria—d. Oct. 11, 2008, near Klagenfurt, Austria), as the charismatic but controversial populist leader of the far-right Freedom Party of Austria (FPÖ; 1986–2000) and the prominent governor of the state of Kärnten (1989–91; 1999–2008), transformed the FPÖ and increased its appeal among conservative Austrian voters. Haider denounced immigration, opposed the expansion of the EU to the east, and exploited the Austrian people's disgust with their scandal-ridden government, but his extreme views and complimentary remarks about Nazi Germany eventually cost him (and the FPÖ) support. Haider studied at the University of Vienna, where he received (1973) a law degree and subsequently taught law. He became chairman of the FPÖ's youth organization and in 1979, at age 29, was elected to the parliament. In 1983 Haider was named to head the FPÖ in Kärnten; three years later he became chairman of the federal party. He was elected governor of Kärnten in 1989 at the head of a coalition with the centre-right Austrian People's Party (ÖVP). He was forced to resign in 1991, partly as a result of his praise for Adolf Hitler's employment policies, but he was reelected in March 1999. In parliamentary elections that October, the FPÖ finished second with 27% of the vote and formed a national coalition government with the ÖVP. This development sparked international protests; the Israeli government recalled its ambassador; and the EU

imposed political sanctions against Austria. Haider was forced to resign as FPÖ leader, though he remained active in the party and continued as governor of Kärnten. In 2005 he formed a new party, the Alliance for the Future of Austria (BZÖ). Haider died from injuries sustained in a car accident.

Haines, Connie (YVONNE MARIE ANTOINETTE JAMAIS), American singer (b. Jan. 20, 1921, Savannah, Ga.—d. Sept. 22, 2008, Clearwater Beach, Fla.), was a petite but powerful vocalist who performed with Frank Sinatra in the big swing bands of Harry James and Tommy Dorsey and went on to make more than 200 solo recordings, 25 of which sold more than 50,000 copies. Some of her best-known songs include "Let's Get Away from It All," "Friendship," "What Is This Thing Called Love?," and "Snootie Little Cutie." As a child, Haines was billed on radio as "Baby Yvonne Marie, the Little Princess of the Air." After winning numerous talent contests, she joined James's band at age 18 and changed her surname to sound like his. Her duos with Sinatra included the popular "Oh Look at Me Now" and "You Might Have Belonged to Another." In addition, "the Nightingale from Savannah" appeared (1942–46) on the Abbott and Costello radio show, in several films (notably, *Duchess of Idaho* [1950] and *Birth of a Band* [1954]), and with singer Beryl Davis and Hollywood stars Jane Russell and Rhonda Fleming in a gospel quartet; the quartet scored a hit with "Do Lord." Haines remained active into her 80s, singing in nightclubs, cabarets, and big band revivals.

Hall, Oakley Maxwell (O.M. HALL; JASON MANOR), American novelist (b. July 1, 1920, San Diego, Calif.—d. May 12, 2008, Nevada City, Calif.), spun tales of the Old West in novels that gained cult followings, notably *Warlock* (1958; filmed 1959; reissued 2005), which he penned under the name O.M. Hall. Hall published his first mystery novel, *Murder City* (1949) before earning an M.F.A. (1950) from the University of Iowa. Another favourite, this one about skiing, *Downhill Racers* (1963), was made into a film (*Downhill Racer*, 1969) starring Robert Redford. Hall's best-known works, however, remained the ones set in the Old West, including *The Bad Lands* (1978), *The Coming of the Kid* (1985), and *Apaches* (1986). A series of five mysteries featuring the real-life 19th-century journalist Ambrose Bierce debuted with *Ambrose Bierce and the Queen of Spades* (1998). Hall, who also wrote two compendiums—*The Art & Craft of Novel Writing* (1994) and *How Fiction Works* (2000)—served for nearly 20 years as director of the writing program at the University of California, Irvine.

Handley, Vernon George ("TOD"), British conductor (b. Nov. 11, 1930, Enfield, Middlesex, Eng.—d. Sept. 10, 2008, Monmouthshire, Wales), championed British composers, both in concert and in the studio; he made more than 150 recordings (nearly 90 of which included British music that had not previously been recorded), embracing works by such composers as Malcolm Arnold, Granville Bantock, Arnold Bax, Arthur Bliss, Rutland Boughton, Frederick Delius, Edward Elgar, Gustav Holst, E.J. Moeran, Robert Simpson, Charles Villiers Stanford, Ralph Vaughan Williams, and William Walton. Handley persuaded conductor Sir Adrian Boult to become his mentor. After making his debut (1961) with the Bournemouth Symphony, Handley conducted often with the Royal Philharmonic (1961–2008), as well as the Ulster (N.Ire.) Orchestra, the Royal Liverpool Philharmonic, and the Guildhall Philharmonic, which he founded in London in 1962. Outside England he conducted regularly with the Malmö (Swed.) Symphony Orchestra and with the Melbourne and West Australian symphonies. Handley was made CBE in 2004 and was granted lifetime achievement awards by *Gramophone* magazine (2003) and the Classical Brit awards (2007).

Harel, Yossi (YOSEF HAMBURGER), Israeli Zionist and intelligence officer (b. Jan. 4, 1918?, Jerusalem, British Palestine [now in Israel]—d. April 26, 2008, Tel Aviv, Israel), commanded the ship *Exodus 1947*, which sailed from the port of Sète (near Marseille) in July 1947, carrying more than 4,500 Jewish Holocaust survivors to Haifa, Palestine, where a blockade by the British prevented the refugees from landing. After several days of highly publicized skirmishes, the passengers were deported back to Europe. The incident, which raised international unease about the plight of Holocaust survivors and contributed to the founding (1948) of the state of Israel, was later dramatized in Leon Uris's novel *Exodus* (1958; filmed 1960), in which the character representing Harel was renamed Ari Ben Canaan. Harel later worked in Israeli army intelligence.

Harkness, Ned (NEVIN D. HARKNESS), Canadian hockey and lacrosse coach (b. Sept. 19, 1921, Ottawa, Ont.—d. Sept. 19, 2008, Rochester, N.Y.), held the distinction of becoming the first coach to win national collegiate championships in two different sports. He led teams in both ice hockey and lacrosse at Rensselaer Polytechnic Institute, Troy, N.Y. (1949–63), where his lacrosse team captured a National Collegiate Athletic Association (NCAA) championship in 1952 and the hockey team earned a title in 1954. He moved to Cornell University, Ithaca, N.Y. (1963–70), where his teams won ice hockey NCAA championships in 1967 and 1970; the latter squad scored a perfect 29-0-0 record, becoming the only undefeated, untied national championship team in NCAA history. He made the transition to the National Hockey League in 1970, briefly heading the Detroit Red Wings, before serving as the franchise's general manager (1973–74) and ultimately returning to college-level sports at Union College, Schenectady, N.Y (1975–77). Harkness was inducted into the U.S. Hockey Hall of Fame in 1994 and the National Lacrosse Hall of Fame in 2001.

Harris, René Reynaldo, Nauruan politician (b. Nov. 11, 1947?, Nauru—d. July 5, 2008, Nauru), served four times (April 27, 1999–April 20, 2000; March 30, 2001–Jan. 9, 2003; Jan. 17–18, 2003; Aug. 8, 2003–June 22, 2004) as Nauru's president; his 31 years (1977–2008) as a member of the country's Parliament made him Nauru's longest-serving politician, but his career was clouded by accusations of corruption and financial mismanagement. He also served (1992–95) as chairman of the Nauru Phosphate Corp. and manager of the island's shipping line. Harris graduated from Geelong College, Victoria, Australia. After more than 20 years in Parliament, he succeeded Bernard Dowiyogo as president in 1999, shortly before Nauru was admitted to the UN. Harris was defeated by Dowiyogo in April 2000 and again in January 2003 but regained the presidency each time. In 2001 Harris and Australian Prime Minister John Howard negotiated the controversial "Pacific Solution," in which Nauru received millions of dollars of much-needed financial aid in exchange for maintaining detention centres for Australia-bound asylum seekers; the centres were closed in March 2004. Harris was ousted for the last time in a no-

confidence vote in June 2004 and lost his seat in Parliament in April 2008.

Hartigan, Grace, American painter (b. March 28, 1922, Newark, N.J.—d. Nov. 15, 2008, Baltimore, Md.), created vibrant American-culture-inspired canvases, considered by some to be precursors of the Pop art movement. Hartigan began a painting career in New York City. She was a latecomer to the Abstract Expressionist movement and was also influenced by the work of such New York School poets as John Ashbery and Frank O'Hara; she collaborated with O'Hara in 1952 to create *Oranges,* a 12-painting series based on texts that he wrote. Initially gestural and obscure, Hartigan's vividly coloured work evolved over time to include recognizable imagery, which she often drew from film, advertising, and earlier paintings. She quickly won recognition for her art, appearing in 1950 in a "New Talent" show at the Kootz Gallery and soon after having her first one-woman show. An early painting, *Persian Jacket* (1952), was purchased for the permanent collection of the Museum of Modern Art in New York City. Hartigan later moved to Baltimore and became director (1965) of the Maryland Institute College of Art's Hoffberger School of Painting, where she taught until her retirement in 2007.

Harvey-Jones, Sir John Henry, British businessman (b. April 16, 1924, London, Eng.—d. Jan. 10, 2008, Hereford, Eng.), as chairman and CEO (1982–87) of Imperial Chemical Industries (ICI), combined an ebullient personality, sharp business acumen, and willingness to make tough, often unpopular, decisions to turn ICI from a troubled chemical firm into Britain's first £1 billion company. Harvey-Jones trained at the Royal Naval College, Dartmouth, and began his World War II service at age 16. In 1956, after having served in the submarine service, naval intelligence, and, reportedly, MI6, he took a low-level job at ICI. By 1970 he was head of the company's petrochemical and plastics division, and eight years later he was a deputy chairman. After retiring (1987) from ICI, he appeared on television, notably as the star of the 1990s documentary show *Troubleshooters,* in which his shaggy hair, flamboyant ties, and jovial, no-holds-barred advice to struggling companies made him an unexpected TV celebrity and inspired several books. Harvey-Jones was also chairman (1989–94) of the news magazine *The Economist.* He was named Industrialist of the Year for three consecutive years (1986–88) and was knighted in 1985.

Haskins, Don (DONALD L. HASKINS), American college basketball coach (b. March 14, 1930, Enid, Okla.—d. Sept. 7, 2008, El Paso, Texas), helped bring racial integration to college basketball when in 1966 he started five African American players on his Texas Western College team, and the squad defeated the all-white University of Kentucky team to win the National Collegiate Athletic Association (NCAA) Division I championship. The season was memorialized in the 2006 movie *Glory Road,* based on a 2005 book of the same title by Haskins and coauthor Dan Wetzel. Haskins, who was regarded as an exceptionally tough and talented coach, first headed the basketball program at Texas Western (from 1967, the University of Texas at El Paso) in the 1961–62 season and retired in 1999. In his 38-year career, he led 14 teams to the NCAA tournament and had a career win-loss record of 719–353. Haskins was inducted into the Naismith Memorial Basketball Hall of Fame in 1997, and in 2007 he was inducted again with his 1965–66 Texas Western team.

Hayes, Isaac Lee, Jr., American singer-songwriter, musician, and actor (b. Aug. 20, 1942, Covington, Tenn.—d. Aug. 10, 2008, East Memphis, Tenn.), was a pioneering figure in soul music whose recordings influenced the development of such musical genres as disco, rap, and urban-contemporary. The charismatic performer— known for his shaved head, dark sunglasses, and smooth baritone voice—was perhaps best remembered for his compelling sound track for the 1971 film *Shaft;* the title song, "Theme from Shaft," became a number one hit and earned Hayes an Academy Award for best original song. Hayes reached his greatest popularity in the late 1960s and '70s, placing (1969–76) 10 consecutive albums on the American pop and rhythm and blues charts. Hayes was a self-taught pianist and saxophonist. He began his professional career performing at Memphis nightclubs and was eventually hired as a session musician for Memphis-based Stax Records; he went on to become one of the label's most successful songwriters. Although Hayes's debut solo album, *Presenting Isaac Hayes* (1967), did not fare well commercially, his next release, *Hot Buttered Soul* (1969), sold more than one million copies and established him as a star. Among his other notable albums were *Black Moses* (1971), *Joy* (1973), *Live at the Sahara Tahoe* (1973), and *Chocolate Chip* (1975). Hayes later devoted much of his attention to acting, appearing in such movies as *Escape from New York* (1981), *I'm Gonna Git You Sucka* (1988), and *It Could Happen to You* (1994) and in various TV series, notably the animated hit *South Park,* for which he provided (1997–2006) the voice of the character Chef. He was inducted in 2002 into the Rock and Roll Hall of Fame.

Paul Warner/AP

Charismatic soul performer Isaac Hayes

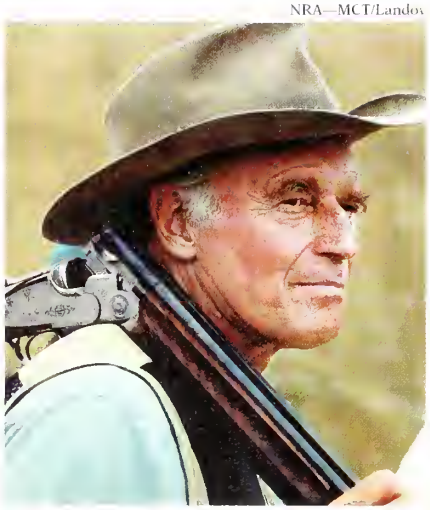
Healey, Jeff (NORMAN JEFFREY HEALEY), Canadian musician (b. March 25, 1966, Toronto, Ont.—d. March 2, 2008, Toronto), was a virtuoso guitarist whom retinoblastoma had left blind before he was a year old. He played the instrument positioned flat on his lap, a highly unconventional method that he adopted for convenience when, at a very young age, he began playing the guitar. Healey sold millions of blues-rock records with his Jeff Healey Band and his subsequent Jazz Wizards band, for which he also played trumpet and clarinet. Healey reached the apex of his career in the late 1980s with the album *See the Light.* A single from that album, "Angel Eyes," scaled *Billboard*'s Hot 100 chart to number 5. His second album, *Hell to Pay,* featured guest artists, including George Harrison. Healey's final album, *Mess of Blues,* appeared posthumously.

Helms, Jesse Alexander, American politician (b. Oct. 18, 1921, Monroe,

N.C.—d. July 4, 2008, Raleigh, N.C.), as a longtime member (1973–2003) of the U.S. Senate, was a leading figure in the conservative movement. Nicknamed "Senator No," he maintained a staunchly right-wing stance on social issues, leading crusades against abortion and homosexuality, supporting prayer in public schools, and opposing the busing of students for racial integration, but he was perhaps best known for his vehement opposition to civil rights and gay rights. Helms attended Wingate (N.C.) Junior College (now Wingate University) and Wake Forest College (now Wake Forest University), Winston-Salem, N.C., but abandoned his schooling in 1941, becoming city editor for the *Raleigh Times*. He served (1942–45) as a navy recruiter and from 1948 to 1951 was program director for radio station WRAL in Raleigh. He then served as an aide to North Carolina Senators Willis Smith (1951–53) and Alton Lennon (1953), was the executive director (1953–60) of the North Carolina Bankers Association, and worked as a political commentator (1960–72) for WRAL, WRAL-TV, and the Tobacco Radio Network. Originally a Democrat, Helms left the party in 1970, in large part because of his opposition to the Civil Rights Act (1964), and two years later he was elected to the Senate as a Republican. Portrayed by his critics as a demagogue, an extremist, and a bigot—he famously opposed the creation of a national holiday in honour of Martin Luther King, Jr.—Helms nevertheless displayed formidable skills as a politician and was reelected four times (1978, 1984, 1990, and 1996), though he never garnered more than 55% of the vote. He served as the chair of the Senate's Agriculture Committee (1981–86) and Foreign Relations Committee (1995–2000). In the latter position, he supported military governments in Latin America, actively opposed arms control, and fought against nearly all foreign aid programs. In his final year in the Senate, he reconsidered his earlier position on HIV/AIDS and sponsored a bill that provided relief to AIDS victims in Africa, where transmission of the disease occurred largely through heterosexual contact. Helms published *Here's Where I Stand: A Memoir* in 2005.

Heston, Charlton (JOHN CHARLTON CARTER), American actor (b. Oct. 4, 1924, Evanston, Ill.—d. April 5, 2008, Beverly Hills, Calif.), possessed a commanding screen presence with his broad shoulders, chiseled features, and compelling speaking voice and became best known for his role as Moses in Cecil B. DeMille's *The Ten Commandments* (1956). Heston made his Broadway debut in *Antony and Cleopatra* (1947). His first Hollywood film was *Dark City* (1950), and he followed that with *The Greatest Show on Earth* (1952), in which he appeared as the circus manager, and *The President's Lady* (1953) portraying Pres. Andrew Jackson. Among Heston's numerous subsequent films were *Touch of Evil* (1958) and *Ben-Hur* (1959), which won 11 Academy Awards, including a best actor award for Heston; the film secured his position as the premiere historical character actor in Hollywood. The films that followed placed him in several larger-than-life roles: the eponymous Spanish warrior in *El Cid* (1961), Michelangelo in *The Agony and the Ecstasy* (1965), and John the Baptist in *The Greatest Story Ever Told* (1965). In 1968 Heston starred in the western *Will*

NRA—MCT/Landov



Film star Charlton Heston

Penny and in *Planet of the Apes*, the first in a string of science-fiction films that included the cult favourites *The Omega Man* (1971) and *Soylent Green* (1973). Heston continued to be identified, however, for his work in period dramas. He twice played Mark Antony, in *Julius Caesar* (1970) and in *Antony and Cleopatra* (1973), which he also directed. Heston also served as the president (1966–71) of the Screen Actors Guild, chairman (1973–83) of the American Film Institute, and president (1998–2003) of the National Rifle Association of America.

Patrick Riviere/Getty Images

British conductor Richard Hickox

Hickox, Richard, British conductor (b. March 5, 1948, Stokenchurch, Buckinghamshire, Eng.—d. Nov. 23, 2008, Cardiff, Wales), was noted for his promotion of English composers, his success as a choral conductor, and his prodigious output of more than 300 classical recordings. Hickox studied organ and composing at the Royal Academy of Music (1966–67) and organ at Queen's College, Cambridge (1967–70). In 1971, soon after making his conducting debut, he founded the Richard Hickox Orchestra and Richard Hickox Singers (later renamed the City of London Sinfonia and City of London Singers). Other appointments included music director (1976–91) and conductor emeritus (from 1991) of the London Symphony Chorus, principal guest conductor of the Dutch Radio Orchestra (1980–84), associate conductor of the San Diego Symphony Orchestra (1983–84), associate guest conductor of the London Symphony Orchestra (from 1985), and principal conductor (2000–06) and conductor emeritus (from 2006) of the BBC National Orchestra of Wales. He became music director of Opera Australia in 2005. Hickox was made CBE in 2002.

Hightower, Rosella, American ballerina and ballet teacher (b. Jan. 30, 1920, Ardmore, Okla.—d. Nov. 3/4, 2008, Cannes, France), had an international career during which she was renowned for her lyricism and virtuosity. Hightower was a Native American of Choctaw descent. She began her study of ballet in Kansas City, Mo., in

1928 and in 1937 traveled to Europe. Hightower performed with Leonide Massine's Ballet Russe (1938–41), with Ballet Theatre (now American Ballet Theatre; 1941–45), and then primarily with Marquis George de Cuevas's company until his death in 1961. In 1962 Hightower founded the Centre of Classical Dance in Cannes; it came to be considered one of the leading ballet schools in Europe. She also served as the director of the Marseille Opera Ballet (1969–72), the Nancy Grand Theatre (1973–74), and the Paris Opéra Ballet (1980–83) in France and La Scala Ballet in Milan (1985–86). Hightower was named a Chevalier of the Legion of Honour in 1975.

Hill, Phil (PHILIP TOLL HILL, JR.), American race car driver (b. April 20, 1927, Miami, Fla.—d. Aug. 28, 2008, Monterey, Calif.), became the first American-born race car driver to win (1961) the Formula 1 (F1) Grand Prix world championship of drivers. Hill worked as a mechanic for midget-car racing in the Santa Monica, Calif., area before winning his first sports car competition in 1949; in 1956 he became an F1 driver for Ferrari. Hill was a disciplined perfectionist in car preparation and in study of the course. He secured the world drivers' championship when he won the 1961 Italian Grand Prix, in which Count Wolfgang von Trips, his Ferrari teammate (and leader for the championship by four points), was killed. Hill also won the Le Mans 24-hour endurance race (1958, 1961–62), the Sebring 12-hour race (1958–59, 1961), the 1964 Daytona Continental 2,000-km road race, the 1966 Nürburgring 1,000-km race, and the 1967 BOAC Six Hours at Brands Hatch. He left Ferrari in 1962 and retired in 1967. In 1991 Hill was inducted into the International Motorsports Hall of Fame.

Hillary, Sir Edmund Percival, New Zealand explorer (b. July 20, 1919, Auckland, N.Z.—d. Jan. 11, 2008, Auckland), galvanized the world when, on May 29, 1953, he and Tibetan mountaineer Tenzing Norgay were the first to reach the summit of Mt. Everest (8,850 m [29,035 ft]), the highest mountain in the world. Hillary began climbing in New Zealand's Southern Alps while in high school and took it up again after his World War II military service. In 1951 he joined a New Zealand party to the central Himalayas and later participated in a British reconnaissance expedition of the southern flank of Everest.

Wayne Drought/AP

New Zealand mountaineer Sir Edmund Hillary

He subsequently joined an expedition launched in the spring of 1953. After another pair of climbers failed to reach the top on May 27, Hillary and Tenzing set out for it early on May 29; by late morning they were standing on the summit, where they remained for 15 minutes. Hillary was knighted immediately after the expedition returned to London. (He made other forays to the Everest region during the early 1960s but never again tried to climb to the top.) Between 1955 and 1958 he commanded the New Zealand group participating in the British Commonwealth Trans-Antarctic Expedition led by Vivian Fuchs. Hillary reached the South Pole by tractor on Jan. 4, 1958, and in 1967 he was among those who scaled Antarctica's Mt. Herschel (3,335 m [10,941 ft]) for the first time. He later led (1977) the first jet-boat expedition up the Ganges River and then climbed to the river's source in the Himalayas. From 1985 to 1988 Hillary served as New Zealand's high commissioner to India, Nepal, and Bangladesh. He recounted his exploits in *High Adventure* (1955), *The Crossing of Antarctica* (1958; with Fuchs), *No Latitude for Error* (1961), and the autobiography *Nothing Venture, Nothing Win* (1975). Through the Himalayan Trust, which he founded in 1960, Hillary built schools, hospitals, and airfields for the Himalayan peoples, especially the Sherpas, and in 2003, as part of the observance of the 50th anniversary of his and Tenzing's climb, he was made an honorary citizen of Nepal.

Hillerman, Tony (ANTHONY GROVE HILLERMAN), American novelist (b. May 27, 1925, Sacred Heart, Okla.—d. Oct. 26, 2008, Albuquerque, N.M.), produced taut mysteries that brought to light rich American Indian customs and culture and featured Navajo tribal officers as protagonists; Lieut. Joe Leaphorn (introduced in *The Blessing Way* [1970], Hillerman's debut novel) and Sgt. Jim Chee (who made his bow in *People of Darkness* [1980]) use the latest police crime-solving methods coupled with traditional Navajo beliefs (*hozro*, or harmony) in their detection. The lyrical novels, which were prized for their authenticity, explored the conflicts between traditional Native American values and those of modern society. The works were set in the sprawling U.S. Southwest (Arizona, Utah, Colorado, and New Mexico) and focused on the motivation of the suspect. Hillerman, a natural storyteller, spent his youth in Depression-era Oklahoma, where he attended a grammar school for Indian girls and a high school with the Potawatomie. After service in World War II, he graduated (1946) with a B.A. in journalism from the University of Oklahoma. Armed with his intimate knowledge of and feeling of kinship with American Indians, he began writing fiction while serving (1965–85) as a professor (emeritus from 1985) at the University of New Mexico. He found commercial success in 1986 with *Skinwalkers*, the book that brought together the cynical Leaphorn (who understood but did not embrace Navajo practices) and the younger Chee (who was studying to become a Navajo *hataali*, or shaman). Hillerman produced 18 novels in the series, ending with *The Shape Shifter* (2006), and a number of nonfiction works, including *New Mexico, Rio Grande, and Other Essays* (1992). Among his numerous awards were two from the Mystery Writers of America: the Edgar Allan Poe Award (1974, for *Dance Hall of the Dead* [1973]) and the Grandmaster Award (1991).

Hillery, Patrick John, Irish politician (b. May 2, 1923, Milltown Malbay, County Clare, Ire.—d. April 12, 2008, Dublin, Ire.), served (1976–90) as the sixth president of Ireland. Hillery attended University College, Dublin, studying science and medicine. His practice of medicine yielded to politics in 1951 when, as a member of the Fianna Fáil party, he won election to Parliament. He later headed four government ministries: Education (1959–65),

Industry and Commerce (1965–66), Labour (1966–69), and Foreign Affairs (1969–72). In 1973 he became Ireland's first representative on the Commission of the European Economic Community (precursor of the European Union) and achieved the post of vice president of the Commission. He succeeded to the Irish presidency in 1976 upon the abrupt resignation of Cearbhall O Dalaigh. When Hillery's term of office ended in September 1983, he indicated that he did not intend to seek a second term but changed his mind when all three political parties pleaded with him to reconsider. He was returned for a further seven years without an electoral contest. After leaving office in 1990, Hillery retired from politics.

Hinckley, Gordon Bitner, American religious leader (b. June 23, 1910, Salt Lake City, Utah—d. Jan. 27, 2008, Salt Lake City), served (1995–2008) as the charismatic 15th president of the Church of Jesus Christ of Latter-day Saints. As the architect of the church's massive public relations network, Hinckley succeeded in overhauling the public image of Mormonism. He emphasized the words *Jesus Christ* in the church's official logo and opened up the church's genealogical records to the public online. He was the first president to use television to promote Mormonism, appearing on such programs as CNN's *Larry King Live,* and he was the first to visit (1999) the site of the 1857 Mountain Meadows massacre, in which Mormon mercenaries slaughtered members of a wagon train on its way West. Hinckley was also the most traveled president in the church's 177-year history, promoting the message of Mormonism in more than 60 countries, which resulted in a rapid growth in its membership from some 9 million to an estimated 12 million worldwide. His missionary efforts resulted in the construction of more than 100 Mormon temples across the globe. In 2004 Hinckley was awarded the Presidential Medal of Freedom.

Hofmann, Albert, Swiss chemist (b. Jan. 11, 1906, Baden, Switz.—d. April 29, 2008, Burg, Switz.), discovered the psychedelic drug lysergic acid diethylamide (LSD), which he first synthesized in 1938 by isolating compounds found in the fungus ergot. Hofmann's initial discovery was set aside for five years until April 1943, when he returned to his earlier therapeutic research on LSD. After ingesting a small amount of the synthesized drug, he experienced dreamlike hallucinations, which he concluded could be of use in psychiatric treatment. He spent years investigating LSD's hallucinogenic properties in the belief that the drug would one day be useful in the therapeutic treatment of schizophrenics and other psychiatric patients.

Holtzman, Jerome, American sportswriter (b. July 12, 1926, Chicago, Ill.—d. July 19, 2008, Evanston, Ill.), possessed an encyclopaedic knowledge of baseball and was dubbed the "dean" of sportswriters; he chronicled the games of the Chicago Cubs and White Sox baseball teams as a respected journalist for the *Chicago Sun-Times* (1957–81) and the *Chicago Tribune* (1981–99) newspapers, and in 1998 commissioner Bud Selig named him baseball's official historian. Holtzman was also responsible for the implementation (1969) of a new baseball rule that designated a "save" to a relief pitcher who took the mound when his team was ahead in scoring and secured the win; it was the first significant addition to baseball statistics since 1920, when runs batted in began to be recorded. He also served as a columnist for *The Sporting News,* wrote the *Encyclopædia Britannica* entry on baseball, and authored the definitive text *No Cheering in the Press Box* (1974, reissued 1995). Holtzman was inducted into the writers' wing of the Baseball Hall of Fame in 1989.

Hua Guofeng (Su Zhu), Chinese politician (b. Feb. 16, 1921, Jiaocheng, Shanxi province, China—d. Aug. 20, 2008, Beijing, China), served as premier (1976–80) of China and chairman (1976–81) of the Chinese Communist Party (CCP). Hua, who joined the CCP in 1938, was a local party secretary in Hunan (the home province of Mao Zedong) before he was transferred in 1955 to head the party apparatus in Xiangtan county in Hunan. Hua became vice-governor of the province in 1958 and was a strong supporter of Mao in the Great Leap Forward (1958–59). During the Cultural Revolution (1966–76), Hua received Mao's endorsement against rebel groups in Hunan, and he was active in setting up (1968) that province's revolutionary committee and in reestablishing (1970) its party committee. He became a member of the Political Bureau in August 1973 and moved to Peking (Beijing), where he was named minister of public security in January 1975. After the death of Premier Zhou Enlai in January 1976, Hua was named acting premier. In April—allegedly at the instigation of Mao's wife, Jiang Qing, and three of her political allies (the Gang of Four)—Mao chose Hua as permanent premier over Vice-Premier Deng Xiaoping, who was purged. Hua became chairman of the CCP after the death of Mao in September 1976. Just days after Mao's death, Hua ordered the arrest of the Gang of Four. In 1977 Hua allowed Deng to be rehabilitated and restored to his former position as vice-premier. Hua resigned the premiership in 1980, and the following year he was replaced as party chairman.

Hubbard, Freddie (Frederick DeWayne Hubbard), American jazz musician (b. April 7, 1938, Indianapolis, Ind.—d. Dec. 29, 2008, Sherman Oaks, Calif.), played bravura trumpet solos with a harmonic-rhythmic flair that made him the most exciting late-bop virtuoso on his instrument. Early in his career, while influenced by bop-era trumpeters (including Clifford Brown and Lee Morgan), Hubbard developed a big, commanding tone and a subtle style of inventing melodies that flowed and, alternately, burst into dramatic contrasts. A prolific and daring recording artist, he not only was a major hard-bop figure but also played free jazz with Ornette Coleman, John Coltrane, and Eric Dolphy and modal jazz with Wayne Shorter. After performing (1961–64) in Art Blakey's Jazz Messengers, Hubbard led combos, including 1970s jazz-rock fusion groups that recorded the popular albums *Red Clay* and *First Light* (Grammy Award, 1972). He also played (1976–79) with Shorter and Herbie Hancock in the all-

Jazz musician Freddie Hubbard

Matt Kryger—The Indianapolis Star/AP

star quintet V.S.O.P. and on sound tracks for films, including *Blowup*. Years of intense trumpeting led to a lip infection in 1992 that severely curtailed Hubbard's career. In later years he played the less-demanding flugelhorn, rather than the trumpet, accompanied by the New Jazz Composers Octet.

Hughes, Brendan ("THE DARK"), Northern Irish militant (b. 1948, Belfast, N.Ire.—d. Feb. 16, 2008, Belfast), joined the Irish Republican Army (IRA) in 1969, becoming an important street fighter, arms smuggler, and strategist; later, as an IRA leader in the Maze prison, he led protests, including a 53-day hunger strike in 1980. Hughes was captured in 1973 but escaped six months later; after being recaptured in 1974, he was sentenced to 15 years in prison and returned to the Maze. After the British government in 1976 reclassified the prisoners as criminals, Hughes led the campaign for the return of the status of political prisoner. In 1977 he began the "dirty protest," in which prisoners refused to wash or use prison toilets. Hughes was released from prison in 1986, and he opposed the peace process.

Huntington, Samuel Phillips, American political scientist (b. April 18, 1927, New York, N.Y.—d. Dec. 24, 2008, Martha's Vineyard, Mass.), was an important political commentator in national debates on U.S. foreign policy in the late 20th and early 21st century and the author of a number of influential books on subjects that included national security strategy, defense policy making, American political ideology, transnational organizations, conservatism, the governability of democracies, processes of democratization, and the comparison of U.S. and Soviet governments. Two of his most important works were *Political Order in Changing Societies* (1968) and the controversial *The Clash of Civilizations and the Remaking of World Order* (1996), in which he cautioned against intervention in non-Western cultures. After earning a Ph.D. (1951) from Harvard University, Huntington joined its faculty. He became associate director (1959) of the Institute for War and Peace Studies at Columbia University, New York City, but he returned (1962) to Harvard, where he served as chairman of the department of government (1967–69; 1970–71) as well as director of the Center for International Affairs (1978–89) and of the John M. Olin Institute for Strategic Studies (1989–2000). From 1996 to 2004 he presided as chair of the Harvard Academy for International and Area Studies. Huntington founded the journal *Foreign Policy* in 1970. He was an adviser to Vice Pres. Hubert Humphrey during Humphrey's unsuccessful 1968 presidential campaign, chairman of the Democratic Party's Foreign Policy Advisory Committee in the mid-1970s, and coordinator of security planning in the National Security Council (1977–79) during the administration of Pres. Jimmy Carter.

Hurwicz, Leonid, Russian-born American economist (b. Aug. 21, 1917, Moscow, Russia—d. June 24, 2008, Minneapolis, Minn.), shared (with Eric S. Maskin and Roger B. Myerson) the 2007 Nobel Prize for Economics for his formulation of mechanism design theory, a microeconomic model of resource allocation that attempts to produce the best outcome for market participants under nonideal conditions. As a result of his study of mechanism design, Hurwicz concluded that the most efficient market system for both buyers and sellers is the double auction. Hurwicz's parents fled their native Poland for Moscow, where Leonid was born, to escape the ravages of World War I. Fearing persecution from the newly installed Soviet government, the family returned to Poland in 1919. After earning a law degree (1938) from the University of Warsaw, Hurwicz continued his education at the London School of Economics and the Graduate Institute of International Studies in Geneva, but the outbreak of World War II forced him to immigrate to the U.S. by way of Portugal. Hurwicz served as a research assistant for Paul Samuelson at the Massachusetts Institute of Technology and for Oskar Lange at the University of Chicago and took a number of teaching positions before settling in 1951 at the University of Minnesota. He remained there for the rest of his career, retiring from full-time teaching in 1988 but continuing as professor emeritus.

Ichikawa, Kon, Japanese motion-picture director (b. Nov. 20, 1915, Ise, Japan—d. Feb. 13, 2008, Tokyo, Japan), introduced sophisticated Western-style comedy to Japan in the 1950s, but he was better known for *Biruma no tategoto* (1956; *The Burmese Harp*) and *Nobi* (1959; *Fires on the Plain*), two dramatic antiwar films. Ichikawa made his first motion picture, *Musume Dojo-ji* (*The Girl at Dojo Temple*), in 1946 for the Shintoho Motion Picture Co. *Sambyaku rokujugo ya* (1948; "Three Hundred and Sixty-five Nights") was his first big box-office success. He collaborated with his wife, Wada Natto, a screenwriter, on the screenplays for many of his early films. In the 1950s Ichikawa and Wada developed the genre of the verbally witty comedy in Japan in such pictures as *Ashi ni sawatta onna* (1953; "The Woman Who Touched the Legs"), a remake of an earlier silent comedy, and *Pu-san* (1953; "Mr. Pu"). *Kagi* (1959; *Odd Obsession*), *Bonchi* (1960), *Kuroi junin no onna* (1961; "Ten Dark Women"), *Yukinojo henge* (1963; "The Revenge of Yukinojo"), and *Matatabi* (1973; "The Wanderers") were notable for Ichikawa's delicate treatment of the material and the strikingly beautiful visual composition of each scene. One of his greatest achievements was the compelling documentary *Tokyo Orimpikku* (1965; *Tokyo Olympiad*), in which he emphasized the attitudes and responses of the spectators and competitors over the outcome of the 1964 Summer Olympics in Tokyo. His later work included a serialization of *The Tale of Genji* and a number of suspense melodramas.

Immonen, Riitta Narhi, Finnish fashion designer (b. May 13, 1918, Ilomantsi, Fin.—d. Aug. 24, 2008, Helsinki, Fin.), was cofounder, with textile artist Armi Ratia, of the Marimekko clothing, textile, and interior-design company. Immonen designed all 27 outfits in Marimekko's debut showing on May 20, 1951, and her stylish, elegantly cut dresses—fashioned from Ratia's boldly coloured handprinted cotton fabrics—established what was to become Marimekko's signature look. Immonen trained as a dressmaker and in 1942 opened a salon in Helsinki, where she progressed from making wartime clothes from mass-produced fabric to using unique handwoven textiles in one-of-a-kind couture designs that caught Ratia's attention. In 1956 Immonen resigned her 49% share in Marimekko to focus on her own salon, turning out limited-production professional uniforms (from 1955), couture (until 1975), and the ready-to-wear line Riitta Immonen Sport (until 1985). Immonen also contributed (1953–64) a fashion-advice column in the Finnish women's magazine *Eeva*.

Ito, Kiyoshi, Japanese mathematician (b. Sept. 7, 1915, Hokusei-cho, Mie prefecture, Japan—d. Nov. 10, 2008, Kyoto, Japan), was a major contributor to

the theory of probability. Building on the work of Andrey Nikolayevich Kolmogorov, Paul Lévy, and Joseph Leo Doob, Itô was able to apply the techniques of differential and integral calculus to stochastic processes (random phenomena that evolve over time), such as Brownian motion. This work became known as the Itô stochastic calculus. The Itô calculus was applied in a number of fields, including engineering, population genetics, and mathematical finance. Itô graduated (1938) from the Imperial University in Tokyo, where he was awarded his doctorate in 1945. He worked (1939–43) for the Cabinet Statistics Bureau before serving as an assistant professor (1943–52) at Nagoya Imperial University and professor (1952–79) at Kyoto University, where he was director (1976–79) of the Research Institute for Mathematical Sciences. Among the awards bestowed on Itô were the Wolf Foundation Prize (1987), the Kyoto Prize (1998), and the Carl Friedrich Gauss Prize for Applications of Mathematics (2006).

Jacobs, Klaus Johann, German-born Swiss entrepreneur and philanthropist (b. Dec. 3, 1936, Bremen, Ger.—d. Sept. 11, 2008, Küsnacht, Switz.), took control of his family's coffee-trading business in 1969, moved (1973) the headquarters from Bremen to Zürich, and subsequently merged (1982) it with Suchard-Tobler to create the international coffee and confectionery giant Jacobs Suchard AG. In 1990 Jacobs sold the majority of that company to U.S.-based Philip Morris for $3.8 billion, though he retained some divisions. In 1996 he acquired the French candy firm Cacao Barry and christened the newly combined business Barry Callebaut; by 2008 it was one of the world's premier chocolate companies.

Jastrow, Robert, American astrophysicist (b. Sept. 7, 1925, New York, N.Y.—d. Feb. 8, 2008, Arlington, Va.), popularized space science as a commentator on dozens of television programs and as the author of numerous books, notably the best-selling *Red Giants and White Dwarfs* (1967); he also played a vital role in guiding NASA's lunar exploration program as the founding director (1961–81) of NASA's Goddard Institute for Space Studies (GISS). Jastrow was also a cofounder (1984) of the George C. Marshall Institute, which provided policy makers with technical analyses of issues relating to science and technology.

Jeyaretnam, J(oshua) B(enjamin), Singaporean lawyer and politician (b. Jan. 5, 1926, Ceylon [now Sri Lanka]—d. Sept. 30, 2008, Singapore), was a longtime critic of Singapore's authoritarian ruling People's Action Party (PAP) and the country's first opposition party

Roslan Rahman—AFP/Getty Images

Singaporean politician J.B. Jeyaretnam

MP (1981–86; 1997–2001). Jeyaretnam (commonly called JBJ) earned a law degree (1951) at University College, London. He practiced law in Singapore and served as chief of the Subordinate Judiciary, but he resigned in 1963. Jeyaretnam joined the opposition Workers' Party, rising to secretary-general in 1971. After a decade of attempts, he won a parliamentary by-election in 1981. He was reelected in 1984, but he was accused of corruption and stripped of his seat two years later. In the 1997 general election, the Workers' Party won enough votes to earn one nonconstituency seat, which was claimed by Jeyaretnam. Over the years he was repeatedly sued for libel and defamation by Prime Ministers Lee Kuan Yew (1959–90), Goh Chok Tong (1990–2004), and Lee Hsien Loong (from 2004) and other prominent PAP politicians. In 2001 Jeyaretnam declared bankruptcy and left the Workers' Party. He founded a new opposition Reform Party in April 2008.

Johnson, (Charles) Van, American actor (b. Aug. 25, 1916, Newport, R.I.—d. Dec. 12, 2008, Nyack, N.Y.), was one of Hollywood's biggest stars during the early part of his six-decade career, particularly during his 12-year tenure (1942–54) at MGM studios, where he made nearly 50 films. Johnson's clean-cut good looks and easygoing "boy-next-door" charm made him especially popular with swooning bobby-soxers, which led to his nickname "the Voiceless Sinatra," and in 1945 he ranked second only to Bing Crosby on the list of Top 10 Box Office Stars. Johnson's career began in the Broadway musicals *New Faces of 1936* (1936), *Too Many Girls* (1939), and *Pal Joey* (1940), in which he served as understudy to Gene Kelly, later his costar in the movie *Brigadoon* (1954). Johnson made his film debut in *Murder in the Big House* (1942); later that year he was put under contract by MGM. During his years with that studio, Johnson starred in several war films, notably *A Guy Named Joe* (1943), *Thirty Seconds over Tokyo* (1944), *Command Decision* (1948), and *Battleground* (1949). His versatility and boyish appeal also led to leading roles in comedies and musicals, including *Two Girls and a Sailor* (1944), *The Bride Goes Wild* (1948), *In the Good Old Summertime* (1949), and *Duchess of Idaho* (1950). He occasionally revealed his dramatic talents, notably in *The Caine Mutiny* (1954). After his film career waned, Johnson continued to act in local theatre and on television, though he periodically returned to the big screen, as in Woody Allen's *The Purple Rose of Cairo* (1985).

Johnston, Ollie (OLIVER MARTIN JOHNSTON, JR.), American animator (b. Oct. 31, 1912, Palo Alto, Calif.—d. April

Disney animator Ollie Johnston

Richard Hartt—Time Life Pictures/Getty Images

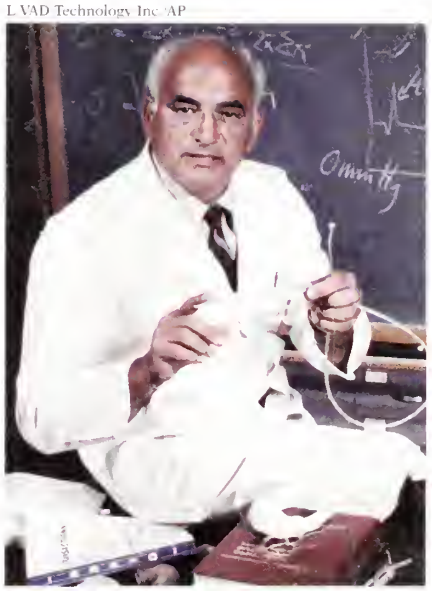
14, 2008, Sequim, Wash.), was a member of Walt Disney's "Nine Old Men," a group of top-notch animators. Johnston began his lifelong career (1935–78) with Disney working on such shorts as *Mickey's Garden* (1935). He soon advanced into feature animations, creating such memorable characters as the dwarfs in *Snow White and the Seven Dwarfs* (1937), the Blue Fairy scenes in *Pinocchio* (1940), the stepsisters in *Cinderella* (1950), Mr. Smee in *Peter Pan* (1953), Pongo and Perdita in *101 Dalmatians* (1961), the dancing penguin waiters in *Mary Poppins* (1964), Mowgli and Baloo in *The Jungle Book* (1967), and Rufus the cat in *The Rescuers* (1977). Johnston was also a coauthor of what some considered the bible of animation, *Disney Animation: The Illusion of Life* (1981). Johnston was awarded the National Medal of Arts in 2005.

Jordan, Hamilton (WILLIAM HAMILTON MCWHORTER JORDAN), American political strategist and government official (b. Sept. 21, 1944, Charlotte, N.C.—d. May 20, 2008, Atlanta, Ga.), was a highly influential adviser to Jimmy Carter during the latter's successful 1976 U.S. presidential campaign and later served as chief of staff in the Carter administration. Jordan helped guide Carter's political career from the early stages, volunteering on his unsuccessful 1966 gubernatorial bid in Georgia and managing Carter's victorious bid for the governor's office four years later. The top campaign strategist for Carter in 1976, Jordan was subsequently named as domestic adviser to the president and (1979) chief of staff, with responsibility for foreign policy.

Kagel, Mauricio Raúl, Argentine-born avant-garde composer (b. Dec. 24, 1931, Buenos Aires, Arg.—d. Sept. 18, 2008, Cologne, Ger.), incorporated sound effects—both artificial ones and those using the human voice—into complex provocative musical compositions such as *Anagrama* (1957–58), with sound effects created by soloists, a speaking chorus, and musical instruments; *Acustica* (1968–70), in which he made use of car horns, cash registers, and walkie-talkies; and *Staatstheater* (1967–70), an "antiopera" consisting of nine sections to be performed in random order. Kagel was strongly influenced by Pierre Boulez, who persuaded him to immigrate to Germany in 1957, and Karlheinz Stockhausen, whom he succeeded as director of the Cologne Courses for New Music. Kagel also wrote radio plays and screenplays and taught at Cologne's University of Music.

Kantrowitz, Adrian, American heart surgeon (b. Oct. 4, 1918, New York, N.Y.—d. Nov. 14, 2008, Ann Arbor, Mich.), was a pioneer in the development of mechanical hearts and other devices to improve heart function. In 1967 he performed the first human heart transplant in the U.S. at Maimonides Medical Center in New York City. Kantrowitz was an adjunct surgeon (1951–55) at Montefiore (N.Y.) Hospital and served (1955–70) in various surgical posts at Maimonides. In 1951 he made the first film to show the inside of a beating human heart. He introduced an improved heart-lung machine in 1958, a pacemaker small enough to implant in 1962, and a balloon pump for short-term use after surgery in 1967. Kantrowitz transplanted a human heart into an infant on Dec. 6, 1967, just three days after South African surgeon Christiaan Barnard performed the world's first human heart transplant. Kantrowitz moved to Detroit, where he chaired the department of surgery (1970–75) and the department of cardiovascular surgery (1975–83) at Sinai Hospital. In 1983 he and his wife, Jean Rosensaft Kantrowitz, founded L.VAD Technology, a research firm that focused on developing new cardiovascular devices. The American Society of Artificial Internal Organs presented Kantrowitz with a lifetime achievement award in 2001.

L.VAD Technology Inc./AP



Cardiologist and surgeon Adrian Kantrowitz

Kantrowitz, Arthur Robert, American physicist and engineer (b. Oct. 20, 1913, New York, N.Y.—d. Nov. 29, 2008, New York, N.Y.), helped bridge a theoretical understanding of fluid dynamics with practical applications, as demonstrated in his innovation of using shock waves through low-pressure gas in a tube to design the first nose cones for intercontinental missiles. From his work it was determined that the best protection for a nose cone returning to Earth from space at high speed through the atmosphere would be a surface material that would ablate, or slowly vaporize, carrying away friction-generated heat. He also carried out pioneering work in other areas that involved the complex behaviour of hot gases, such as thermonuclear fusion under magnetic containment, supersonic compressors, high-power lasers, and magnetohydrodynamics for electric-power generation. Later in his career he helped develop a temporary heart-assist pump with his brother Adrian (*q.v.*), a cardiovascular surgeon, and he devoted efforts to establish a so-called science court to deal with scientific controversies in public policy. Kantrowitz received a Ph.D. (1947) from Columbia University, New York City. He headed (1937–46) the gas dynamics section at the National Advisory Committee for Aeronautics (the predecessor of NASA) and was a professor (1946–58) at Cornell University, Ithaca, N.Y. He founded (1955) and was CEO of Avco-Everett Research Laboratory. In 1978 he joined the faculty at the School of Engineering at Dartmouth College, Hanover, N.H.

Keenan, Brian, Northern Irish republican militant (b. 1942, Belfast, N.Ire.—d. May 21, 2008, Dublin, Ire.), served two prison sentences for delivering weapons to the Irish Republican Army (IRA) and helping orchestrate the IRA bombing campaign in Britain in the 1970s, but he eventually assisted in the disarmament of the IRA in 2005. Keenan joined the Provisional IRA in 1970, and by 1972 he had established a relationship with Libya that allowed him to deliver weapons to the IRA. He quickly moved up the ranks of the radical organization, becoming quartermaster general in 1973 and organizing the IRA bombings in London shortly thereafter. Keenan was arrested in 1979 on 18 counts of planning terrorist acts, including 6 killings, and was sentenced to 18 years in prison. After his release

(1993) on parole, Keenan expressed the belief that supporting the peace process through politics, rather than through violence, was the best way to achieve a united Ireland, and he became actively involved in promoting an IRA cease-fire and disarmament. Much of the success of the peace process was attributed to Keenan's efforts and leadership. In 1996 he was appointed to the seven-member IRA army council, and three years later he was involved in secret disarmament talks with Canadian Gen. John de Chastelain. Keenan in 2005 stepped down from his position on the army council for health reasons.

Keyes, Evelyn Louise, American actress (b. Nov. 20, 1916, Port Arthur, Texas—d. July 4, 2008, Montecito, Calif.), attained a level of stardom on the silver screen with her role as Scarlett O'Hara's put-upon sister Suellen in the Academy Award-winning *Gone with the Wind* (1939) and in the tabloids with her tumultuous romantic life, which included marriages to directors Charles Vidor and John Huston and bandleader Artie Shaw. Keyes played bit parts before being cast in *Gone with the Wind.* Her later varied movies included *The Face Behind the Mask* (1941), *Here Comes Mr. Jordan* (1941), *Dangerous Blondes* (1943), and *The Jolson Story* (1946).

Khalil, Mustafa, Egyptian politician (b. Nov. 18, 1920, Qalyub, Egypt—d. June 7, 2008, Cairo, Egypt), as Egypt's prime minister (1978–80) and foreign minister (1979–80), helped to secure the Camp David Accords (1978) and subsequent peace treaty (1979) between his country and Israel, an action that set the framework for other Arab states to make peace with Israel. Khalil graduated (1941) from Cairo University with a degree in civil engineering and earned master's (1948) and doctoral (1951) degrees from the University of Illinois. After working for railroad companies in both the United States and Egypt, Khalil taught (1951–56) engineering at Ain Shams University in Cairo. When Egypt became a republic in 1953, Khalil began advising the new government, and in 1958 he joined the cabinet as minister of transport and communications. He held various other ministerial posts, including deputy prime minster (1964–66), before his appointment as prime minister. In 1980 Khalil became deputy chairman of the Democratic National Party; he stepped down in 2007.

Kitt, Eartha Mae, American singer and dancer (b. Jan. 17, 1927, North, S.C.—d. Dec. 25, 2008, Connecticut), was a shapely singer who seduced audiences with her extraordinary and distinctive sultry voice; she also achieved success as a dramatic stage and film actress, earning numerous Tony and Grammy Award nominations. The daughter of a white man and a black woman, Kitt from the age of eight grew up with relatives in an ethnically diverse section of Harlem, New York City. At 16 she joined Katherine Dunham's dance troupe, touring the U.S., Mexico, South America, and Europe. When the Dunham company returned to the U.S., the multilingual Kitt stayed in Paris, where she won immediate popularity as a nightclub singer. She made her acting debut in 1950 as Helen of Troy in *Time Runs,* an Orson Welles adaptation of *Faust.* With her appearance in the Broadway revue *New Faces of 1952* and with early 1950s recordings such as "C'est Si Bon," "Santa Baby," and "I Want to Be Evil," Kitt became a star. Her success continued in nightclubs; theatre productions, such as *Mrs. Patterson* (1954) and *Shinbone Alley* (1957); films, including *St. Louis Blues* (1958) and *Anna Lucasta* (1959); and television appearances, notably the role of Catwoman in the late 1960s series *Batman.* After she publicly criticized the Vietnam War at a 1968 White House luncheon in the presence of the first lady, Lady Bird (Claudia) Johnson, Kitt's career went into a severe decline; in the 1970s it began to recover after news surfaced that she had been subjected to U.S. Secret Service surveillance. She made a comeback in the U.S. with *Timbuktu!* (1978), a remake of *Kismet* featuring an all-black cast. Kitt continued to perform in nightclubs, theatres, and films and on recordings until her death, and she received two Daytime Emmy Awards (2007 and 2008) for her role as the scheming Yzma in the children's television program *The Emperor's New School.* Kitt published three autobiographies: *Thursday's Child* (1956), *Alone with Me* (1976), and *I'm Still Here: Confessions of a Sex Kitten* (1989).

Ira Schwarz/AP

Sizzling entertainer Eartha Kitt

Korman, Harvey Herschel, American comedian (b. Feb. 15, 1927, Chicago, Ill.—d. May 29, 2008, Los Angeles, Calif.), delighted television viewers with the screwball roles he created as part of the ensemble cast of *The Carol Burnett Show.* During Korman's 10 seasons (1967–77) with the program, he garnered four Emmy Awards and a Golden Globe Award. He was most closely identified with the parts he played in recurring skits. One lampooned a TV soap opera ("As the Stomach Turns"); another was a spoof of the film *Gone with the Wind;* and a number of others featured him with Burnett as her spouse (notably the characters Ed and Eunice Higgins). Korman launched his show business career as a bit player (1964–67) on *The Danny Kaye Show,* which helped him gain entry to *The Carol Burnett Show.* He left her show to star in his own vehicle, *The Harvey Korman Show* (1978). The latter was canceled after three episodes, however, and Korman became a regular on *The Tim Conway Show* (1980–81) and a player on *Mama's Family* (reprising the Burnett show character Ed Higgins). Korman's film credits include *Blazing Saddles* (1974), *High Anxiety* (1977), and *The Trail of the Pink Panther* (1982).

Lamb, Willis Eugene, Jr., American physicist (b. July 12, 1913, Los Angeles, Calif.—d. May 15, 2008, Tucson, Ariz.), was corecipient, with Polykarp Kusch,

of the 1955 Nobel Prize for Physics for experimental work that spurred refinements in the quantum theories of electromagnetic phenomena. Lamb joined the faculty of Columbia University, New York City, in 1938 and worked in the Radiation Laboratory there during World War II. Though the quantum mechanics of P.A.M. Dirac had predicted the hyperfine structure of the lines that appear in the spectrum (dispersed light, as by a prism), Lamb applied new methods to measure the lines and in 1947 found their positions to be slightly different from what had been predicted. While a professor of physics (1951–56) at Stanford University, Lamb devised microwave techniques for examining the hyperfine structure of the spectral lines of helium. He taught at the University of Oxford until 1962, when he was appointed a professor of physics at Yale University. In 1974 he became a professor of physics and optical sciences at the University of Arizona, where he remained until his retirement in 2002. Lamb was also the recipient of the 1992 Einstein Medal (given by the Society for Optical and Quantum Electronics) and a 2000 National Medal of Science.

Lapid, Joseph (TOMISLAV LAMPEL; "TOMMY"), Israeli journalist and politician (b. Dec. 27, 1931, Novi Sad, Yugos. [now in Serbia]—d. June 1, 2008, Tel Aviv, Israel), enjoyed a successful career in journalism that spanned print media, radio, and television; he used his reputation as a journalist as a springboard into politics as a member of the secularist Shinui ("Change") party and served (2003–04) as deputy prime minister and justice minister in a coalition government headed by Prime Minister Ariel Sharon. Joseph (or Yosef) Lapid survived World War II in the Budapest ghetto, although his father was killed in a concentration camp. After the war, he and his mother immigrated (1948) to Israel. Lapid earned a law degree (1955) from Tel Aviv University and went to work as a journalist for the newspaper *Maariv,* where he spent more than 20 years as a columnist, foreign correspondent, and managing editor. He was also director general (1979–84) of the Israel Broadcasting Authority, hosted *My Week,* a weekly Hebrew-language broadcast on Israel Radio, and in the 1990s appeared as a panelist on the current affairs television program *Popolitika*. After being elected to the Knesset (parliament) in 1999, Lapid opposed the special treatment—including political, social, and financial advantages—enjoyed by the ultra-Orthodox in Israel. He returned to journalism in 2006. That same year he was appointed chairman of the board of directors of Yad Vashem, Israel's Holocaust Martyrs' and Heroes' Remembrance Authority.

Laurus, Metropolitan (VASSILY MIKHAILOVICH SKURLA), Czech religious leader (b. Jan. 1, 1928, Ladomirovo, Czechoslovakia [now in Slovakia]—d. March 16, 2008, Jordanville, N.Y.), was instrumental in reconciling the 80-year dispute between the Russian Orthodox Church Outside of Russia and its parent church in Russia; the separation occurred in 1927 when Moscow Patriarch Sergey proclaimed allegiance to the Communist Party. Laurus joined a monastery at about age 10, and he arrived in 1946 in Jordanville with other monks after fleeing advancing Soviet troops. He was ordained a priest in 1954 and consecrated bishop of Manhattan in 1967 and bishop of Syracuse, N.Y., in 1976. In 2001 the Synod of Bishops elected Laurus metropolitan of the Russian Orthodox Church Outside of Russia. In 2007, in a gesture of peace, Laurus exchanged kisses with Alexis II, the patriarch of Moscow and All Russia, at a historic ceremony at which a reunification pact was signed in Moscow's Christ the Saviour Cathedral in the presence of Russian Pres. Vladimir Putin. Laurus maintained administrative independence for his 400 parishes outside Russia.

Lederberg, Joshua, American geneticist (b. May 23, 1925, Montclair, N.J.—d. Feb. 2, 2008, New York, N.Y.), was a pioneer in the field of bacterial genetics and shared the 1958 Nobel Prize for Physiology or Medicine (with George W. Beadle and Edward L. Tatum) for discovering the mechanisms of genetic recombination in bacteria. Lederberg studied under Tatum at Yale (Ph.D., 1948) and taught at the University of Wisconsin (1947–59), where he established a department of medical genetics. In 1959 he joined the faculty of the Stanford Medical School, serving as director of the Kennedy Laboratories of Molecular Medicine there from 1962 to 1978, when he moved to New York City to become president of Rockefeller University. He held that post until 1990. With Tatum he published "Gene Recombination in *Escherichia coli*" (1946), in which he reported that the mixing of two different strains of a bacterium resulted in genetic recombination between them and thus to a new, crossbred strain of the bacterium. Scientists had previously thought that bacteria reproduced only asexually—i.e., by cells splitting in two; Lederberg and Tatum showed that they could also reproduce sexually and that bacterial genetic systems are similar to those of multicellular organisms. While biologists who had not previously believed that "sex" existed in bacteria such as *E. coli* were still confirming Lederberg's discovery, he and his student Norton D. Zinder reported another and equally surprising finding. In the paper "Genetic Exchange in *Salmonella*" (1952), they revealed that certain bacteriophages (bacteria-infecting viruses) are capable of carrying a bacterial gene from one bacterium to another, a phenomenon they termed transduction. Moreover, his discovery of transduction provided the first hint that genes could be inserted into cells.

Ledger, Heath (HEATHCLIFF ANDREW LEDGER), Australian actor (b. April 4, 1979, Perth, Australia—d. Jan. 22, 2008, New York, N.Y.), was renowned for his moving and intense performances in diverse motion-picture roles, in particular the taciturn and tormented cowboy Ennis Del Mar in *Brokeback Mountain* (2005), for which he won best actor honours from the Australian Film Institute and received a nomination in the Academy Awards, BAFTA Awards, and Golden Globes. Ledger began his career in the late 1990s on Australian television, notably in the soap opera *Home and Away* and the mythic adventure series *Roar,* and in films, including the black comedy *Two Hands* (1999). His first Hollywood movie, the teen romance *10 Things I Hate About You* (1999), won him great attention. Ledger resisted being typecast as a teen heartthrob, however, and won critical acclaim for his varied roles in *The Patriot* (2000), *Monster's Ball* (2001), *Lords of Dogtown* and *Casanova* (both 2005), and *Candy* (2006). He had completed his role as the Joker in the Batman movie *The Dark Knight* (2008) and was working on the Terry Gilliam film *The Imaginarium of Doctor Parnassus* at the time of his death from an accidental overdose of a mixture of prescription drugs.

Leigh, Dorian (DORIAN ELIZABETH LEIGH PARKER), American fashion model (b. April 23, 1917, San Antonio, Texas—d. July 7, 2008, Falls Church, Va.), dominated the 1940s and '50s fash-

ion scene, with appearances on more than 50 magazine covers (including 7 for *Vogue* in 1946 alone) and in a 1952 advertising campaign for Revlon cosmetics; she was widely considered the first supermodel, though the publicity surrounding her stormy personal life sometimes rivaled that of her career. At the age of 27 she applied to be a model at Harry Conover Agency, which re-

Gjon Mili—Time Life Pictures/Getty Images

Fashion model Dorian Leigh

ferred her to Diana Vreeland at *Harper's Bazaar*. Vreeland featured her on the magazine's cover in June 1944. Leigh later joined Eileen Ford's esteemed modeling agency on the condition that her much younger sister—the future supermodel Suzy Parker—be hired as well. At age 40, Leigh, with Ford, opened Paris's first modeling agency. Leigh later trained as a chef, opened a restaurant, and wrote two cookbooks—*Pancakes* (1988) and *Doughnuts* (1994)—as well as an autobiography, *The Girl Who Had Everything* (1980).

Leonard, John, American literary critic (b. Feb. 25, 1939, Washington, D.C.—d. Nov. 5, 2008, New York, N.Y.), with his stylistically ornate and humorous prose, was regarded as one of the preeminent cultural critics of his time. Though he was a lifelong leftist, Leonard began his journalism career in 1959 at the conservative *National Review* magazine. Later, during his tenure (1967–82) with the *New York Times*, he headed the newspaper's Sunday *Book Review* and served as a cultural critic. He was known best for his sweeping, verbose writings on literature and American culture, but he also wrote regularly about other media. He published a dozen books, some of which were collections of his criticism. In 2006 he was the recipient of the National Book Critics Circle lifetime achievement award. At the time of Leonard's death, he held posts at the journal *The Nation* and at *New York* and *Harper's* magazines.

Lepeshinskaya, Olga Vasiliyevna, Russian ballerina (b. Sept. 15 [Sept. 28, New Style], 1916, Kiev, Russia—d. Dec. 20, 2008, Moscow, Russia), was one of the most popular stars of the Bolshoi Ballet for some 30 years (1933–63). Known for the virtuosity, dynamic technique, and humour and drama with which she infused her dancing, she shone in both classic and, especially, contemporary roles. Lepeshinskaya was a favourite of Joseph Stalin and was awarded the Stalin Prize in 1941, 1946, 1947, and 1950. Following her retirement from the Bolshoi, she taught internationally for many years.

Li Ximing, Chinese government official (b. 1926—d. Nov. 8, 2008, Beijing, China), as the Communist Party of China (CPC) boss in Beijing during the 1989 Tiananmen Square pro-democracy movement, notably advocated the military crackdown on the student-led demonstrators that ended in a massacre. Li was among a number of prominent conservatives removed from their positions by Chinese paramount leader Deng Xiaoping in a shake-up of party leadership in 1992. Li later served as vice-chairman of the Standing Committee of the eighth National Congress of the CPC before retiring in 1998.

López Trujillo, Alfonso Cardinal, Colombian Roman Catholic prelate (b. Nov. 8, 1935, Villahermosa, Colom.—d. April 19, 2008, Rome, Italy), exerted enormous influence as a conservative leader in the Latin American Bishops' Council until 1990, when he became even more powerful as president of the Pontifical Council for the Family and thus the chief voice in the Vatican in the defense of traditional family values.

Bullit Marquez/AP

Cardinal Alfonso López Trujillo

López Trujillo was unwavering in his opposition to abortion, same-sex marriage, and condoms. He caused a major stir in 2003 when he declared that condoms did not prevent the spread of AIDS because the HIV virus could "easily pass through." In 2006 López Trujillo ignited controversy again when he announced that for those involved in stem cell research (which he likened to abortion) "excommunication is valid for the women, the doctors, and researchers who destroy embryos." After his ordination in 1960, López Trujillo was named auxiliary bishop of Bogotá (1971) and archbishop of Medellín (1979); in 1983 he was elevated to cardinal.

Lorenz, Edward Norton, American meteorologist and mathematician (b. May 23, 1917, West Hartford, Conn.—d. April 16, 2008, Cambridge, Mass.), was considered the father of modern chaos theory. In his effort to predict the weather by using computers, Lorenz constructed a weather model that showed that almost any two nearby starting points, indicating the current weather, will quickly diverge trajectories and will quite frequently end up in different "lobes," which correspond to calm or stormy weather. His model's twin-lobed shape gave rise to the somewhat facetious "butterfly effect" metaphor: the flapping of a butterfly's wings in China today may cause a tornado in Kansas tomorrow. For his groundbreaking work (his findings were published in 1963 in a paper entitled "Deterministic Nonperiodic Flow"), Lorenz shared the 1983 Cra-

foord Prize of the Royal Swedish Academy of Sciences and was awarded the 1991 Kyoto Prize.

Loving, Mildred (MILDRED DELORES JETER), American civil rights activist (b. July 22, 1939, Virginia—d. May 2, 2008, Central Point, Va.), was one of the plaintiffs in the landmark 1967 U.S. Supreme Court case *Loving* v. *Virginia*, in which the court overturned long-standing miscegenation laws that had prohibited interracial marriages. In 1958 Mildred Jeter married her high-school sweetheart, Richard Loving, in the District of Columbia, but when the two returned home to Virginia, they were unaware that their marriage—between a black woman and a white man—was invalid there. The Lovings were jailed and charged with unlawful cohabitation. Though they were sentenced to one year's imprisonment, they

AP

Civil rights activists Mildred Loving and her husband, Richard.

were allowed to have that sentence suspended if they left the state for 25 years. The couple moved to Washington, D.C., but on a visit home in 1964, they were arrested for traveling together. In light of the 1964 civil rights laws, the Lovings secured an attorney and in April 1967 took their case to the Supreme Court, which unanimously ruled in their favour.

Lubich, Chiara (SILVIA LUBICH), Italian Roman Catholic lay leader (b. Jan. 22, 1920, Trento, Italy—d. March 14, 2008, near Rome, Italy), founded (1943) the Focolare Movement, a lay organization dedicated to peace, spiritual renewal, and ecumenical dialogue. Lubich, who trained as a teacher, felt a religious calling and changed her name to Chiara in honour of St. Clare of Assisi but rejected joining a convent. She laid the foundations for the Focolare ("hearth") Movement when she and other young women studied the Bible while gathered together in air-raid shelters during World War II. Lubich worked tirelessly to expand the movement's values of spiritual unity and devotion to the poor in war-ravaged Europe and, later, throughout the world. Pope John XXIII endorsed the Focolare Movement in 1962, and in 1990 the Vatican approved the group's formal constitution. By 2008 the movement claimed 18 branches in 182 countries and millions of followers, including several thousand living in religious communities. Lubich's many personal awards included the Templeton Prize for Progress in Religion (1977), the UNESCO Prize for Peace Education (1996), and the Council of Europe's Human Rights Prize (1998).

Lyttelton, Humphrey Richard Adeane ("HUMPH"), British jazz musician and radio personality (b. May 23, 1921, Eton College, near Windsor, Berkshire, Eng.—d. April 25, 2008, London, Eng.), was a renowned trumpeter and bandleader, as well as a noted radio broadcaster, journalist, cartoonist, calligrapher, author, songwriter, and jazz critic. His trumpeting was strongly influenced by American Louis Armstrong, who reportedly considered him England's best. After serving in the Grenadier Guards during World War II, Lyttelton played with George Webb's Dixielanders and then formed (1948) his own popular traditional jazz combo. From the early 1950s he gradually led his band into a swing-revival idiom, adding saxophonist Bruce Turner and touring widely, including visits to the Middle East and to North America; they also accompanied top American players and singers on tours of Britain. In 1967 Lyttelton began hosting the weekly BBC Radio program *The Best of Jazz*, but he was most acclaimed as the ribald, though seemingly innocent, host of BBC Radio's weekly comedy game show *I'm Sorry I Haven't a Clue*.

Mac, Bernie (BERNARD JEFFREY MCCULLOUGH), American comedian and actor (b. Oct. 5, 1957, Chicago, Ill.—d. Aug. 9, 2008, Chicago), earned two Emmy nominations (2002 and 2003) for his portrayal of a high-strung comedian looking after his drug-addicted sister's three children on the television series *The Bernie Mac Show* (2001–06); he also achieved box-office success with roles in such films as *Ocean's Eleven* (2001) and its two sequels and *Charlie's Angels: Full Throttle* (2003). Mac's career ignited after he won a national comedy search in 1990. He hosted the HBO late-night comedy-variety show *Midnight Mac* before joining (1996) the cast of the TV sitcom *Moesha*. He later starred on the 1999–2000 "Kings of Comedy" concert tour, which was filmed by director Spike Lee and released in 2000 as the documentary *The Original Kings of Comedy*.

Maciel Degollado, the Rev. Marcial, Mexican Roman Catholic priest (b. March 10, 1920, Cotija de la Paz, Mex.—d. Jan. 30, 2008, Houston, Texas), founded (1941) the Roman Catholic religious order Legionaries of Christ (also known as the Legion of Christ), of which he remained head until 2005. The order attracted some 2,500 seminarians in 20 countries and had 650 priests across the globe; its lay affiliate, Regnum Christi, boasted a membership of 50,000. In 2006, following an investigation into former seminarians' allegations of sexual abuse (dating back to the 1940s–'60s), the Vatican requested that Maciel end his public ministry.

Mahesh Yogi, Maharishi, Hindu religious leader (b. 1917?, Jabalpur, British India—d. Feb. 5, 2008, Vlodrop, Neth.), introduced the practice of transcendental meditation (TM) to the West. Little is known of the Maharishi's early life, including the exact place and date of his birth. He studied physics at the University of Allahabad and worked for a time in factories. He later left for the Himalayas, where for 13 years he studied under Guru Dev, the founder of TM. When Guru Dev died in 1952, the Maharishi organized a movement to spread the teachings of TM throughout the world; his first world tour took place in 1959 and took him to the United States. The movement grew slowly until the late 1960s, when the English rock group the Beatles and other celebrities began to join his following. Although the Maharishi had a falling out with the Beatles, his movement continued to expand. He founded several study centres, including the nonsectarian Maharishi International University (later the Maharishi University of Management) in Fairfield, Iowa.

From 1990 he lived in the Dutch village of Vlodrop. The principles of transcendental meditation are discussed in the Maharishi's books *The Science of Being and Art of Living* (1963) and *Meditations of Maharishi Mahesh Yogi* (1968).

Makeba, Miriam (ZENSI MIRIAM MAKEBA; "MAMA AFRIKA"), South African singer (b. March 4, 1932, Prospect township, near Johannesburg, S.Af.—d. Nov. 10, 2008, Castel Volturno, near Naples, Italy), was one

Antony Kamingui—Reuters/Landov

South African singer Miriam Makeba

of the world's most prominent black African performers, though she spent some three decades (1960–91) in exile from her South African homeland (which responded to her antiapartheid stands by banning her songs and revoking her passport) until Nelson Mandela encouraged her return after his 1990 release from prison. Makeba released some 50 albums (original and compilations) and appeared on the recordings of other musicians. She especially excelled at Xhosa and Zulu songs, which she introduced to Western audiences, and her best-known songs, including "Pata Pata" and "The Click Song" ("Qongqothwane"), featured the distinctive click sounds of her native Xhosa language. Makeba was the daughter of a Swazi mother and a Xhosa father. She grew up in Sophiatown, a segregated black township outside Johannesburg, and began singing in a school choir at an early age. She became a professional vocalist in 1954, and by the late 1950s she was well known in South Africa. Her appearance in the documentary film *Come Back, Africa* (1959) attracted the interest of Harry Belafonte, among others. With the help of her new friends, Makeba settled (1959) in the U.S. In 1965 she and Belafonte won a Grammy Award for best folk recording for their album *An Evening with Belafonte/Makeba.* Makeba was married to South African trumpeter Hugh Masekela (1964–66) and to West Indian-born American black activist Stokely Carmichael (1968–78). She relocated with Carmichael to Africa, settled in Guinea, and then moved to Belgium, continuing to record and tour in Africa and Europe. In April 1991 she gave her first concert in South Africa in more than 30 years.

Mamo, Sir Anthony Joseph, Maltese jurist and statesman (b. Jan. 9, 1909, Birkirkara, Malta—d. May 1, 2008, Mosta, Malta), was the first president (1974–76) of the independent Republic of Malta and came to be regarded as a symbol of the new country. Mamo obtained (1934) a degree in law from the University of Malta and later was a criminal law professor (1943–57) there. He devoted most of his life to the public sector, however, serving as a member of the commission (1936–42) that revised Malta's legal code, a crown counsel (1942–51) in the attorney general's office, deputy attorney general (1951–55), attorney general (1955–57), and chief justice and president of the Constitutional Court (1957–71) before being sworn in as governor-general on July 4, 1971. As the crown colony's last governor-general, he was named to the largely ceremonial post of president on Dec. 13, 1974, when the island country gained its formal independence from the U.K. Mamo was knighted in 1960 and created a Companion of Honour in the National Order of Merit in 1990.

Manekshaw, Sam (SAM HORMUSJI FRAMJI JAMSHEDJI MANEKSHAW), Indian field marshal and military hero (b. April 3, 1914, Amritsar, British India—d. June 27, 2008, Wellington, India), as chief of staff (1969–73) of the Indian armed forces, was credited with India's swift military victory in December 1971 over Pakistan, which led to the creation of Bangladesh. He was the son of a Parsi doctor, who chose not to send his son to Britain to be educated; instead, Manekshaw attended the Indian Military Academy at Dehra Dun, receiving his commission in 1934 as part of the first class of Indian cadets. In early 1971 Manekshaw—over Prime Minister Indira Gandhi's objections—postponed intervening in the war between West Pakistan and secessionist East Pakistan (Bangladesh) until the monsoon season was over. Indian forces finally crossed the border on December 3, and on December 16 Pakistan surrendered, almost without a fight. Shortly before his retirement in 1973, Manekshaw was made field marshal, one of only two Indian soldiers ever to receive the title. He was also the recipient of two of India's highest civilian awards, the Padma Bhushan (1968) and the Padma Vibhushan (1972).

Mann, Abby (ABRAHAM GOODMAN), American screenwriter (b. Dec. 1, 1927, Philadelphia, Pa.—d. March 25, 2008, Beverly Hills, Calif.), examined the Nazi war crimes trials in the film *Judgment at Nuremberg* (1961), for which he won an Academy Award for best screenplay, and was the creator of the TV series *Kojak* (1973–78), inspired

Screenwriter Abby Mann

Mark Terrill/AP

by his Emmy Award-winning *The Marcus-Nelson Murders* (1973). During his 50-year career, Mann directed and wrote screenplays for dozens of films, including *Ship of Fools* (1965), *The Detective* (1968), and *Report to the Commissioner* (1975). Mann also wrote and directed the miniseries *King* (1978), based on the life of the Rev. Martin Luther King, Jr.

Martin, Del (DOROTHY L. TALIAFERRO), American gay rights activist (b. May 5, 1921, San Francisco, Calif.—d. Aug. 27, 2008, San Francisco), was in the forefront of the battle for lesbian and gay rights for more than 50 years. After a brief early marriage, she found that she was attracted to women. Martin and her partner, Phyllis Lyon, founded (1955) the first advocacy group for lesbians, Daughters of Bilitis, which grew to have chapters in several cities before it disbanded in 1970. The couple wrote the landmark book *Lesbian/Woman* (1972), followed by *Lesbian Love and Liberation* (1973); Martin also wrote the classic *Battered Wives* (1976). Martin was an early member of the National Organization for Women (NOW) and was the first avowed lesbian to serve on its board of directors. In 1972 Martin and Lyon founded the Alice B. Toklas Democratic Club, the first gay political organization in the U.S. When San Francisco Mayor Gavin Newsom directed on Feb. 12, 2004, that marriage licenses be issued to same-sex couples, Martin and Lyon were the first couple married. After the California Supreme Court nullified marriages made under that directive, Martin and Lyon joined a lawsuit. In May 2008, however, the same court ruled 4–3 that the state's ban on same-sex marriage was unconstitutional. On June 16, after 55 years together, Martin and Lyon became the first same-sex couple to be legally wed in California.

Martin, Dick (THOMAS RICHARD MARTIN), American comedian (b. Jan. 30, 1922, Battle Creek, Mich.—d. May 24, 2008, Santa Monica, Calif.), was the irrepressible cohost with straight man Dan Rowan of the breakout hit television variety show *Rowan & Martin's Laugh-In* (1968–73), which featured an ensemble cast of largely unknown comics whose frenetic-paced routines were interspersed with unexpected drop-ins by celebrities such as Robert Goulet, Cher, Jack Benny, and even Pres. Richard M. Nixon. In its first two seasons, *Laugh-In* topped the ratings and won Emmy Awards for outstanding variety or musical series. The show introduced a slew of taglines, including one for Martin, "You bet your sweet bippy," which became his signature. Prior to *Laugh-In* Martin and Rowan performed together in nightclubs, and after the show left the airwaves, Martin began a career in directing for TV.

Marulanda Vélez, Manuel (PEDRO ANTONIO MARÍN; "TIROFIJO"), Colombian guerrilla leader (b. May 12, 1930?, Génova, Colom.—d. March 26, 2008, unknown mountain encampment, Colombia), was a founder (1964) and commander of the Revolutionary Armed Forces of Colombia (FARC), estimated to possess some 10,000 to 15,000 armed soldiers and thousands of supporters, largely drawn from Colombia's rural areas. The FARC supported a redistribution of assets from the wealthy to the poor and opposed the influence that multinational corporations and foreign governments (particularly the United States) had on Colombia. Born into a peasant family, Marulanda was never able to determine with certainty the year of his birth. He began fighting with several armed groups against right-wing forces in Colombia in 1948. By the mid-1960s these armed groups had merged into the FARC, which Marulanda headed from 1990 until his death. He earned the nickname "Tirofijo" ("Sureshot") because of his skills as a marksman.

McKay, Jim (JAMES KENNETH MCMANUS), American sportscaster and journalist (b. Sept. 24, 1921, Philadelphia, Pa.—d. June 7, 2008, Monkton, Md.), was a pioneer in American television sports coverage; as the sagacious and personable host (from 1961) of the groundbreaking ABC show *The Wide World of Sports*, he was one of the most recognizable faces on American TV, and in 1968 he became the first TV sports commentator to win an Emmy Award (he won 13 altogether, including a 1990 award for lifetime achievement). McKay gained international acclaim for his uninterrupted 16-hour coverage of the Israeli hostage crisis during the 1972 Olympics in Munich. After learning that all 11 members of the Israeli team had been killed by their Palestinian captors, he stated, with his characteristic simplicity, "They're all gone." McKay's exceptional coverage of those Games earned him a George Polk Award and two Emmys (for sports and news broadcasting).

McKusick, Victor Almon, American physician and genome researcher (b. Oct. 21, 1921, Parkman, Maine—d. July 22, 2008, Baltimore, Md.), was a pioneer in the study of medical genetics, founding president (1988–91) of HUGO (the Human Genome Organisation), and the creator of the multivolume reference work *Mendelian Inheritance in Man* (12 editions, 1966–98) and its Internet corollary (from 1987), the *Online Mendelian Inheritance in Man* (OMIM). He published the influential textbook *Cardiovascular Sound in Health and Disease* (1958), but a heart patient whose condition was related to rare inherited diseases triggered his switch to genetics. In 1957 he founded the first medical genetics clinic at Johns Hopkins, where he remained as chairman of the department of medicine (from 1973) and professor of medical genetics (1985–2007). McKusick's most significant research included identifying the gene that causes Marfan syndrome and pinpointing the genetic basis for a form of dwarfism known as McKusick-Kaufman syndrome. His numerous honours include the Albert Lasker Award for Special Achievement in Medical Science (1997), Canada's Gairdner Award (1977), the U.S. National Medal of Science (2001), and the Japan Prize in Medical Genetics and Genomics (2008).

Miles, Buddy (GEORGE ALLEN MILES, JR.), American drummer and singer (b. Sept. 5, 1947, Omaha, Neb.—d. Feb. 26, 2008, Austin, Texas), was a soulful singer and an innovator in the fusion of psychedelic rock with soul, jazz, and blues. He had begun performing by the age of 12 with his father's jazz band, the Bebops, and he went on to work with the Ink Spots, the Delfonics, and Wilson Pickett. In the late 1960s Miles formed his own groups, the Electric Flag (with Mike Bloomfield) and the Buddy Miles Express, but he was best known as the drummer in Jimi Hendrix's all African American trio, the Band of Gypsys (assembled in 1969). That group, with Billy Cox on bass, recorded an eponymous live album that featured the song "Them Changes," which became Miles's signature song after he rerecorded it with his own band. His powerful drumming was featured on more than 70 albums with artists such as Stevie Wonder, Barry White, and Carlos Santana. During the 1980s Miles achieved a modicum of celebrity as the vocalist on the Claymation California Raisins commercials.

In 2004 Miles and Cox released the album *The Band of Gypsys Return*.

Minghella, Anthony, British playwright, screenwriter, and director (b. Jan. 6, 1954, Ryde, Isle of Wight, Eng.—d. March 18, 2008, London, Eng.), was one of Britain's most gifted and admired filmmakers; he won the Academy Award for best director for his third movie, *The English Patient* (1996), which also captured the best picture and seven other Oscars (he was nominated but failed to win for best adapted screenplay). After graduating from the University of Hull, Minghella taught there, contributed scripts to such television programs as *Grange Hill* and *Inspector Morse*, and wrote for the theatre. He was named most promising playwright by the London Theatre Critics Circle in 1984 and won the best new play award two years later for *Made in Bangkok*. In 1990 he made his directing debut with the poignant romantic comedy *Truly Madly Deeply*. The BAFTA-winning film was followed by *Mr. Wonderful* (1993), *The English Patient*, *The Talented Mr. Ripley* (1999), which garnered five Oscar nominations, an adaptation of Samuel Beckett's *Play* (2000), *Cold Mountain* (2003), which earned seven Oscar nominations, and *Breaking and Entering* (2006).

Mirghani, Ahmad Ali al-, Sudanese politician (b. Aug. 16, 1941, Khartoum, Anglo-Egyptian Sudan [now in The Sudan]—d. Nov. 2, 2008, Alexandria, Egypt), headed a rare democratically elected government in The Sudan as chairman of the Supreme Council from May 6, 1986, until he was overthrown by a military coup on June 30, 1989. In November 1988 Mirghani reached a peace agreement with the Sudan People's Liberation Army (SPLA), headed by John Garang. The coalition government at that time included the National Islamic Front, which refused to support the agreement. After the 1989 coup, Mirghani went into exile, mostly in Egypt, where he headed the National Democratic Alliance, which opposed the military regime in The Sudan, and cofounded the Islamic Development Corporation and the Sudanese Islamic Bank. In 2001 Mirghani returned to The Sudan and worked to end the civil war in the south and seek peace in Darfur province.

Mitchell, Mitch (JOHN MITCHELL), British rock-and-roll drummer (b. July 9, 1947, Ealing, Middlesex, Eng.—d. Nov. 12, 2008, Portland, Ore.), was the powerful and innovative drummer of the legendary trio the Jimi Hendrix Experience from 1966, when he was hired to tour with guitarist Jimi Hendrix. Mitchell's drumming underpinned the band's debut single, "Hey Joe" (1966), and his jazz-inflected rhythms complemented Hendrix's virtuoso guitar playing on the group's first album, *Are You Experienced?* (1967), notably on the tracks "Purple Haze," "Manic Depression," and "Third Stone from the Sun." Mitchell backed Hendrix at the Monterey Pop Festival in 1967 and at the Woodstock Festival in 1969. The Jimi Hendrix Experience was inducted into the Rock and Roll Hall of Fame in 1992.

Kevin Harvey/AP

Rock-and-roll musician Mitch Mitchell

Mohammed, Warith Deen (WALLACE D. MUHAMMAD), American religious leader (b. Oct. 30, 1933, Detroit, Mich.—d. Sept. 9, 2008, Markham, Ill.), after succeeding his father, Elijah Muhammad, as head of the black nationalist Nation of Islam in 1975, reformed the organization and moved it toward inclusion within the worldwide Islamic community. Mohammad received religious training in the tradition of the Nation, but while serving a federal prison sentence (1961–62) for refusing the military draft, he came to see the teachings of the Nation of Islam as differing from those of true Islam. He left and rejoined the organization three times before becoming supreme minister when his father died in 1975. Mohammed adopted the title imam (1976) and renamed the organization the World Community of al-Islam in the West; the name was changed to the American Muslim Mission in 1978 and to the Muslim American Society in 1985. Although Mohammed's changes were welcomed by many, a dissident minority led by Louis Farrakhan split in 1978 and reestablished the Nation of Islam according to the precepts of Elijah Muhammad. In 1992 Mohammed became the first Muslim to give the traditional invocation in the U.S. Senate.

Mondavi, Robert Gerald, American winemaker (b. June 18, 1913, Virginia, Minn.—d. May 16, 2008, Yountville, Calif.), created American wines that rivaled European labels and helped generate the rebirth of California's wine industry. Mondavi introduced the use of stainless steel tanks for cold fermentation, reinstated French oak barrels into the winemaking process, and inaugurated tastings and public tours of his winery. Mondavi urged his father (then co-owner of a small California winery) to buy (1943) the historic Charles Krug Winery and helped run the business with his father and brother for more than 20 years. After a falling out with his brother, however, Mondavi left (1965) the Krug Winery. The next year he established the Robert Mondavi Winery with the goal of producing world-class wines in California; it was the first major winery to be built in the Napa Valley since the 1930s. After additional family squabbles and several years of fluctuating wine sales, Mondavi sold his company in 2004 to Constellation Brands for $1.3 billion.

Mordyukova, Nonna (NOYABRINA VIKTOROVNA MORDYUKOVA), Soviet actress (b. Nov. 25, 1925, Konstantinovskaya, Ukraine, U.S.S.R. [now in Russia]—d. July 6, 2008, Moscow, Russia), epitomized the ideal Soviet woman in films that typecast her as a strong mother figure torn between her conflicting loyalties to family and state. Mordyukova grew up on a collective farm and studied acting at the Russian State Institute of Cinematography. She made her screen debut in *Molodaya gvardiya* (1948; *The Young Guard*), but her breakthrough roles came in *Chuzhaya rodnya* (1955; *Other People's Relatives*) and Aleksandr Askoldov's *Kommissar* (*The Commissar*), which was filmed in

1967 but was not released until 1987, largely owing to its controversial themes of anti-Semitism and the Holocaust. Mordyukova's other significant films include *Prostaya istoriya* (1960; *A Simple Story*), the comedies *Brilliantovaya ruka* (1968; *The Diamond Arm*) and *Inkognito iz Peterburga* (1977; *Incognito from St. Petersburg*), and her final screen appearance, *Mama* (1999). Mordyukova was honoured (1992) with the Order for Service to the Fatherland.

Morse, Barry (HERBERT MORSE), British actor (b. June 10, 1918, London, Eng.—d. Feb. 2, 2008, London), was an accomplished actor in some 3,000 stage and screen roles over a seven-decade (1935–2005) career, but Morse's other achievements were overshadowed by his portrayal of Lieut. Philip Gerard, the tenacious police detective who relentlessly pursued the title character in the American television series *The Fugitive* (1963–67). After studying at the Royal Academy of Dramatic Arts, he began working (1930s) onstage and in British radio. In 1951 Morse settled in Canada, where he eventually won numerous acting awards.

Mphahlele, Es'kia (EZEKIEL MPHAHLELE), South African writer, editor, and teacher (b. Dec. 17, 1919, Marabastad, S.Af.—d. Oct. 27, 2008, Lebowakgomo, S.Af.), addressed negritude, nationalism, the black African writer, and the literary image of Africa, notably through his memoir about growing up under apartheid, *Down Second Avenue* (1959). Mphahlele trained as a teacher and pursued graduate studies at the University of South Africa (M.A., 1956) and later in the U.S. at the University of Denver (Ph.D., 1968). His early career teaching English and Afrikaans was terminated by the South African government because of his strong opposition to the Bantu Education Act. After going into voluntary exile in 1957, Mphahlele held a number of academic and cultural posts in Nigeria, Europe, and the U.S. He returned home in 1977 and later became head (1983–87) of the department of African literature at the University of the Witwatersrand, Johannesburg. Mphahlele was coeditor (1960–64) with Ulli Beier and Wole Soyinka of the Nigerian literary periodical *Black Orpheus*, cofounded South Africa's first independent black publishing house, and coedited the anthology *Modern African Stories* (1964). His critical writings include volumes of essays, notably *The African Image* (1962), *Voices in the Whirlwind* (1972), *Es'kia* (2002), and *Es'kia Continued* (2005). He also wrote several short-story collections, including *In Corner B* (1967), *The Unbroken Song* (1981), and *Renewal Time* (1988); the novels *The Wanderers* (1971) and *Chirundu* (1979); and a sequel to his autobiography, *Afrika My Music* (1984).

Mr. Blackwell (RICHARD SYLVAN SELZER), American fashion designer and Hollywood tastemaker (b. Aug. 29, 1922, Brooklyn, N.Y.—d. Oct. 19, 2008, Los Angeles, Calif.), attracted media and public attention for his annual "10 Worst Dressed Women's List," in which he used his biting wit to pillory what he viewed as the horrendous fashion

Reed Saxon/AP

Fashion tastemaker Mr. Blackwell

choices of the people whom he selected; his "best-dressed list" gained much less attention. Blackwell enjoyed a brief career as a child actor and a Hollywood agent before founding (1958) the House of Blackwell, his fashion concern. The company's classic designs remained popular until the 1960s heyday of the miniskirts, and in the mid-1970s Blackwell shuttered the doors to his business.

Mulligan, Robert Patrick, American film and television director (b. Aug. 23, 1925, Bronx, N.Y.—d. Dec. 20, 2008, Lyme, Conn.), began his career directing for *The Philco Television Playhouse*, *Studio One*, and *Playhouse 90*, earning an Emmy Award for his direction of the TV film *The Moon and the Sixpence*, but he achieved his greatest renown for directing compelling movies that involved complex human relationships, notably *To Kill a Mockingbird* (1962), for which he earned an Academy Award nomination. Mulligan's other film credits include *Fear Strikes Out* (1957), *The Great Imposter* (1961), *Inside Daisy Clover* (1965), *Up the Down Staircase* (1967), *Summer of '42* (1971), and *The Man in the Moon* (1991), his last.

Murdoch, Colin Albert, New Zealand pharmacist, veterinary chemist, and inventor (b. Feb. 6, 1929, Christchurch, N.Z.—d. May 4, 2008, Timaru, N.Z.), held patents on some 46 inventions, most notably the first disposable sterile prefilled hypodermic syringe, which he devised (1956) at age 27 while seeking an easier way to vaccinate animals. His other inventions included a less-dangerous form of veterinary tranquilizer dart (plus various rifles and pistols with which to dispense the projectiles, along with advanced telescopic rangefinder sights), disposable automatic vaccinator syringes, silent automatic-dialing burglar alarms, heat-sensing cells for silent fire alarms, transmitter relocation darts, and the childproof medicine bottle cap, which earned him a gold medal at the 1976 World Inventors Fair in Brussels. Murdoch registered (1961) the international trade name Paxarms Ltd., but he repeatedly refused to defend his patents. He was made an Officer of the New Zealand Order of Merit in 2000. In August 2007 the tranquilizer gun was honoured on a New Zealand postage stamp.

Mwanawasa, Levy Patrick, Zambian attorney and politician (b. Sept. 3, 1948, Mululira, Northern Rhodesia [now Zambia]—d. Aug. 19, 2008, Paris, France), as the third president (2002–08) of Zambia, launched an anticorruption campaign that included stripping his predecessor, Frederick Chiluba, of immunity from prosecution and distinguished himself as one of the few African leaders to publicly criticize Zimbabwean Pres. Robert Mugabe. Mwanawasa, a member of the Lenje tribe, read law (1970–73) at the University of Zambia, Lusaka. He became an assistant in a law firm in Ndola in 1974 and qualified for the bar in 1975. After forming (1978) his own legal firm, he became (1982) vice-chairman of the Law Association of Zambia and served (1985–86) as the country's solicitor general. When Pres. Kenneth Kaunda reluctantly approved the creation of opposition parties in December

1990, Mwanawasa joined the new Movement for Multiparty Democracy (MMD), headed by Chiluba. In 1991 Mwanawasa was elected to the National Assembly for the Ndola constituency. He was appointed vice president and leader of the Assembly under President Chiluba, but he resigned office in July 1994, accusing the Chiluba government of condoning irresponsibility and greed. With Chiluba's impending retirement, Mwanawasa was unexpectedly adopted in 2001 as the MMD's candidate for president. He polled only 28.69% of the votes cast, while the nearest of the other 10 candidates received 26.76%; the result was initially challenged by his opponents, but he moved quickly to establish his authority and distance himself from Chiluba. Although Mwanawasa suffered a stroke in April 2006, he stood for reelection later that year, garnering 42.98% of the vote. Sporadic violence ensued in areas loyal to his nearest challenger, Michael Sata (with 29.37%). The results stood, however, and Mwanawasa was sworn in for his second term. He suffered another stroke in late June 2008 and was taken to France for medical treatment.

Nasir, Ibrahim, Maldivian politician (b. Sept. 2, 1926, Male, British Maldives—d. Nov. 22, 2008, Singapore), dominated life in the Indian Ocean archipelago of some 1,200 islands for more than 20 years. In 1957 Nasir was named prime minister under the British protectorate's ruling sultan, and in 1965 when Maldives gained independence from Britain—under an agreement that Nasir negotiated—he remained prime minister of the new country. Three years later he engineered a referendum in which the sultanate was abolished and replaced with a republic, of which he became the first president. Under Nasir's control, Maldives was transformed into a modern country, with improved education and telecommunications, an international airport, a modernized fishing industry, and a reputation as a luxury tourism destination. Nasir's dictatorial style angered many, however, and in 1978 he formally refused a third term in office and fled the country amid public unrest and unproven allegations of corruption.

Ndiaye, Iba, Senegalese painter (b. 1928, Saint-Louis, French West Africa [now in Senegal]—d. Oct. 5, 2008, Paris, France), was one of Senegal's leading Modernist artists and a cofounder of the negritude art movement known as the École de Dakar, but his richly coloured semiabstract paintings more often reflected Western influences, especially jazz and classic European art, than the African Primitivism common to many of his compatriots.

Nerina, Nadia (NADINE JUDD), South African ballerina (b. Oct. 21, 1927, Cape Town, S.Af.—d. Oct. 6, 2008, Beaulieu-sur-Mer, France), was celebrated for her remarkable versatility of roles, her bravura footwork, and her onstage charm. After touring South Africa in 1942, she went (1945) to England, where she studied under Dame Marie Rambert. Nerina became prima ballerina of the Sadler's Wells Ballet (now the Royal Ballet) in 1951, excelling in both classical and modern repertoires. She was especially noteworthy as the girlish Lise in *La Fille mal gardée,* which choreographer Sir Frederick Ashton created for her in 1960. In the U.S.S.R. she appeared as guest artist with the Bolshoi and Leningrad (St. Petersburg) Kirov (now Mariinsky) ballets. Nerina continued with the Royal Ballet as a soloist from 1967 to 1969, when she retired.

Newell, Peter Francis, Canadian-born American basketball coach (b. Aug. 31, 1915, Vancouver, B.C.—d. Nov. 17, 2008, Rancho Santa Fe, Calif.), served as the influential coach of the basketball teams at the University of San Francisco (1946–50), where his 1949 team captured the National Invitation Tournament (NIT) title; Michigan State University (1950–54); and the University of California, Berkeley (1954–60), where he guided his team to triumph in the 1959 National Collegiate Athletic Association (NCAA) tournament. The following year he led the U.S. basketball team to a gold medal in the 1960 Rome Olympic Games. He later served (1972–76) as general manager of the National Basketball Associaton (NBA) Los Angeles Lakers. Newell was inducted into the Basketball Hall of Fame in 1979.

Newman, Paul Leonard, American actor (b. Jan. 26, 1925, Cleveland, Ohio—d. Sept. 26, 2008, Westport, Conn.), was a matinee idol whose striking good looks and startling blue eyes became hallmarks in a film career in which he was honoured for his compelling performances with nine Academy Award nominations (one win); he also won two honorary Oscars, a lifetime achievement (1986) and the Jean Hersholt Humanitarian Award (1994). Newman honed his craft at New York City's Actors Studio. Following his Broadway debut in *Picnic* (1953), he signed a film contract with Warner Brothers and also appeared in live television dramas (*Our Town* [1955] and *Bang the Drum Slowly* [1956]). His impressive portrayal of boxer Rocky Graziano in *Somebody Up There Likes Me* (1956) was followed by *The Rack* (1956), *Cat on a Hot Tin Roof* (1958; for which he received his first Academy Award nomination), *The Long, Hot Summer* (1958), and *The Young Philadelphians* (1959). Newman essayed the role that perhaps best defined his screen persona, that of pool shark "Fast" Eddie Felson in *The Hustler* (1961) and earned another Oscar nomination. *The Hustler* was the first in a series of films in which Newman portrayed antiheroic protagonists. *Hud* (1963), *Harper* (1966), *Hombre* (1967), and *Cool Hand Luke* (1967) further solidified his image as an ingratiating iconoclast. Newman costarred in 11 films with his second wife, actress Joanne Woodward, and directed her in several others, beginning with *Rachel, Rachel* (1968). Two enormously popular comedies teamed Newman with costar Robert Redford. The western *Butch Cassidy and the Sundance Kid* (1969) received seven Oscar nominations, and the Depression-era film *The Sting* (1973) won the Academy Award for best picture. Newman maintained his star status with such popular films as *The Towering Inferno* (1974), *Slap Shot* (1977), *Fort Apache the Bronx* (1981), and two for which he received Oscar

Silver Screen Collection—Hulton Archive/Getty Images

Award-winning actor Paul Newman

nominations, *Absence of Malice* (1981) and *The Verdict* (1982). He finally won the Academy Award for his reprise as Felson in *The Color of Money* (1986). He also earned nominations for his depiction of an unemployed construction worker in *Nobody's Fool* (1994) and for his supporting role as a mob boss in *Road to Perdition* (2002). In 2005 he starred in the television movie *Empire Falls*, for which he won Emmy, Golden Globe, and Screen Actors Guild awards. After voicing a character in the animated film *Cars* (2006), Newman retired in 2007. In addition to his Hollywood career, Newman launched (1982) the successful Newman's Own line of food products: its profits benefited a number of charitable causes. In 1988 he founded the Hole in the Wall Gang Camp in south-central Connecticut for children with serious medical conditions. A passionate race car driver since the early 1970s, Newman became coowner in 1982 of Newman/Haas/Lanigan Racing.

Ngugi wa Mirii, Kenyan-born Zimbabwean playwright and activist (b. 1951, Limuru, Kenya—d. May 3, 2008, Harare, Zimb.), was coauthor with Ngugi wa Thiong'o of two plays that criticized the Kenyan government. Both men were arrested and imprisoned for the Gikuyu-language play *Ngaahika ndeenda* (1977; *I Will Marry When I Want*), which attacks capitalism, religious hypocrisy, and corruption among the new economic elite of Kenya; five years later *Mother Cry for Me* caused such a negative reaction from the Kenyan government that both men were forced into exile. Ngugi wa Mirii settled in Zimbabwe, where he wrote about the social issues facing ordinary citizens, as well as extensive criticisms of imperialism and capitalism; he was also a strong supporter of the Pan-African cause. In 1985, with the support of the Zimbabwean government, Ngugi wa Mirii was awarded funding to found the Zimbabwe Association of Community Theatre, with the goal of bringing about social change through the arts. He became a Zimbabwean citizen shortly thereafter.

Niane, Katoucha, Guinean-born French fashion model (b. 1960, Conakry, Guinea—found dead Feb. 28, 2008, Paris, France), became the muse of French designer Yves Saint Laurent in the 1980s as one of the first black African top models in Paris. Katoucha, as she was known, arrived in Paris in the early 1980s and soon began working for Thierry Mugler, Paco Rabanne, and Christian Lacroix before beginning her long association with Saint Laurent. She retired from modeling in 1994 and began a campaign against female genital mutilation, which she had been made to undergo at the age of nine. She was declared missing in early February after her handbag was found on her houseboat but she had disappeared; her body was found in the Seine River.

Nielsen, Inga, Danish soprano (b. June 2, 1946, Holbæk, Den.—d. Feb. 10, 2008, Copenhagen, Den.), was known for the lyrical beauty of her voice and for her dramatic talent, especially as she matured into weightier roles. Nielsen began singing as a child and made her professional debut in 1971 at Gelsenkirchen, W.Ger. She specialized in light soubrette roles for several years, but in the 1980s her growing vocal power allowed her to take more demanding and theatrical roles, notably Konstanze in Mozart's opera *Die Entführung aus dem Serail* (*Abduction from the Seraglio*), the protagonist in Arnold Schoenberg's monodrama *Erwartung*, and the title role in Richard Strauss's opera *Salome*.

Nissel, Siegmund Walter ("SIGGI"), German-born Austrian violinist (b. Jan. 3, 1922, Munich, Ger.—d. May 21, 2008, London, Eng.), toured for almost 40 years with the chamber group the Amadeus Quartet, best known for its repertoire of music by Mozart, Beethoven, Brahms, Haydn, and Schubert. Nissel was evacuated to Britain in 1938. While interned (1940) on the Isle of Man as an enemy alien, he met violinists Norbert Brainin and Peter Schidlof. Once released, the three men were introduced to cellist Martin Lovett and formed a quartet, with Schidlof playing viola. Although the group was originally called the Brainin Quartet, the name was changed, at Nissel's suggestion, to the Amadeus Quartet when the group debuted (1948) in London. With Nissel playing second violin and serving as unofficial manager, the group enjoyed enormous popularity from its inception. Nissel concerned himself with ensuring that the quartet had an adequate musical balance and frequently mediated differences between other members. They toured worldwide and made hundreds of recordings over the next four decades, but after Schidlof's death (1987), the quartet broke up. Thereafter Nissel concentrated on teaching music at the Royal Academy of Music in London and the Musikhochschule in Cologne, Ger. He was made OBE in 1970.

Norbu, Thubten Jigme (TASHI TSERING; TAKTSER RINPOCHE), Tibetan religious leader, scholar, and activist (b. Aug. 16, 1922, Takster, Amdo, Tibet—d. Sept. 5, 2008, Bloomington, Ind.), was identified as the reincarnation of the Tibetan lama Taktser Rinpoche at age three, 10 years before the birth of his brother, the future 14th Dalai Lama. The 13th Dalai Lama gave him the spiritual name Thubten Jigme Norbu. As an incarnate monk, Norbu studied extensively and was appointed abbot of Kumbum monastery in Amdo. After the Chinese invasion of Tibet in 1950, he was escorted to the capital, Lhasa, by Communist Chinese troops who offered to make him governor-general if he would persuade the Dalai Lama to cooperate. Norbu instead counseled his brother to flee the country. Norbu, who disagreed with his brother's belief in peaceful resistance to Chinese rule in Tibet, worked as a CIA translator and endorsed guerrilla warfare for Tibetan independence. He eventually resigned from the Buddhist priesthood, married, and settled in the U.S.

Norman, Larry David, American singer-songwriter (b. April 8, 1947, Corpus Christi, Texas—d. Feb. 24, 2008, Salem, Ore.), was generally regarded as the father of Christian rock music, though his controversial lyrics (which covered such social themes as racism, poverty, and sexually transmitted diseases) and hippielike appearance (ragged jeans and long hair) kept his recordings from gaining a mainstream Christian following in the U.S. Norman's song "Why Should the Devil Have All the Good Music?" (1972) was especially derided in some Christian quarters. His *Upon This Rock* (1969) was hailed as the first Christian rock album, and years later another album, *Only Visiting This Planet* (1972), was voted the most influential Christian album by *Contemporary Christian Music* magazine. In 2001 he was inducted into the Gospel Music Hall of Fame.

Nouhak Phoumsavan (NOUHAK PHOUMSAVANH), Laotian resistance leader and politician (b. April 9, 1914, Mukdahan, French Indochina—d. Sept. 9, 2008, Vientiane, Laos), was (with Kaysone Phomvihan and Prince Souphanouvong) a member of the trium-

virate of men at the centre of Laotian resistance to French rule in Indochina and, after independence from France (1954), to the government that replaced it. Nouhak spent many years as a shadowy figure working behind the scenes in the Vietnam-dominated Indochinese Communist Party, the nationalist Lao Issara ("Free Laos"), the Pathet Lao, the clandestine People's Party of Laos, and finally the Lao People's Revolutionary Party (LPRP), which he cofounded in 1972. After the end of the Vietnam War also brought peace to Laos, the LPRP emerged in 1975 to win Laos's first general election, and Nouhak joined the new communist government as the hard-line head of the economic ministry. When President Kaysone died in 1992, Nouhak was appointed his successor. He retired in February 1998.

O'Brien, Conor Cruise, Irish diplomat, politician, educator, and journalist (b. Nov. 3, 1917, Dublin, Ire.—d. Dec. 18, 2008, Howth, near Dublin), was one of Ireland's most provocative political and intellectual figures. Although he was a fierce advocate of his homeland, O'Brien was a strong critic of Irish Republican Army violence and of what he considered the romanticized desire for reunification with Northern Ireland. O'Brien attended a Roman Catholic grammar school and the predominantly Protestant Trinity College, Dublin (B.A., 1941; Ph.D., 1953) before joining the Irish diplomatic corps. His collection of essays *Maria Cross: Imaginative Patterns in a Group of Modern Catholic Writers* (1952; written under the pseudonym Donat O'Donnell) impressed UN Secretary-General Dag Hammarskjöld, who in 1961 appointed him UN special representative in the Congo (later the Democratic Republic of the Congo). O'Brien ordered UN peacekeeping forces into the breakaway Katanga province, and the resulting scandal forced him out of office. Despite UN objections, he wrote *To Katanga and Back* (1963) to explain his actions. After serving as vice-chancellor of the University of Ghana (1962–65) and Albert Schweitzer Professor of Humanities at New York University (1965–69), O'Brien entered Irish politics. He held (1969–77) a Labour Party seat in the Dail (parliament) and then (1977–79) in the Senate, representing Trinity College, of which he was pro-chancellor (1973–2008). In 1979 he was named editor in chief of the British Sunday newspaper *The Observer*, but he left after three tumultuous years. O'Brien remained an active newspaper columnist, especially for the Irish *Independent* (until 2007).

O'Faolain, Nuala, Irish writer and journalist (b. March 1, 1940, Dublin, Ire.—d. May 9, 2008, Dublin), wrote a popular opinion column for the *Irish Times* newspaper and several books in which she addressed the themes of love, loss, rejection, and social problems. Through her works, which were drawn largely from personal experience, O'Faolain gave a voice to the latent doubts and fears of middle-aged women. O'Faolain briefly taught English at University College, Dublin, and acted as a producer at both the BBC (1970–77) and Radio Telefis Eirann (from 1977). She began writing her column for the *Irish Times* in 1986, and in 1995 a publisher offered to compile a book of her most memorable columns. What O'Faolain had originally envisioned as a brief introduction to the book turned into a 200-page memoir, *Are You Somebody?: The Accidental Memoir of a Dublin Woman* (1996). O'Faolain followed the best-selling book with a continuation, *Almost There: The Onward Journey of a Dublin Woman* (2003), and two novels, *My Dream of You* (2001) and *The Story of Chicago May* (2006), which was awarded a Prix Fémina.

Odetta (ODETTA HOLMES FELIOUS), American folk singer (b. Dec. 31, 1930, Birmingham, Ala.—d. Dec. 2, 2008, New York, N.Y.), became for many the voice of the civil rights movement of the early 1960s, and her renditions of spirituals encapsulated the times. At age six Odetta moved with her family to Los Angeles. The family loved music, and at age 13 Odetta began studying classical voice. In 1950, on her first trip to San Francisco, she encountered the emergent folk scene. She took up guitar and began performing traditional music. Within a few years her career took off as she developed a distinctive mixture of folk, blues, and spirituals, sung in an impassioned and convincing style of her own. She moved (1953) to New York City, where she met singers Pete Seeger and Harry Belafonte, who became loyal supporters. Her debut solo recording, *Sings Ballads and Blues* (1956), was soon followed by *At the Gate of Horn* (1957). In the late 1950s and early 1960s, she continued to record as a leading folk musician—although recording could never do her

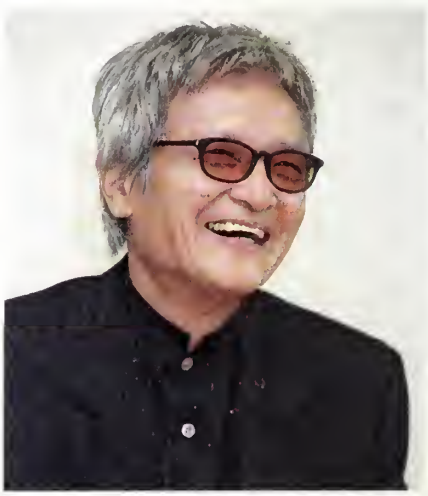
Stuart Ramson/AP

American folk singer Odetta

performances justice. Her music and her politics fit in perfectly with the growing civil rights movement, and she sang at the March on Washington led by the Rev. Martin Luther King, Jr. (1963), as well as for U.S. Pres. John F. Kennedy. As the movements waned and interest in folk music declined, Odetta fell somewhat into obscurity, although she continued to perform. In 1999 Pres. Bill Clinton awarded her the National Medal of Arts; in 2003 the Library of Congress named her a Living Legend.

Ogata, Ken (OGATA AKINOBU), Japanese actor (b. July 20, 1937, Tokyo, Japan—d. Oct. 5, 2008, Tokyo), was in-

Japanese actor Ken Ogata



Kyodo/AP

ternationally acclaimed for his powerful performances in such films as *Vengeance Is Mine* (1979), in which he portrayed a ruthless killer, and *Mishima: A Life in Four Chapters* (1985), about famed Japanese novelist Mishima Yukio. Ogata appeared in more than 50 films, beginning with *One Long Road* (1960), as well as in some 25 Japanese television series. Among his other notable films were *The Ballad of Narayama* (1983), *Zegen* (1987), *Dream of Russia* (1992), and *The Pillow Book* (1996). In recognition of his contribution to the arts, Ogata was awarded Japan's Medal with Purple Ribbon in 2000.

Okosuns, Sonny (SUNNY OKOSUN), Nigerian musician (b. Jan. 1, 1947, Enugu or Benin City, Nigeria—d. May 24, 2008, Washington, D.C.), composed songs advocating the Pan-African cause and supporting the reform of African social and political conditions. Okosuns (or Okosun), who sang both in English and in the Nigerian languages of Ishan and Ibo, created a unique musical style by combining various genres, including reggae, pop, rock, calypso, and Nigerian highlife dance music. As a youth, he taught himself guitar and played with several different bands before forming (1972) Paperback Ltd., which later became known as Ozziddi ("Message"). Although he produced dozens of albums, he first gained international acclaim with *Fire in Soweto* (1977). Okosuns played on the Artists Against Apartheid album *Sun City* (1985), and in 1994 he was invited to perform at the inauguration of South African Pres. Nelson Mandela. From the late 1980s Okosuns performed gospel music under the name Evangelist Sonny Okosuns; his gospel album *Songs of Praise* (1994) sold nearly a million copies. In 1998 he founded the House of Prayer Ministry in Ikeja.

Page, Bettie, American model (b. April 22, 1923, Nashville, Tenn.—d. Dec. 11, 2008, Los Angeles, Calif.), was a legendary pinup model of the 1950s whose provocative photographs were credited with helping to usher in the 1960s sexual revolution. Page's modeling career lasted from about 1950 to 1957, during which time she attracted a huge following by appearing in numerous men's magazines such as *Wink, Peek, Titter,* and *Eyeful;* in 1955 she also became one of the earliest centrefold models for *Playboy.* Her work for fetish photographer Irving Klaw eventually

Hulton Archive/Getty Images

Legendary pinup model Bettie Page

drew the attention of government authorities; Page was subpoenaed to appear before a congressional panel investigating obscenity, but she never testified. She soon gave up modeling, however, and dropped from public view altogether; she reportedly became a born-again Christian and in later years suffered bouts of mental illness. A great revival of interest in Page began in the 1990s. Richard Foster's biography, *The Real Bettie Page: The Truth About the Queen of the Pinups,* appeared in 1997, and she was also the subject of two films, *Bettie Page: Dark Angel* (2004) and *The Notorious Bettie Page* (2005).

Pak Kyongni (PARK KYUNG-NI), South Korean poet and novelist (b. Oct. 28, 1926, Tongyeong, Korea—d. May 5, 2008, Seoul, S.Kor), garnered international acclaim for the 21-volume epic novel *T'oji* (1969–94; *Land*), in which she chronicled Korea's tumultuous history from 1897 to 1945. The novel, widely regarded as a masterpiece of Korean literature, took Pak more than 25 years to complete and won numerous honours, including the Woltan Literature Award. Pak published two early short stories, "Gyesan" (1955; "Calculations") and "Heuk heuk baek baek" (1956; "Black Is Black, White Is White"), but she first captured public attention with the novel *Kim yakkuk ui ttal tul* (1962; "Daughters of Pharmacist Kim"). Many of Pak's works, including *Pulshin shidae* (1957; "Age of Distrust") and *Shijang kwa chonjang* (1964; "The Marketplace and the Battlefield), feature a female character widowed by the Korean War, a situation that mirrored Pak's own experience. She composed several poems about the importance of protecting the environment and in 1999 established the Toji Cultural Centre in Wonju, S.Kor., which nurtured young writers and encouraged environmental awareness. Pak was posthumously awarded the Order of Culture Merit Geumgwan, the highest honour for South Korean writers and artists.

Palacio, Andy Vivien, Belizean musician (b. Dec. 2, 1960, Barranco, Belize—d. Jan. 19, 2008, Belize City, Belize), used his music to help preserve the culture of the Garifuna (descendants of Carib Indians and Africans exiled in the 18th century from British colonies in the eastern Caribbean). A bandleader and composer, Palacio hosted (1981) a Garifuna program on Radio Belize in an effort to stimulate interest in the culture and language through music and song. His infusion of traditional elements of Garifuna music with electric guitars inspired a younger generation of musicians. In collaboration with other Garifuna musicians, a group that was known as the Garifuna Collective, Palacio produced several influential albums, notably *Paranda* (1999) and *Wátina* (2007). He was awarded Belize's Order of Meritorious Service in September 2007, and two months later he was named a UNESCO Artist for Peace.

Palade, George Emil, Romanian-born American cell biologist (b. Nov. 19, 1912, Iasi, Rom.—d. Oct. 7, 2008, Del Mar, Calif.), developed tissue-preparation methods, advanced centrifuging techniques, and conducted electron microscopy studies that resulted in the discovery of several cellular structures. With Albert Claude and Christian de Duve, he was awarded the Nobel Prize for Physiology or Medicine in 1974. Palade received (1940) a degree in medicine from the University of Bucharest, where he remained as a professor until after World War II. He immigrated to the U.S. in 1946 and began work at the Rockefeller Institute, New York City, becoming a professor of cytology in 1958. Palade performed many studies on the internal organization of such cell structures as mitochondria, chloroplasts, the Golgi apparatus, and others. His most important discovery was that microsomes, bodies formerly thought

to be fragments of mitochondria, are actually parts of the endoplasmic reticulum (internal cellular transport system) and have a high RNA content. They were subsequently named ribosomes. He left the Rockefeller Institute in 1973 to direct studies in cell biology at Yale University Medical School, and in 1990 he moved to the University of California, San Diego (UCSD), School of Medicine. Though he retired in 2001, Palade remained at UCSD as professor emeritus of medicine. Palade also received the Albert Lasker Award for Basic Medical Research (1966) and the National Medal of Science (1986). He became a naturalized U.S. citizen in 1952.

Palmer, Earl, American drummer (b. Oct. 25, 1924, New Orleans, La.—d. Sept. 19, 2008, Banning, Calif.), provided the "solid stickwork and feverish backbeat" that laid the foundations for rock and roll drumming; his distinctive style was notable on such recordings as Little Richard's "Tutti Frutti," the Righteous Brothers' "You've Lost That Lovin' Feelin'," Fats Domino's "The Fat Man," Smiley Lewis's "I Hear You Knockin'," Sam Cooke's "You Send Me," and Ike and Tina Turner's "River Deep, Mountain High." Palmer, who was inducted into the Rock and Roll Hall of Fame in 2000, was one of the few sidemen to earn the honour.

Papa Wendo (WENDO KOLOSOY; ANTOINE KALOSOYI), Congolese musician (b. 1925, Mushie, Bandundu region, Belgian Congo [now Democratic Republic of the Congo]—d. July 22, 2008, Kinshasa, Dem. Rep. of the Congo), helped lay the foundations of Congolese rumba, a form of lilting Afropop dance music that combines indigenous traditional songs with Afro-Cuban rumba rhythms. He was orphaned as a boy and eventually earned a living as a professional boxer while singing part time until he scored a massive hit with "Marie-Louise" (recorded in 1948), which made great use of his distinctive vocal style and flair for improvisation. Some of his devotees believed the record had supernatural—even satanic—powers, which led concerned officials in the Roman Catholic Church and the government to have Wendo arrested and briefly imprisoned. After his release he became an even more popular performer and a personal friend of Patrice Lumumba (later prime minister). The shift of Congolese rumba into the less-traditional *soukous* dance music, along with Lumumba's assassination (1961) and other political upheavals in the newly independent country, led Wendo to stop performing in public. He made a comeback—and regained political favour—with the albums *Nani akolela Wendo?* (1993), *Marie Louise* (1999), and *Amba* (2002).

Papadopoulos, Tassos, Cypriot politician (b. Jan. 7, 1934, Nicosia, Cyprus—d. Dec. 12, 2008, Nicosia), triumphed over Pres. Glafcos Clerides and eight other candidates in 2003 to become the Republic of Cyprus's fifth president. In that position he called on the Greek Cypriot community to reject a UN-sponsored reunification plan and then oversaw the entry of the Greek portion of the island country into the EU in May 2004 and its adoption of the euro currency in January 2008. His later attempts to reach a settlement with the breakaway Turkish zone failed. Papadopoulos trained in law at London University's King's College and Gray's Inn and returned home in 1955 to practice law. A member of EOKA, the anti-British resistance group during the last years of colonial rule, he took part in the negotiations leading to independence in 1960. Afterward he became minister of the interior—the youngest member of the cabinet—and he later held other important posts. For years he was a political ally of Clerides, until he broke with his mentor in the mid-1970s. When Papadopoulos ran for president in 2003, as the leader of the moderate-right Democratic Party (DIKO), his EOKA credentials tended to identify him with the right, but he was elected with the support of the Social Democrats and the communist-led Progressive Party of the Working People (AKEL). In February 2008 Papadopoulos lost his reelection bid.

Patarkatsishvili, Badri (ARKADY SHALOVICH PATARKATSISHVILI), Georgian oligarch (b. Oct. 31, 1955, Tbilisi, Georgia, U.S.S.R. [now in Georgia]—d. Feb. 12, 2008, Leatherhead, Surrey, Eng.), made a fortune in labyrinthine business dealings during the post-Soviet period of privatization of state-owned industries in Russia; Patarkatsishvili was instrumental in the 2003 Rose Revolution, which brought Mikheil Saakashvili to power in Georgia, but finally came to oppose Saakashvili. Patarkatsishvili became a regional director of Boris Berezovsky's LogoVAZ car-distribution network in 1990 and by 1992 was the company's deputy general director. He moved to Moscow in 1993 and became involved with, among other businesses, the oil company Sibneft and two television stations. The business climate in Russia changed with the rise to power of Pres. Vladimir Putin, and in 2001 Patarkatsishvili returned to Georgia, where he invested heavily in local businesses and media outlets. He was believed to have been an impetus for the antigovernment riots in Tbilisi in November 2007 and was accused of plotting a coup; he fled to England, from which he launched an unsuccessful campaign for Georgia's presidency.

Piccard, Jacques-Ernest-Jean, Swiss oceanic engineer, economist, and physicist (b. July 28, 1922, Brussels, Belg.—d. Nov. 1, 2008, La Tour-de-Peilz, Switz.), helped his father, Auguste Piccard, build the bathyscaphe for deep-sea exploration, and he also invented

AFP/Getty Images

Swiss oceanic engineer Jacques Piccard

the mesoscaphe, an undersea vessel for exploring middle depths. Piccard studied at the University of Geneva, taking a year off (1944–45) to serve with the French First Army. Upon receiving his licentiate in 1946, he taught at the university for two years before entering private teaching. Meanwhile, he was helping his father to design bathyscaphes, and in 1953 they took the *Trieste* on a dive of 3,099 m (10,168 ft) off the island of Ponza, Italy. In 1958 the U.S. Navy bought the vessel and retained Piccard as a consultant. On Jan. 23, 1960, he and Naval Lieut. Don Walsh set a submarine depth record by descending the *Trieste* 10,916 m (35,810

ft) into the Mariana Trench in the Pacific Ocean. Piccard recounted this feat in *Seven Miles Down* (1961), written with Robert Dietz. He introduced his first mesoscaphe, the *Auguste Piccard*, at the 1964 Swiss National Exhibition in Lausanne. In 1969 Piccard drifted some 3,000 km (1,800 mi) along the east coast of North America in the mesoscaphe *Ben Franklin*, conducting research on the Gulf Stream for the U.S. Navy. In the 1970s he founded the Foundation for the Study and Protection of Seas and Lakes, based in Cully, Switz.

Pinter, Harold British playwright, director, actor, screenwriter, and political activist (b. Oct. 10, 1930, London, Eng.—d. Dec. 24, 2008, London), won international renown—and the 2005 Nobel Prize for Literature—as one of the most complex and challenging post-World War II English-language dramatists. His 29 plays are noted for their use of understatement and subtle underlying menace within deceptively ordinary settings, while his characters' colloquial "Pinteresque" speech consists of disjointed and oddly ambivalent conversation punctuated by resonant hesitations and silences that reveal not only the characters' own alienation and the difficulties they have in communicating but also the many layers of meaning that can be contained in even the most innocuous statements. The son of a Jewish tailor, Pinter grew up in a working-class area in London's East End. He studied at the Royal Academy of Dramatic Art in 1948 but left after two terms to become an actor. Pinter toured Ireland and England with various acting companies, appearing under the name David Baron in provincial repertory theatres until 1959. After 1956 he began to write for the stage. The one-act dramas *The Room* (1957) and *The Dumb Waiter* (1959) established the mood of comic menace that was to figure largely in his later works. Pinter's first full-length play, *The Birthday Party* (1958; filmed 1968), puzzled the London audiences and lasted only a week. After his radio play *A Slight Ache* (1959) was adapted for the stage (1961), his reputation as the originator of a unique dramatic idiom was secured by his next two full-length plays, *The Caretaker* (1960; filmed 1963) and *The Homecoming* (1965; filmed 1969). Pinter's later successes included *Old Times* (1971), *No Man's Land* (1975), *Betrayal* (1978; filmed 1983), *Moonlight* (1993), and *Celebration* (2000). From the 1970s on, Pinter directed his own and others' works, wrote radio and television dramas, made occasional acting appearances, and wrote adapted motion-picture screenplays. Among the latter are *The Servant* (1963), *Accident* (1967), *The Go-Between* (1970), *The Last Tycoon* (1976), *The French Lieutenant's Woman* (1981), *The Handmaid's Tale* (1990), and the remake of *Sleuth* (2007). Pinter was also a noted poet, and his verse—such as that in *War* (2003)—often reflected his sometimes controversial left-wing political views. Pinter was made (2002) a Companion of Honour and named (2007) a chevalier of the French Legion of Honour.

Pleshette, Suzanne, American actress (b. Jan. 31, 1937, New York, N.Y.—d. Jan. 19, 2008, Los Angeles, Calif.), was a brunette beauty whose throaty voice became her trademark on Broadway, in films, and on television; she was especially remembered for her role as sardonic Emily Hartley, the schoolteacher wife and foil to her husband, Bob, on the TV sitcom *The Bob Newhart Show* (1972–78), for which she was nominated for two Emmy Awards. After starring in *Rome Adventure* (1962) and *40 Pounds of Trouble* (1963), Pleshette portrayed a teacher pecked to death by feathered killers in the Alfred Hitchcock classic *The Birds* (1963). On Broadway she performed in *Compulsion* (1957) and *The Cold Wind and the Warm* (1958) before replacing (1961) Anne Bancroft in *The Miracle Worker*. Other TV roles earned her two more Emmy nominations, one of them for her title role characterization in the TV film *Leona Helmsley: The Queen of Mean* (1990). Pleshette's other film roles include *Nevada Smith* (1966), *The Ugly Dachshund* (1966), and *Blackbeard's Ghost* (1968).

American actress Suzanne Pleshette

Screen Collection—Hulton Archive/Getty Images

Pollack, Sydney Irwin, American director, producer, and actor (b. July 1, 1934, Lafayette, Ind.—d. May 26, 2008, Pacific Palisades, Calif.), directed numerous television shows and more than a score of movies, including the epic romance *Out of Africa* (1985), a period piece set in colonial Kenya that earned him Academy Awards for best director and best picture. Pollack directed actor Robert Redford in several films, including *The Way We Were* (1973), *Three Days of the Condor* (1975), *The Electric Horseman* (1979), and *Out of Africa*. Pollack was best remembered by many, however, for his work on the comedy *Tootsie* (1982), which garnered him Oscar nominations for best director and best picture, won him a New York Film Critics Circle Award for best director, and earned him plaudits for his on-screen appearance as Dustin Hoffman's long-suffering agent. Pollack began his career as an actor on Broadway and on television, but performing in a teleplay piqued his interest in directing. He later directed more than 80 television programs, including a 1965 episode of *Bob Hope Presents the Chrysler Theatre* for which he won an Emmy Award. Pollack directed his first feature film, *The Slender Thread*, in 1965 and received his first Academy Award nomination for *They Shoot Horses, Don't They?* (1968). This was followed by such popular films as *Absence of Malice* (1981), *The Firm* (1993), and *The Interpreter* (2005).

Rakowski, Mieczyslaw Franciszek, Polish newspaper editor and politician (b. Dec. 1, 1926, Kowalewko, Pol.—d. Nov. 7, 2008, Warsaw, Pol.), as the last communist prime minister of Poland (September 1988–July 1989), presided over the dissolution of the old regime and the transfer of power to the country's first democratically elected government. Rakowski was the son of poor farmers who were executed during the World War II Nazi occupation of Poland. He joined (1946) the communist party, which sponsored his studies at the Institute of Social Science (Ph.D.

in history, 1957). As deputy editor (1956–58) and editor (1958–82) of the party's prestigious weekly newspaper *Polityka*, he provided an approved outlet for modest dissent among Poland's intelligentsia. He was promoted in 1975 to membership in the Central Committee, was made deputy prime minister in 1981, and was appointed prime minister on Sept. 28, 1988.

Rambo, Dottie (JOYCE REBA LUTTRELL), American songwriter and singer (b. March 2, 1934, Madisonville, Ky.—d. May 11, 2008, Mount Vernon, Mo.), wrote more than 2,500 songs, many of which became gospel standards, including "I Go to the Rock," "Stand by the River" (2003; a megahit that Rambo sang with Dolly Parton), and "He Looked Beyond My Fault and Saw My Need," probably her best-known hymn. Rambo began songwriting at age 8, and by the time she was 12, she had launched her musical career. She was married at 16 to Buck Rambo and with her husband formed the Singing Echoes, but when their 13-year-old daughter joined the act in 1964, the group became the Singing Rambos (later the Rambos). With her folksy alto voice, Rambo developed a sound that blended elements of black gospel and country music. Her album of spirituals, *It's the Soul of Me* (1968), won a Grammy Award for Best Soul Gospel Performance, an unusual honour for a white performer. In 1989, however, a back injury interrupted her career. Making a comeback as a singer in 2003, Rambo embarked on a busy touring schedule. She was killed when her tour bus left the highway. Rambo was inducted into the Gospel Music Association Hall of Fame as a solo singer in 1992 and was honoured again in 2001 when the Rambos gained admission. In 2007 she was installed as a member of the Nashville Songwriters Hall of Fame.

Curtis Hilbun/AP

Singer and songwriter Dottie Rambo

Rauschenberg, Robert (MILTON RAUSCHENBERG), American painter, graphic artist, performance artist, and photographer (b. Oct. 22, 1925, Port Arthur, Texas—d. May 12, 2008, Captiva Island, Florida), was a Renaissance man who blurred divisions between the arts and whose works helped serve as a transformational link between Abstract Expressionism and other new art movements; his early offerings anticipated the Pop art movement. Rauschenberg's first paintings in the early 1950s comprised a series of all-white and all-black surfaces underlaid with wrinkled newspaper. In subsequent works he began to explore the possibilities of making art from such varied objects as Coca-Cola bottles, traffic barricades, and stuffed birds, calling the works "combine" paintings. In 1955 Rauschenberg became associated with the Merce Cunningham Dance Company, first as a designer of costumes and sets and later as a technical director. He also produced theatrical pieces in collaboration with composer John Cage. From the late 1950s Rauschenberg experimented with the use of newspaper and magazine photographs in his paintings, devising a process using solvent to transfer images directly onto the canvas. About 1962 he borrowed from Andy Warhol the silk-screen stencil technique for applying photographic images to large expanses of canvas, reinforcing the images and unifying them compositionally with broad strokes of paint reminiscent of Abstract Expressionist brushwork. By the 1970s, however, he had turned to prints on silk, cotton, and cheesecloth, as well as to three-dimensional constructions. Among Rauschenberg's preoccupations from the 1970s to the 1990s were lithography and other printmaking techniques. Following a stroke in 2002 that left his right side paralyzed, Rauschenberg continued to create, using his left hand and employing the aid of assistants.

Reynolds, Nick (NICHOLAS WELLS REYNOLDS), American musician (b. July 27, 1933, San Diego, Calif.—d. Oct. 1, 2008, San Diego), with Bob Shane and Dave Guard, was a founding member in 1957 of the Kingston Trio, the group that helped spark the folk music revival of the 1960s. Reynolds played guitar and often contributed bongo and other percussion to the songs. With a repertoire that drew on traditional folk material but eschewed the left-wing sympathies typical of many American folk performers in the first half of the 20th century, the trio conveyed the lighthearted optimism of mainstream Americans at the onset of the 1960s. The trio, with their tight harmonies and clean-cut image, scored a breakthrough hit with the song "Tom Dooley" (1958), which earned them their first Grammy Award for best country and western performance (folk music was not a category). That song was followed by such hit singles as "M.T.A.," "A Worried Man," and "The Wanderer" and a series of chart-topping albums—including *Kingston Trio at Large* (1959; which won a Grammy), *Here We Go Again* (1959), and *String Along* (1960); 13 of the trio's albums reached the Top 10. In 1961 Guard left the group and was replaced by singer-songwriter John Stewart (*q.v.*). The group disbanded in 1967.

Risi, Dino, Italian filmmaker (b. Dec. 23, 1916, Milan, Italy—d. June 7, 2008, Rome, Italy), wrote and/or directed more than 80 films, documentaries, and television shows throughout his nearly six-decade-long (1946–2002) career. Risi helped to establish the satiric commedia all'italiana style, which portrayed the problems facing Italian society following the country's overwhelming economic growth during the 1960s. Risi worked as assistant director under Alberto Lattuada and Mario Soldati before launching his own directing career with the film *Vacanze col gangster* (1951). Risi's most famous work, *Il sorpasso* (1962), served as a commentary on Italy at the time, its newfound wealth, and the repercussions that resulted from a life of spontaneity and ease. *Profumo di donna* (1974) received two Academy Award nominations, including one for the adapted screenplay that Risi co-wrote, and was remade in English as *Scent of a Woman* (1992). Risi's other movies include *Poveri ma belli* (1957), *Una vita difficile* (1961), and *I mostri* (1963). He was given a Golden Lion lifetime achievement award at the Venice Film Festival in 2002.

Robbe-Grillet, Alain, French novelist, screenwriter, and motion-picture director (b. Aug. 18, 1922, Brest, France—d. Feb. 18, 2008, Caen, France), was a representative writer and leading theoretician of the *nouveau roman* ("new novel"), the French "antinovel" that emerged in the 1950s. His critical discourse *Pour un nouveau roman* (1963; *Toward a New Novel: Essays on Fiction*) was widely hailed as the embodiment of the genre's theoretical foundations. Robbe-Grillet trained as a statistician and agronomist before turning to literature. Although his fiction raises questions about the ambiguous relationship of objectivity and subjectivity, his earliest novels also display elements of the traditional detective story. His first novel, *Les Gommes* (1953; *The Erasers*), deals with a murder committed by the man who has come to investigate it. *Le Voyeur* (1955; *The Voyeur*) examines the murder of a young girl, while in *La Jalousie* (1957; *Jealousy*), a mistrustful husband views the actions of his wife and her suspected lover through a *jalousie*, or louvered shutter. His later works include the novels *Dans le labyrinthe* (1959; *In the Labyrinth*), *La Belle Captive* (1975), *Djinn* (1981), *La Reprise* (2001; *Repetition*), and *Un Roman sentimental* (2007), as well as the autobiography, *Le Miroir qui revient* (1984; *Ghosts in the Mirror*). Robbe-Grillet's techniques were dramatized in the films that he directed, among them *L'Immortelle* (1963). His best-known work in cinema, however, is the Oscar-nominated screenplay for Alain Resnais's film *L'Année dernière à Marienbad* (1961; *Last Year at Marienbad*). Robbe-Grillet was elected to the French Academy in 2004.

Roderick, John, American journalist (b. Sept. 15, 1914, Waterville, Maine—d. March 11, 2008, Honolulu, Hawaii), was an illustrious foreign correspondent (1937–42 and 1945–84) for the Associated Press (AP) and won admiration for his reportage of the several months he spent living (1945–47) with the Chinese rebel army and revolutionary leader Mao Zedong in caves in Yan'an, the communist stronghold. The inveterate China watcher was subsequently posted (1959) to Japan until he reopened AP's Beijing office in 1979. Roderick returned to Tokyo in 1980 as an AP special correspondent. In 1985, a year after his formal retirement, the Japanese government bestowed upon Roderick the Order of the Sacred Treasure.

Rogers, Ted (EDWARD SAMUEL ROGERS, JR.), Canadian businessman (b. May 27, 1933, Toronto, Ont.—d. Dec. 2, 2008, Toronto), was the founder of Rogers Communications Inc. (RCI), Canada's premier media company. In addition to cable television and other media operations, RCI owned several leading Canadian magazines as well as the Toronto Blue Jays, a Major League Baseball team. Rogers was named for his father, a pioneering force in broadcasting who established several companies of his own. While still a law student in Toronto, Rogers, Jr., acquired an FM radio station. He continued over the years to build his RCI holdings, taking on considerable debt in the process. In 1994 Rogers made his biggest acquisition, purchasing communications company Maclean-Hunter. Over the years RCI's debts were retired.

Russert, Tim (TIMOTHY JOHN RUSSERT, JR.), American journalist (b. May 7, 1950, Buffalo, N.Y.—d. June 13, 2008, Washington, D.C.), as the insightful moderator (1991–2008) of the television program *Meet the Press*—the long-running (since 1947) Sunday morning talk show that became a mainstay in American political discourse—established himself as a tough but even-handed interviewer and became one of the most influential political commentators of his era. Russert studied political science at John Carroll University (B.A., 1972), University Heights, Ohio,

Journalist and moderator Tim Russert

Alex Wong/Getty Images

before earning a law degree (1976) from the Cleveland-Marshall College of Law. That same year he worked on the successful U.S. Senate campaign of Daniel Patrick Moynihan; Russert later served as Moynihan's chief of staff. During the New York gubernatorial race of 1982, Russert joined the campaign staff of Mario Cuomo, and he continued to advise Cuomo after his election. Two years later Russert left the political arena to become an executive at the Washington Bureau of NBC, and in 1988 he was made its bureau chief. Russert was the recipient of numerous honours, including an Edward R. Murrow Award (2001) and an Emmy Award (2005). He was also the author of two best-selling books, *Big Russ and Me: Father and Son, Lessons of Life* (2004) and *Wisdom of Our Fathers: Lessons and Letters from Daughters and Sons* (2006).

Sabah, Sheikh Saad al-Abdullah al-Salim al-, Kuwaiti royal (b. 1929?, Kuwait—d. May 13, 2008, Kuwait City, Kuwait), as a member of the ruling Sabah family, served in a variety of government posts, including minister of the interior (1961–77), minister of defense (1965–77), and prime minister (1978–2003). As prime minister he headed a government-in-exile in Saudi Arabia during the 1990–91 Iraqi invasion of Kuwait. When Emir Sheikh Jabir al-Ahmad al-Jabir al-Sabah died on Jan. 15, 2006, Sheikh Saad immediately replaced him as emir in accordance with the constitution. A brief power struggle ensued, however, between the two branches of the Sabah family, and Sheikh Saad, then aged 76 and in extremely poor health, abdicated after only nine days. (On January 29 his cousin, Prime Minister Sheikh Sabah al-Ahmad al-Jabir al-Sabah, was sworn in as emir.) Sheikh Saad, the eldest son of Sheikh Abdullah al-Salim al-Sabah (who ruled Kuwait from 1950 to 1965), trained at the Hendon Police College in London and served as Kuwait's deputy director of police (1959–61) until he joined independent Kuwait's first cabinet. He was named crown prince in 1978.

Saint Laurent, Yves (YVES-HENRI-DONAT-MATHIEU SAINT LAURENT), French fashion designer (b. Aug. 1, 1936, Oran, Alg.—d. June 1, 2008, Paris, France), was regarded as one of the most influential designers in Paris and was especially noted for his popularization of women's trousers for all occasions. After completing his secondary education

Philippe Wojazer—Reuters/Landov

Fashion designer Yves Saint Laurent

in Oran, Alg., Saint Laurent left for Paris to pursue a career in designing theatrical costumes and women's fashions. When a *Vogue* magazine executive showed Christian Dior some sketches by Saint Laurent, then aged 17, he was hired immediately as Dior's assistant. As Dior's protégé, the 21-year-old Saint Laurent was named the head of the House of Dior at Dior's death in 1957. Following the "little-girl" look and the A-line silhouette, he introduced more sophisticated, longer skirts and, in 1959, drastically shortened skirts. In 1960 he introduced the chic beatnik look of turtlenecks and black leather jackets edged with fur. After induction into the French army in 1960, Saint Laurent suffered a nervous collapse and was replaced at the House of Dior by designer Marc Bohan. In 1962 Saint Laurent opened his own fashion house. In addition to his celebrated trousers and innovative jumpsuits, metallic and transparent fabrics were prominent in his late '60s collections; in the 1970s, inspired by ethnic costume, he introduced the *haute* peasant look. During the 1960s and '70s his enterprises expanded to include ready-to-wear licenses, accessories, household linens, fragrances, and menswear. He sold the ready-to-wear business to Gucci for some $1 billion in 1999 and shut down the couture house when he retired in 2002. Saint Laurent was made a grand officer of the Legion of Honour in 2007.

Salvador, Henri Gabriel, French entertainer (b. July 18, 1917, Cayenne, French Guiana—d. Feb. 13, 2008, Paris, France), enjoyed a lengthy career as a singer and songwriter, with a musical range that included French chansons, jazz, novelty songs, and children's songs. In the 1930s Salvador played guitar with jazz guitarist Django Reinhardt, and during World War II he toured in South America with bandleader Ray Ventura, which brought a South American influence into his work. In 1947 Salvador's first recording, "Maladie de l'amour," was a hit, and he enjoyed great popularity thereafter. One of his best-known songs from this period of his career was "Le Loup, la biche, et le chevalier (une chanson douce)." In the 1950s Salvador began writing and recording novelty rock-and-roll songs with Boris Vian, including "Rock and Roll Mops" and "Le Blues du dentiste." In the 1970s he concentrated on children's music, released on his own Rigolo label, but he returned to adult music late in the decade. In 2000 he topped the charts with the album *Chambre de vue*. Salvador was named a knight in the French Legion of Honour in 1988 and was elevated to commander in 2004.

Scheider, Roy Richard, American actor (b. Nov. 10, 1932, Orange, N.J.—d. Feb. 10, 2008, Little Rock, Ark.), was identified most closely with his role as the small-town police chief in the blockbuster *Jaws* films (1975 and 1978), but he earned Academy Award nominations for his supporting role as a policeman opposite Gene Hackman in the film *The French Connection* (1971) and for his starring role in *All That Jazz* (1979), in which he portrayed a character based on director-choreographer Bob Fosse. Other memorable films include *Klute* (1971), *The Seven-Ups* (1973), *Marathon Man* (1976), and *Blue Thunder* (1983). Scheider also appeared (1993–95) as the captain of a submarine in the television adventure series *SeaQuest DSV*.

Schoenfeld, Gerald, American producer and theatre owner (b. Sept. 22, 1924, New York, N.Y.—d. Nov. 25, 2008, New York City), led a revitalization of commercial theatre in New York City, bringing to Broadway such hits as *Equus*, *A Chorus Line*, and *The Phantom of the Opera* and transforming a run-down and sleazy neighbourhood into a gleaming attraction for audiences. His involvement in the Shubert Organization began in 1957, when he became its lawyer. The following year he brought in Bernard Jacobs to work with him. Together they headed the organization from 1972; Jacobs died in 1996.

Schön, Mila (MARIA CARMEN NUTRIZIO), Italian fashion designer (b. 1917?, Trogir, Dalmatia, Austria-Hungary [now in Croatia]—d. Sept. 4, 2008, near Alessandria, Italy), created understated, impeccably tailored haute couture worn by such fashion icons as Jacqueline Kennedy Onassis, but it was Schön's high-end ready-to-wear collections and her innovations (notably her use of double-faced wool instead of nonwool coat linings) that put her at the centre of the Italian fashion world. Schön was an avid student of the fashion houses that she frequented as a client, and after separating from her wealthy husband, she opened (1958) an atelier in Milan. Many of her clothes were inspired by fine art and by the classic designs of Paris couturiers Dior and Balenciaga that she enjoyed wearing. She opened a chic Milan boutique in 1965, introduced menswear and the prêt-à-porter line in 1971, and later put her hand to luxury fashion accessories. Schön sold the company in 1993.

Scofield, (David) Paul, British actor (b. Jan. 21, 1922, Hurstpierpoint, Sussex, Eng.—d. March 19, 2008, West Sussex, Eng.), delighted audiences with his sonorous voice and powerful performances in Shakespearean and other stage roles. He had his greatest success, however, as Sir Thomas More in Robert Bolt's *A Man for All Seasons*, in which he appeared in London (1960) and on Broadway (1961–62), where he won (1962) the Tony Award for best actor in a drama; in 1967 he earned the Academy Award for best actor for the film version. Scofield trained at the Croydon Repertory Theatre School (1939) and at the Mask Theatre School (1940) in London. After touring with companies entertaining the troops during World War II, he joined the Birmingham Repertory Theatre and in 1946 moved to Stratford-upon-Avon, where he played the title characters in *Henry V* and *Hamlet*, among other Shakespearean roles. He had his first starring role in commercial theatre in Terence Rattigan's ill-fated *Adventure Story* (1949). Scofield's successes in the theatre included *King Lear* (1962), Chekhov's *Uncle Vanya* (1970), Ben Jonson's *Volpone* (1977), Salieri in the original production of Pe-

ter Shaffer's *Amadeus* (1979), and Ibsen's *John Gabriel Borkman* (1996). Scofield made his film debut in 1955. He later played Lear in Peter Brook's 1971 movie version, Tobias in Edward Albee's *A Delicate Balance* (1973), the French king in Kenneth Branagh's version of *Henry V* (1989), and Judge Thomas Danforth in a film adaptation of Arthur Miller's *The Crucible* (1996). Although Scofield declined a knighthood, he was made CBE in 1956 and was named a Companion of Honour in 2001.

Seamans, Robert Channing, Jr., American aeronautical engineer (b. Oct. 30, 1918, Salem, Mass.—d. June 28, 2008, Beverly Farms, Mass.), was a pioneer in the development of advanced systems of flight control, fire control, and guidance for modern aircraft. In 1941 Seamans became an instructor of aircraft instrumentation at the Massachusetts Institute of Technology (MIT) while still working on his master's degree. Under the instruction and guidance of American engineer C. Stark Draper, Seamans worked on fire-control systems for naval antiaircraft guns. His doctoral work on the problems of control and guidance of high-speed aircraft proved valuable in the development of automatic flight control, automatic tracking equipment, homing systems for guided missiles, and intercontinental ballistic missile control systems. At MIT Seamans became assistant professor of aeronautical engineering in 1945 and associate professor in 1950. After working as chief engineer (1950–55) of Project Meteor, a naval guided-missile program, he became head of the Radio Corporation of America (RCA) Airborne Systems Laboratory, Boston. Three years later he became chief engineer of RCA's Missile Electronics and Controls Division. He was an associate administrator (1960–65) and deputy administrator (1965–68) of NASA before serving (1969–73) as secretary of the air force. Seamans was also president (1973–74) of the National Academy of Engineering and administrator (1974–76) of the Energy Research and Development Administration. He returned to MIT in 1977 as Luce Professor of Environment and Public Policy; the following year he was named dean of the MIT School of Engineering, a post he held until 1981. Seamans received the NASA Distinguished Service Medal in 1965 and 1969 and the Thomas D. White National Defense Award in 1980.

Sendler, Irena (IRENA KRZYZANOWSKA), Polish social worker (b. Feb. 15, 1910, Otwock, Russian Empire [now in Poland]—d. May 12, 2008, Warsaw, Pol.), rescued some 2,500 Jewish children from the Warsaw ghetto during World War II. Trained as a social worker, Sendler became (1942) a member of Zegota (Council to Aid the Jews), the Polish underground organization established to help save Jews from the Nazi occupiers. She used such creative means as coffins and ambulances to remove children to safety, supplied them with fake birth certificates with Aryan names, placed them in sympathetic Christian orphanages and convents, and buried jars containing lists of their real names for future reference. Even when she was captured and tortured (1943) by the Nazis, Sendler refused to reveal with whom she worked and the names of those she saved. Although sentenced to death, she escaped when other Zegota members bribed Gestapo officers to free her. In 1965 Yad Vashem, Israel's Holocaust Martyrs' and Heroes' Remembrance Authority, recognized Sendler as Righteous Among the Nations for her actions during the war. She was also awarded (2003) the Order of the White Eagle, Poland's highest honour.

Shakhlin, Boris Anfiyanovich, Siberian Soviet gymnast (b. Jan. 27, 1932, Ishim, Russia, U.S.S.R.—d. May 30, 2008, Kiev, Ukr.), set a career record of 10 individual titles in the world championships and won gold medals at three successive Olympic Games (1956–64); his tally of 13 Olympic medals (7 gold, 4 silver, and 2 bronze) placed him among the most-decorated Olympians. Shakhlin first competed internationally at the 1954 world gymnastics championships, winning the silver medal on the horizontal bar. At the 1956 Melbourne Olympic Games, he won a gold medal for the pommel horse and shared the team gold medal. At the 1960 Rome Olympics, he won a total of seven medals, including the individual all-around title, gold medals for the pommel horse (tie), the parallel bars, and the vault (tie), as well as silver medals for the rings and in the team competition and a bronze in the horizontal bar, despite a serious hand injury. At the 1964 Tokyo Games, he won the gold medal for the horizontal bar, silver medals in the individual all-around and as a member of the Soviet team, and a bronze in rings. Following his retirement in 1966 Shakhlin was (1968–92) an international official in gymnastics; he was inducted into the International Gymnastics Hall of Fame in 2002.

AP

Champion gymnast Boris Shakhlin

Shomron, Dan, Israeli military leader (b. 1937, Kibbutz Ashdot Ya'acov, British Palestine [now in Israel]—d. Feb. 26, 2008, Ra'anana, Israel), organized and led the daring rescue of more than 100 Israeli and other Jewish airline passengers who had been hijacked by Palestinian and German militants at the airport in Entebbe, Ugan., in July 1976. Shomron enlisted as a paratrooper in 1955 and fought in the Sinai

Military commander Dan Shomron

Keystone/Getty Images

after the Suez Crisis of 1956. During the Six-Day War in 1967, Shomron commanded a unit and was the first paratrooper to reach the Suez Canal. He was promoted to brigadier general in 1974. In 1979–83, as head of the army's southern command, he oversaw the withdrawal of Israeli forces from the Sinai Peninsula. He served as army chief of staff in 1987–91. Shomron was called out of retirement in 2006 to head a military inquiry into the Israeli war against Hezbollah militants in Lebanon; the report was critical of the conduct of the war.

Sills, Paul, American theatre director and teacher (b. Nov. 18, 1927, Chicago, Ill.—d. June 2, 2008, Baileys Harbor, Wis.), established improvisational comedy and cofounded (1959) The Second City theatre company in Chicago. His improvisation model for Second City and its spin-offs in other cities became the basis for the format used on *Saturday Night Live* and other comedy television programs. In 1955 Sills cofounded the Compass Players, but it was with Second City that he found long-lasting success. In 1968 he developed the story-theatre form, in which actors narrated and acted out folktales and legends. *Paul Sills' Story Theatre* debuted (1970) on Broadway and was nominated for a Tony Award in 1971. Using the story-theatre model, Sills helped create (1988) the New Actors Workshop in New York City, where he taught and directed until 2003.

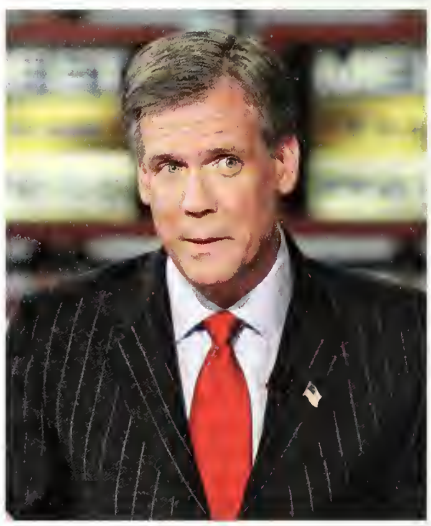
Singh, V(ishwanath) P(ratap) Indian politician (b. June 25, 1931, Allahabad, Uttar Pradesh, British India—d. Nov. 27, 2008, New Delhi, India), was prime minister (Dec. 2, 1989–Nov. 10, 1990) of India at the head of a coalition government formed of parties that opposed the powerful Congress (I) Party. Singh studied at Allahabad and Pune (Poona) universities and in 1969 became a Congress Party member of the Uttar Pradesh Legislative Assembly. He won election to the Lok Sabha (lower house of Parliament) in 1971. He held several posts under Prime Minister Indira Gandhi, including deputy minister of commerce (1974), minister of commerce (1976–77, 1983–84), and chief minister (governor) of Uttar Pradesh (1980–82). Upon Gandhi's death in 1984, her son and successor as prime minister, Rajiv Gandhi, appointed Singh minister of finance. Singh's efforts to reduce governmental regulation of business and to prosecute tax fraud attracted widespread praise. He was transferred to the post of minister of defense in January 1987, but he resigned later that year after his investigations of arms-procurement fraud were squelched. Soon afterward, Singh resigned from the government altogether and left Gandhi's Congress (I) Party. He assembled a coalition of centrist opposition parties called the National Front, which challenged Congress (I) in the 1989 general elections. As the leader of the victorious National Front, Singh formed a coalition government with two other major opposition parties, but the coalition was riven by disputes having to do with religious and caste issues. Less than a year later, he lost a vote of confidence in Parliament and resigned. He later was one of the forces behind the broad United Front coalition that governed the country in 1996–97.

Sister Emmanuelle (MADELEINE CINQUIN), Belgian-born Roman Catholic nun and social activist (b. Nov. 16, 1908, Brussels, Belg.—d. Oct. 20, 2008, Callian, France), lived for more than two decades among the *zabbaleen*, the garbage scavengers in the slums of Cairo, where she established schools, clinics, and other social services. Her humanitarian work was often compared to that of Mother Teresa in India and Abbé Pierre in France. Sister Emmanuelle took her vows in about 1929/30 with the Congregation of Notre Dame of Sion and taught school in Turkey and other countries until 1971, when she was granted permission to live among the *zabbaleen*. In 1980 she founded the Sister Emmanuelle Foundation, which extended her work around the world. Sister Emmanuelle was an outspoken critic of some Roman Catholic doctrines, including the ban on contraception and the celibate priesthood. Her autobiography, *Confessions of a Nun*, which included candid reminiscences of her lifetime struggle against sexual temptation, was withheld from publication until after her death.

Smith, Mike (MICHAEL GEORGE SMITH), British singer and songwriter (b. Dec. 6, 1943, Edmonton, Middlesex, Eng.—d. Feb. 28, 2008, Aylesbury, Buckinghamshire, Eng.), was the lead singer and keyboardist for the Dave Clark Five (DC5), one of the most popular rock-and-roll bands of the British Invasion in the early 1960s. The DC5's hit songs included "Glad All Over," "Bits and Pieces," "Can't You See That She's Mine," "Because," "Any Way You Want It," "Over and Over," "I Like It like That," "You Got What It Takes," "Everybody Knows," and "Catch Us if You Can," which served as the title song of the group's 1965 rock movie. Their popularity, which briefly rivaled that of the Beatles, led to a record for a British band—12 appearances on TV's *The Ed Sullivan Show*, but the group fell out of favour in the late '60s and disbanded in 1970. Smith formed his own short-lived band before concentrating on songwriting and producing until an accident in 2003 left him severely paralyzed. He died less than two weeks before the DC5 was inducted into the Rock and Roll Hall of Fame.

Snow, Tony (ROBERT ANTHONY SNOW), American journalist (b. June 1, 1955, Berea, Ky.—d. July 12, 2008, Washington, D.C.), during his 16-month stint (May 2006–September 2007) as White House press secretary, was appreciated for his good-natured banter with journalists, infusing energy into what many considered a lacklustre position. Although Snow became known as one of Pres. George W. Bush's staunchest advocates, he originally earned journalistic credibility as the host (1996–2003) of the television program *Fox News Sunday*, on which he often criticized Bush's policies. He wrote editorials for regional newspapers throughout the 1980s, worked as a speechwriter (1991–96) for Pres. George H.W. Bush, and later had a nationally syndicated newspaper column.

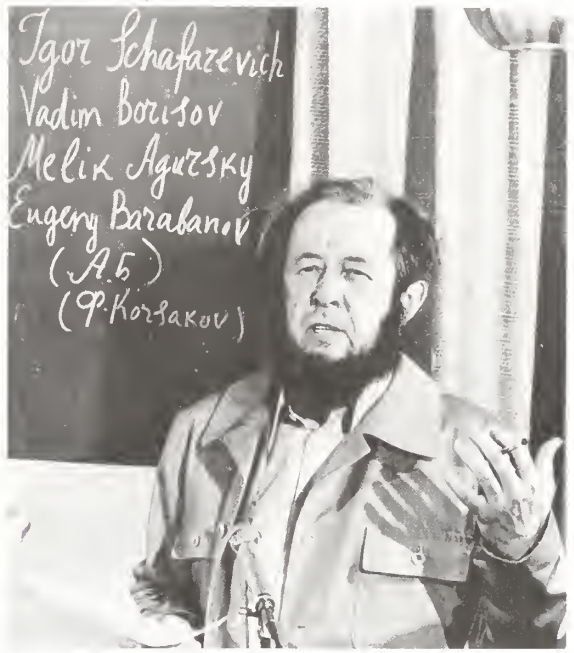
Alex Wong/Getty Images



Former White House press secretary Tony Snow

Solotaroff, Ted (THEODORE SOLOTAROFF), American literary critic (b. Oct. 9, 1928, Elizabeth, N.J.—d. Aug. 8, 2008, East Quogue, N.Y.), founded (1967) the *New American Review* (later American Review), a literary journal that appeared three times a year in paperback form and featured fiction and nonfiction works by such luminaries as Mordecai Richler, E.L. Doctorow, Gabriel García Márquez, Norman Mailer, and Philip Roth (who submitted a sampling of what would become his novel *Portnoy's Complaint* [1969]). Although it was a critical success, the magazine struggled financially and stopped publication in 1977.

Keystone/Getty Images



Nobel Prize-winning author Aleksandr Solzhenitsyn

Solzhenitsyn, Aleksandr Isayevich, Russian novelist and historian (b. Dec. 11, 1918, Kislovodsk, Russia—d. Aug. 3, 2008, Troitse-Lykovo, near Moscow, Russia), was awarded the Nobel Prize for Literature in 1970, but he declined to go to Stockholm to receive the prize for fear that the government would not readmit him to the Soviet Union upon his return. Although he lived for two decades (1974–94) in honoured exile in the West, he tended to favour the formation of a benevolent authoritarian regime based on Russia's traditional Christian values rather than Western emphases on democracy and individual freedom. Solzhenitsyn was born into a family of Cossack intellectuals; he attended the University of Rostov-na-Donu, graduating in mathematics, and took correspondence courses in literature at Moscow State University. After achieving the rank of captain of artillery during World War II, he was arrested in 1945 for having written a letter in which he criticized Joseph Stalin, and he spent eight years in prisons and labour camps and three more years in enforced exile. Rehabilitated in 1956, he became a mathematics teacher and began to write. Solzhenitsyn submitted his short novel *Odin den iz zhizni Ivana Denisovicha* (1962; *One Day in the Life of Ivan Denisovich*) to the leading Soviet literary periodical *Novy Mir* ("New World"). The novel, based on Solzhenitsyn's own experiences, was noted for its simple, direct language and the obvious authority with which it treated the daily struggles and material hardships of life in a forced-labour camp during the Stalin era. The book produced a sensation both abroad and in the Soviet Union. After the publication of a collection of his short stories in 1963, however, he was denied further official publication of his work, and he resorted to samizdat ("self-published") literature. His most significant works of this period were *V kruge pervom* (1968; *The First Circle*), *Rakovy korpus* (1968; *Cancer Ward*), and *Avgust 1914* (1971; *August 1914*). In December 1973 the first parts of *Arkhipelag Gulag* (*The Gulag Archipelago*) were published in Paris after the KGB had seized a copy of the manuscript in the Soviet Union. The work mingles historical exposition and Solzhenitsyn's own autobiographical accounts of the Gulag with the voluminous personal testimony of other inmates—histories that he collected and committed to memory during his earlier imprisonment. He was arrested and charged with treason on Feb. 12, 1974, and was exiled from the Soviet Union on the following day; in December he took possession of his Nobel Prize. The second and third volumes of *The Gulag Archipelago* were published in 1974–75. An extensively expanded and revised version of *August 1914* appeared in Russian in 1983 as the first part of a projected series. In 1989 *Novy Mir* published the first officially approved excerpts from *The Gulag Archipelago*. Solzhenitsyn's Soviet citizenship was officially restored in 1990, and he returned to Russia in 1994. Solzhenitsyn established (1997) an annual prize for writers contributing to the Russian literary tradition, and in 2007 he was awarded Russia's prestigious State Prize for his contribution to humanitarian causes.

Stafford, Jo Elizabeth, American singer (b. Nov. 12, 1917, Coalinga, Calif.—d. July 16, 2008, Century City, Calif.), possessed a strong, unwavering voice and flawless intonation, and during the 1940s and '50s she became a sensation, hosting and performing on the radio show *The Chesterfield Supper Club* and the television program *The Jo Stafford Show* (1954); she also recorded a succession of charted singles that included the number one hit "You Belong to Me" (1952), which sold two million copies. After singing lead for the Stafford Sisters, a trio formed with her siblings, she served as lead vocalist (1938–44) for the Pied Pipers, who began working in 1939 with the Tommy Dorsey Orchestra and provided backup vocals for Frank Sinatra, notably for the hit single "I'll Never Smile Again" (1940). During her peak solo years (1944–55), Stafford sold some 25 million records and was a favourite among U.S. servicemen, who affectionately dubbed her "G.I. Jo" because of her tireless work with the USO. Stafford was presented (1960) with a Grammy Award for the best comedy performance for the album *Jonathan and Darlene Edwards in Paris*.

Stewart, John Coburn, American singer and songwriter (b. Sept. 5, 1939, San Diego, Calif.—d. Jan. 19, 2008, San Diego), rose to fame when he wrote the chart-topping hit single "Daydream Believer" (1967) for the pop-rock group the Monkees. Stewart was playing the guitar and banjo and had written his first song by the age of 10. While in high school he started up his own band, the Furies, which released the song "Rockin' Anna" on a local label. In 1958 Stewart formed the Cumberland Three (which recorded three albums), and in 1961 he joined Bob Shane and Nick Reynolds (*q.v.*) in the Kingston Trio when founding member Dave Guard left. He went solo after the latter group broke up in 1967. During his career Stewart wrote more than 600 songs and released dozens of albums.

Stubbs, Levi (LEVI STUBBLES), American singer (b. June 6, 1936, Detroit,

Mich. –d. Oct. 17, 2008, Detroit), was the lead vocalist for the Four Tops, one of Motown's most popular acts in the 1960s; his gruff, passionate vocals were set against gentler background harmonies and propelled the group to the pinnacle of fame with such songs as "Baby I Need Your Loving" (1964), "I Can't Help Myself (Sugar Pie, Honey Bunch)" (1965), "It's the Same Old Song" (1965), "Reach Out I'll Be There" (1966), and "Bernadette" and "Standing in the Shadows of Love" (both 1967). The group, which included Renaldo ("Obie") Benson, Abdul ("Duke") Fakir, and Lawrence Payton, formed after the quartet sang together at a party in 1953. The foursome called themselves the Four Aims until 1956, when they joined Chess Records as the Four Tops. During the next decade they performed primarily jazz-oriented material in clubs and released singles for a number of labels, which were poorly received. After signing with Motown (1963), the group saw its career soar. Though the Four Tops split with Motown in 1972 (when the label relocated to California), the foursome scored a major hit in 1973 with "Ain't No Woman like the One I've Got"; the Four Tops eventually returned for another live-year stint with Motown in the mid-1980s. The group's original lineup continued to tour and record together throughout the 1970s, '80s, and '90s. The Four Tops were inducted into the Rock and Roll Hall of Fame in 1990.

Stuhlinger, Ernst, German-born American rocket scientist (b. Dec. 19, 1913, Niederrimbach, Ger.—d. May 25, 2008, Huntsville, Ala.), was a member of the German team of scientists (led by Wernher von Braun) who developed the V-2 rockets used by the Nazis against the British during World War II and later helped build the American Saturn V rocket, which carried the first astronauts to the Moon in 1969. After the war, Stuhlinger and the rest of von Braun's team surrendered to the Americans and were taken to Fort Bliss, Texas, to work on the U.S. space program; the team was relocated to Huntsville in 1950. The timing device that Stuhlinger invented played a critical role in the success of the Explorer I satellite launch in 1958. He also helped develop the solar X-ray telescope used (1973–74) in the Skylab space station. Stuhlinger worked at the Marshall Space Flight Center in Huntsville as director of the Space Sciences Laboratory (1960–68) and associate director for science (1968–75). After retiring in 1975, he taught at the University of Alabama. In 2005 the Electric Rocket Propulsion Society awarded him a medal for outstanding achievement in electric propulsion. Stuhlinger wrote the textbook *Ion Propulsion for Space Flight* (1964) and co-wrote the biography *Wernher von Braun: Crusader for Space* (1993). He became a U.S. citizen in 1955.

Suharto, Indonesian army officer and political leader (b. June 8, 1921, Kemusu Argamulja, Java, Dutch East Indies [now Indonesia]—d. Jan. 27, 2008, Jakarta, Indon.), pursued strongly anticommunist, pro-Western policies as president of Indonesia (1967–98); Suharto's three decades of uninterrupted rule gave his country much-needed political stability and sustained economic growth, but his authoritarian regime finally fell victim to an economic crisis and its own internal corruption. After graduating from high school and working briefly as a bank clerk, he joined the Dutch colonial army and then, after the Japanese conquest in 1942, switched to a Japanese-sponsored home defense corps. With Japan's surrender in 1945, he fought in the guerrilla forces seeking independence (1950) from the Dutch. Suharto rose steadily through the ranks of the Indonesian army, becoming a colonel (1957), a brigadier general (1960), and a major general (1962). On Sept. 30, 1965, a group of disgruntled left-wing army officers and some Indonesian Communist Party leaders tried to seize power in Jakarta. Suharto escaped assassination, led the army in crushing the coup, and directed a purge of communists and leftists in public life; his example was followed by vigilantes in a grand massacre of communists throughout the country in which hundreds of thousands lost their lives. Suharto took effective control of the government on March 12, 1966, though President Sukarno remained nominal head of state. In March 1967 the People's Consultative Assembly (the national legislature) appointed Suharto acting president, and in March 1968 it elected him president. His government-sponsored political party, Golkar, repeatedly scored landslide victories in elections to the Assembly, and that body in turn reelected Suharto unopposed to the presidency in 1973, 1978, 1983, 1988, 1993, and 1998. In 1997, however, Indonesia became caught up in a currency crisis sweeping across Southeast Asia. Antigovernment demonstrations turned into rioting in May 1998, and Suharto was forced to resign on May 21.

Sumac, Yma (ZOILA AUGUSTA EMPERATRIZ CHAVARRI DEL CASTILLO), Peruvian-born American folk singer (b. Sept. 13, 1922, Cajamarca, Peru—d. Nov. 1, 2008, Los Angeles, Calif.), was internationally renowned for her extraordinary vocal range and for her interpretations of traditional South American songs. Known as the "Peruvian songbird" and the "nightingale of the Andes," Sumac possessed a soaring soprano voice that spanned at least four octaves. Most of her professional career was spent in the U.S., to which she moved in 1946. She became a sensation on the New York City nightclub and supper-club circuit before releasing her first album, *Voice of the Xtabay* (1950), which sold half a million copies. She also attracted widespread attention with her appearance in the 1951 Broadway musical *Flahooley*. A string of other albums followed, including *Legend of the Sun Virgin* (1952), *Mambo!* (1954), and *Fuego del Ande* (1959). Sumac made notable appearances in two films, *Secret of the Incas* (1954) and *Omar Khayyam* (1957). Although her popularity declined after the early 1960s, she continued to perform. The release of a 1992 documentary, *Yma Sumac: Hollywood's Inca Princess,* helped revive interest in her music, and many of her albums were

Folk singer Yma Sumac

Tom Kelley/Getty Images

subsequently reissued. She was awarded the Orden del Sol, Peru's highest honour for achievement, in 2006.

Svensson, Esbjörn, Swedish jazz pianist (b. April 16, 1964, Västeras, Swed.—d. June 14, 2008, off the coast near Stockholm, Swed.), led the jazz group the Esbjörn Svensson Trio (better known as e.s.t.) and was twice voted Swedish Jazz Musician of the Year (1995 and 1996). As a child Svensson took lessons in classical piano, and he later studied at the Royal College of Music in Stockholm and at Stockholm University, graduating with a degree in music. He played with bands specializing in various genres, including jazz, pop, rock, and funk, before joining (1993) drummer and childhood friend Magnus Öström and bassist Dan Berglund to form e.s.t. The group played jazz fused with other musical genres, ranging from classical to funk. Because of its unique sound, e.s.t. appealed to a diverse audience, especially younger fans unaccustomed to listening to jazz. The group produced 12 albums, first earning international acclaim with *From Gagarin's Point of View* (1999). The trio was named best international artist at the 2003 BBC Jazz Awards and garnered numerous other awards, including the Guinness Jazz in Europe Award for its album *Strange Place for Snow* (2002) and several Swedish Grammi Awards.

Miguel Vidal—Reuters/Landov

Swedish jazz pianist Esbjörn Svensson

Takarli, Fu'ad al-, Iraqi jurist and writer (b. 1927, Baghdad, Iraq—d. Feb. 11, 2008, Amman, Jordan), was regarded as one of the best Iraqi writers of his generation. His first short story, "Al-'Uyun al-khudr" (published 1952) won him attention, as did his first short-story collection, *Al-Wajh al-akhar* (1960; "The Green Eyes"), which dealt with male-female relations in a patriarchal society. His first novel, *Al-Raj' al-ba'id* (1980; *The Long Way Back*, 2001), regarded by many as a masterpiece of Arabic literature, described life in Iraq during the last days of the regime of 'Abd al-Karim Qasim through the eyes of a family in Baghdad. Takarli spent many years working at the Iraqi Ministry of Justice, becoming a judge in 1956 and rising to the head of the Court of Appeals in Baghdad; he later emigrated from the country.

Teicher, Lou (LOUIS MILTON TEICHER), American pianist (b. Aug. 24, 1924, Wilkes-Barre, Pa.—d. Aug. 3, 2008, Highlands, N.C.), performed in the 1960s with pianist Arthur Ferrante, and the two (billed as Ferrante & Teicher) became a sensation with their florid renditions on twin pianos of the theme songs from such films as *The Apartment*, *Exodus*, *West Side Story* ("Tonight"), and *Midnight Cowboy*. Teicher and Ferrante both attended the Juilliard School of Music, New York City, and later joined its faculty. In 1947 they began a partnership, but their repertoire was limited to classical music and some experimental works until they moved with producer Don Costa from ABC Records to United Artists, which had interests in film. Costa offered them the score from the motion picture *The Apartment*, and the two became audience favourites with their lush touches at the keyboards. During their 50-year association, they toured widely and recorded dozens of singles and more than 150 albums; they sold more than 88 million records.

Teitelboim, Volodia (VALENTÍN TEITELBOIM VOLOSKY), Chilean writer and activist (b. March 17, 1916, Chillán, Chile—d. Jan. 31, 2008, Santiago, Chile), exerted an extraordinary influence on Chilean life as a leading writer, literary critic, and member of the Politburo of the Chilean Communist Party and a founder of the CCP's daily newspaper, *El Siglo*. When Teitelboim published (with Eduardo Anguita) his first literary offering, *Antología de poesía chilena nueva* (1935), the anthology came under criticism because it did not include work by Gabriela Mistral, who later won the 1945 Nobel Prize for Literature. During the 1930s Teitelboim and poet Pablo Neruda (1971 Nobel literature laureate), who were fierce literary rivals but friends, persuaded Chilean Pres. Pedro Aguirre Cerda to accept some 2,400 Spanish Civil War refugees fleeing persecution from Gen. Francisco Franco. Teitelboim's activism resulted in numerous arrests during the 1940s and '50s. He was a key figure in the coalition government of Pres. Salvador Allende, who in 1970 became the first Socialist leader of the country. During the 1973 military coup in which Allende was toppled, Teitelboim was overseas, and he spent the next 17 years in exile in the Soviet Union, where he launched the twice-weekly broadcast *Escucha, Chile*, a radio program in which he derided the censorship and campaign of terror instituted by Chilean leader Gen. Augusto Pinochet. Teitelboim also founded and directed *Araucaria de Chile*, a vehicle for Chilean intellectuals living abroad. He secretly returned to Chile in 1987, and the following year he was elevated to secretary-general of the CCP, a post he held until 1994. In addition, Teitelboim founded (1954) the literary journal *Aurora*, and he turned out essays, biographies (of Chilean poets Neruda, Mistral, and Vicente Huidobro), political books, and a four-volume autobiography, *Antes del olvido* (1997–2004). In 2002 Teitelboim was awarded Chile's National Literature Prize.

Templeton, Sir John Marks, American-born British investor, mutual fund manager, and philanthropist (b. Nov. 29, 1912, Winchester, Tenn.—d. July 8, 2008, Nassau, Bahamas), was noted for his focus on global stock markets rather than shares in American companies and for his emphasis on shrewd contrarian investing, buying out-of-favour stocks at what he called "the point of maximum pessimism." Templeton's success as an investor and mutual fund manager brought him fame

and wealth, which he used to establish (1972) the Templeton Prize for Progress in Religion (from 2003 the Templeton Prize for Progress Toward Research or Discoveries About Spiritual Realities), to be awarded annually to a living person who demonstrated "extraordinary originality in advancing humankind's understanding of God and/or spirituality," and later (1987) the John Templeton Foundation, which awarded some $70 million per year for research in the areas of science, religion, character development, and freedom. After working his way through Yale University (B.A., 1934), Templeton studied law at Balliol College, Oxford (M.A., 1936), on a Rhodes scholarship. He took a job on Wall Street in 1937, and two years later he borrowed $10,000 to buy stocks selling for less than $1 per share. After turning a profit on 100 of the 104 companies in which he invested, Templeton founded (1940) his own investment firm and then started (1954) Templeton Growth Fund, a global stock fund. He sold the Templeton fund group in 1992 to concentrate on the foundation, from which he stepped down as chairman in 2006. He also served for 42 years (12 as chairman) on the board of Princeton Theological Seminary, retiring in 1994. Templeton, who took British citizenship in 1968, was knighted in 1987.

Tendulkar, Vijay Dhondopant, Indian playwright and screenwriter (b. Jan. 6, 1928, Kohalpur, Maharashtra state, British India—d. May 19, 2008, Pune, India), wrote more than 30 full-length Marathi-language plays and numerous one-act plays, short stories, and movie scripts about controversial social themes, including violence, poverty, women's rights, and corruption. Some of Tendulkar's most famous plays include *Shantata! Court Chalu Ahe* (1967; "Silence! The Court Is in Session") and *Sakharam Binder* (1971). *Ghashiram Kotwal* (1972; "Ghashiram the Constable") was recognized as one of the longest-running plays in the world, with more than 6,000 performances staged internationally. Tendulkar began his career writing for newspapers and had a daily column in the *Maharashtra Times*. It was the play *Shrimant* (1956; "Affluent"), however, that made him a household name. In addition to his plays, Tendulkar wrote screenplays in both Marathi and Hindi. His script for *Manthan* (1976) won the National Film Award for best screenplay; for his literary accomplishments, Tendulkar received (1984) the Padma Bhushan award, one of India's highest civilian honours. In 1998 he won the lifetime contribution award from the Sangeet Natak Akademi Fellowship.

Terkel, Studs (LOUIS TERKEL), American author and oral historian (b. May 16, 1912, New York, N.Y.—d. Oct. 31, 2008, Chicago, Ill.), chronicled the lives of Americans from the Great Depression to the early 21st century. Terkel moved at age nine with his family to Chicago, where his parents ran a rooming house that brought him into contact with the wide range of working-class people who would later inspire his early oral-history collections. After Terkel finished his schooling at the University of Chicago Law School, he failed his first bar examination and decided not to pursue a career in law. In the 1930s, while holding down a job with the Works Progress Administration (WPA) Federal Writers' Project, he embarked on a career as a radio actor, usually playing the tough-talking villain, and adopted his lifelong nickname, "Studs," from Chicago-born author James T. Farrell's *Studs Lonigan* trilogy. Terkel's acting jobs led to other radio spots, including news commentator, sportscaster, and disc jockey. In 1945 he began his long association with Chicago radio by inaugurating *The Wax Museum*, a WENR program that showcased his knack for engaging people in impromptu interviews. *Studs' Place*, Terkel's nationally broadcast television show (1949–52), comprised songs and stories and used a fictional bar as its backdrop. Its cancellation was due to Terkel's leftist leanings, which got him blacklisted in the early 1950s. He joined fine arts radio station WFMT in 1952 with a daily talk show that ran until Jan. 1, 1998. Though the program was originally intended as a forum for music, Terkel's famous interviews came to dominate his broadcasts. In the late 1960s Terkel began to use a tape recorder to chronicle his conversations with people outside his radio show. In 1967 he published the best-selling *Division Street: America*, a book consisting of 70 conversations he had recorded with people in the Chicago area. He gained a wider audience with *Hard Times: An Oral History of the Great Depression* (1970), *Working: People Talk About What They Do All Day and How They Feel About What They Do* (1974), and *American Dreams, Lost and Found* (1980). *Working* was made into a stage musical. Terkel won a Pulitzer Prize for *"The Good War": An Oral History of World War II* (1984). In 1992 Terkel published the daring *Race: How Blacks and Whites Think and Feel About the American Obsession*, which exposed a deep sense of disenchantment and even resentment among the interviewees. His other works include *Will the Circle Be Unbroken?: Reflections on Death, Rebirth, and Hunger for a Faith* (2001); *And They All Sang: Reflections of an Eclectic Disc Jockey* (2005), which gathered Terkel's WFMT interviews with musicians; and two volumes of autobiography, *Talking to Myself: A Memoir of My Times* (1977) and *Touch and Go* (2007). *P.S.: Further Thoughts from a Lifetime of Listening* (2008) was published posthumously.

Tillion, Germaine Marie Rosine, French ethnologist and World War II Resistance activist (b. May 30, 1907, Allègre, France—d. April 19, 2008, Saint-Mandé, France), was one of only about 3,500 survivors liberated in April 1945 from Ravensbrück women's concentration camp near Berlin; it was estimated that at least 50,000 women (including Tillion's mother) and children died at Ravensbrück, in addition to thousands more who were transported from there to other death camps. Arrested in 1942 for her Resistance activities, Tillion was interned (1943–45) in Ravensbrück but managed to hide detailed notebooks of her observations on life in the camp. She later used the surviving notebooks as the basis for a satiric operetta, *Le Verfügbar aux Enfers* ("The Campworker Goes to Hell"), but she refused to allow it to be performed until 2007, soon after her 100th birthday. After graduating (1932) with a degree in anthropology from the Ethnology Institute, Tillion traveled extensively throughout Algeria (researching the Amazigh [Berber] people and the territory's relationship with France) until 1940, when she returned to Paris and joined a Resistance cell based at the Musée de l'Homme. In the 1950s Tillion, who vocally opposed the use of torture in Algeria, unsuccessfully sought to negotiate better relations between the independence-minded colony and France.

Truman, Margaret (MARY MARGARET TRUMAN DANIEL), American writer (b. Feb. 17, 1924, Independence, Mo.—d. Jan. 29, 2008, Chicago, Ill.), was the illustrious only daughter of U.S. Pres. Harry S. Truman and first lady Bess Truman and carved a literary niche for

herself as her parents' biographer (*Harry S. Truman* [1973] and *Bess W. Truman* [1986]) and as the author of a number of best-selling mysteries. Her first book was the autobiographical *Souvenir: Margaret Truman's Own Story* (1956), and her inaugural offering in her Capital Crimes series was *Murder in the White House* (1980). Subsequent titles were set in such locations as the Supreme Court, the Smithsonian Institution, the CIA, the National Gallery of Art, the Pentagon, and the opera. After a brief singing career, Truman turned to radio, where she hosted her own nationally syndicated interview show. She also appeared onstage and on television. In 1956, after she married newspaperman E. Clifton Daniel, Jr., Truman retreated from the show-business spotlight. Her other nonfiction works include *White House Pets* (1969) and *First Ladies* (1995).

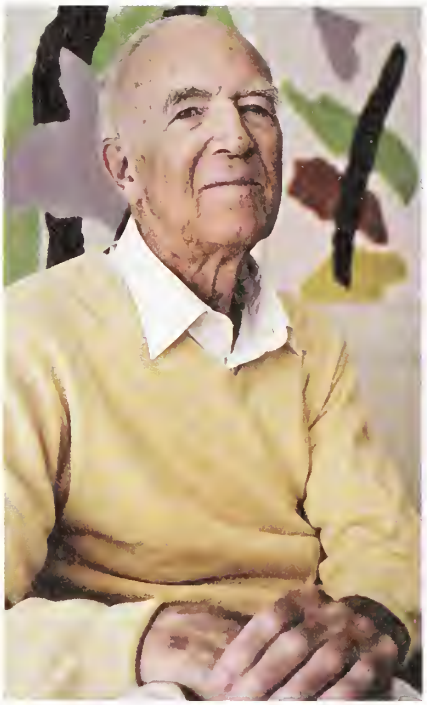
Tucker, Ira B., American gospel singer (b. May 17, 1925, Spartanburg, S.C.—d. June 24, 2008, Philadelphia, Pa.), was for seven decades the arresting lead singer of the a cappella soul-gospel group the Dixie Hummingbirds, who enjoyed a flourishing career and influenced such performers as James Brown and the Temptations. Tucker, who joined the Hummingbirds in the late 1930s, was known for his passionate dancing, throaty screams, and skill at "trickeration," in which one singer would pick up a note where another left off. He also composed several of the group's most successful songs, including "Christian's Automobile," "Who Are We?," and "This Evening." Although the group edged into the secular music scene as backup vocalists for Paul Simon's 1973 hit song "Loves Me like a Rock" (and received a Grammy Award that same year for their own version of the song), the Dixie Hummingbirds remained primarily a gospel group. They were inducted into the Grammy Hall of Fame in 2000 for their 1946 rendition of "Amazing Grace."

Tuwhare, Hone, Maori poet (b. Oct. 21, 1922, Kaikohe, Northland, N.Z.—d. Jan. 16, 2008, Dunedin, N.Z.), made an international impression and became the first widely celebrated Maori poet with his initial collection, *No Ordinary Sun* (1964). Tuwhare's poetry, written in English, has a conversational tone and incorporates both Maori and biblical rhythms; the subjects range from the political to the personal and often powerfully evoke the beauties of nature. *No Ordinary Sun* won Tuwhare a fellowship at Otago University in 1969. He published *Come Rain Hail* (1970) and *Sap-wood and Milk* (1972) and then helped organize the first Maori Writers and Artists Conference (1973). During the 1970s he was able to give up his job as a railroad boilermaker and devote himself to poetry. Of the many verse collections that followed, *Shape-Shifter* (1997) and *Piggy-Back Moon* (2001) won Montana New Zealand Book Awards. Tuwhare was poet laureate of New Zealand in 1999–2000, and in 2003 he, together with novelist Janet Frame and historian Michael King, received the inaugural Prime Minister's Awards for Literary Achievement.

Upshaw, Gene, American football player (b. Aug. 15, 1945, Robstown, Texas—d. Aug. 20, 2008, near Lake Tahoe, California), was a standout offensive lineman for professional football's Oakland Raiders, helping to lead the team to three Super Bowls (1968, 1977, 1981). After his retirement as a player, Upshaw served as the executive director (1983–2008) of the National Football League Players Association; he was particularly known for his leadership of the association through the 1987 players' strike and for his efforts in the negotiations that subsequently brought about the implementation of free agency and a salary cap. Upshaw played college football at Texas College of Arts and Industries (now Texas A&M University—Kingsville) and was drafted by the Raiders in 1967. One of the best left guards in the history of the sport, Upshaw started in 207 consecutive regular-season games between 1967 and 1981 and was selected to play in seven Pro Bowls (1968, 1972–77). He retired from the Raiders after the 1981 season and was inducted into the Pro Football Hall of Fame in 1987.

Utzon, Jørn, Danish architect (b. April 9, 1918, Copenhagen, Den.—d. Nov. 29, 2008, Copenhagen), was best known for his dynamic design for the iconic Sydney Opera House, which in 2007 was designated a UNESCO World Heritage site. Utzon studied (1937–42) at the Copenhagen School of Architecture and worked under Swedish architect Gunnar Asplund (1942–46) and Finnish architect and designer Alvar Aalto (1946) before founding (1950) his own firm in Copenhagen. Among Utzon's important early works were two houses in Denmark, his own at Hellebæk

Jens Astrup—AFP/Getty Images



Architect Jørn Utzon

(1952) and another at Holte (1952–53). In 1957 Utzon won the design competition for a new opera house in Sydney. Construction, however, posed a variety of problems, many resulting from the innovative nature of the design, a series of sail-like roofs. He resigned from the project in 1966, but construction continued under other architects until it opened in September 1973. In 1999 Utzon agreed to oversee an improvement project. He redesigned the reception hall—the only interior space that had been true to his original plans—and it opened in 2004 as the Utzon Room. Two years later a new colonnade was completed, marking the first alteration to the Opera House's exterior since 1973. Utzon was also noted for two housing estates, one near Helsingør (1956) and another in Fredensborg in northern Sjælland (1957–60), and for the Bagsværd Church (1976) in suburban Copenhagen, which has the appearance of clustered farm buildings. Utzon was awarded the Gold Medal of the Royal Institute of British Architects (1978) and the Pritzker Architectural Prize (2003).

Vo Van Kiet (PHAN VAN HOA), Vietnamese politician (b. Nov. 23, 1922, Trung Hiep, French Indochina [now in Vietnam]—d. June 11, 2008, Singapore), as Vietnam's prime minister (1991–97), strongly advocated *doi moi*

Charles Dharapak/AP

Vietnamese politician Vo Van Kiet

(renovation), the economic plan that encouraged entrepreneurial initiative and foreign investment. Under this policy he pushed for free-market reform and helped free the country from its economic isolation. Kiet fought in the French Indochina War as a member (1945–54) of the Viet Minh and later in the Vietnam War with the Viet Cong (1958–75). As Communist Party chief (1976–82) of Ho Chi Minh City, Kiet was charged with instituting socialist reforms in the city, but he favoured more gradual change and supported free enterprise. The party replaced him (1982), and he was transferred to Hanoi. In spite of his disagreements with the ruling Communist Party, Kiet was elected prime minister in 1991. During his time in office, he expanded diplomatic ties with foreign countries, and in 1995 he restored diplomatic relations between Vietnam and the U.S. Kiet also encouraged the Hanoi government to reconcile with dissidents, to listen to the opinions of opponents, and to support a free press. Even after resigning from office in 1997, Kiet remained a vocal critic of the Communist Party and its shortcomings. He retired from his position as adviser to the party's Central Committee in 2001.

von Bülow, Sunny (MARTHA SHARP CRAWFORD), American heiress (b. Sept. 1, 1931, Manassas, Va.—d. Dec. 6, 2008, New York, N.Y.), spent nearly 28 years in a coma after being found unconscious in a bathroom of her Newport, R.I., mansion on Dec. 21, 1980; in two sensational trials, her second husband, Claus von Bülow, was initially convicted but then acquitted of having attempted to murder her by injecting her with drugs. Sunny, as she was known from childhood, was the daughter of George Crawford, the multimillionaire founder of the Columbia Gas and Electric Co. Her first marriage, to Prince Alfred von Auersperg, ended in divorce in 1965. She married von Bülow the following year.

Wallace, David Foster, American novelist, short-story writer, and essayist (b. Feb. 21, 1961, Ithaca, N.Y.—found dead Sept. 12, 2008, Claremont, Calif.), produced dense works that provide a dark, often satiric analysis of American culture. Wallace received a B.A. (1985) from Amherst (Mass.) College. He was completing a master's degree in creative writing at the University of Arizona when his highly regarded debut novel, *The Broom of the System* (1987), was published. He later taught creative writing at Illinois State University and at Pomona College, Claremont. Wallace received a MacArthur Foundation "genius" grant in 1997. He became best known for his second novel, *Infinite Jest* (1996), a massive, multilayered novel that features a sweeping cast of postmodern characters who range from recovering alcoholics and foreign statesmen to residents of a halfway house and high-school tennis stars. Presenting a futuristic vision of a world in which advertising has become omnipresent, *Infinite Jest* takes place during calendar years that have been named by companies that purchased the rights to promote their products. Wallace's short stories are collected in *Girl with Curious Hair* (1989), *Brief Interviews with Hideous Men* (1999), and *Oblivion* (2004). His essay collections include *A Supposedly Fun Thing I'll Never Do Again* (1997) and *Consider the Lobster, and Other Essays* (2005). *Everything and More: A Compact History of Infinity* (2003) is a survey of the mathematical concept of infinity. Wallace's death was an apparent suicide.

Wang Yung-ching, Taiwanese industrialist (b. Jan. 18, 1917, Hsin-tien, Taiwan—d. Oct. 15, 2008, Livingston, N.J.), was founder and chairman of the Formosa Plastics Group, Taiwan's largest manufacturing conglomerate. Wang established the group's flagship business, the Formosa Plastics Corp., in 1954 and built the company into one of the world's largest suppliers of polyvinyl chloride (PVC). Dubbed the "god of management" for his business acumen, Wang successfully expanded the group before stepping down as chairman in 2006. At the time of his death, *Forbes* magazine ranked him as the second richest person in Taiwan, with a fortune estimated at $6.8 billion.

American writer David Foster Wallace

Steve Liss—Time Life Pictures/Getty Images

Weller, Thomas Huckle, American physician and virologist (b. June 15, 1915, Ann Arbor, Mich.—d. Aug. 23, 2008, Needham, Mass.), was in 1954 the corecipient (with John Enders and Frederick Robbins) of the Nobel Prize for Physiology or Medicine for the successful cultivation of poliomyelitis virus in tissue cultures. This breakthrough, which was announced to the public in 1949, made it possible to study the virus "in the test tube"—a procedure that led to the development of polio vaccines. After his education at the University of Michigan at Ann Arbor (A.B., 1936; M.S., 1937) and Harvard University (M.D., 1940), Weller became a teaching fellow (1940–42) at the Harvard Medical School; he served in the U.S. Army Medical Corps during World War II. Weller joined (1947) Enders's infectious diseases laboratory at the Children's Medical Center, Boston, and served (1949–55) as assistant director. He worked with Enders and Robbins and soon achieved the propagation of poliomyelitis virus in laboratory suspensions of human embryonic skin and muscle tissue. Weller was also the first (with the American physician Franklin Neva) to achieve the laboratory propagation of rubella (German measles) virus and to isolate chicken pox virus from human cell cultures. In 1954 Weller became professor of tropical public health at Harvard University, and he also served (1966–81) as director of the Center for the Prevention of Infectious Diseases at the Harvard University School of Public Health.

Westlake, Donald Edwin, American writer (b. July 12, 1933, New York, N.Y.—d. Dec. 31, 2008, San Tancho, Mex.), attracted a wide readership as well as great critical acclaim with his stylish crime novels, which numbered more than 100. Among the author's best-known characters was the hapless thief John Dortmunder, the protagonist of such novels as *The Hot Rock* (1970), *Bank Shot* (1972), *Why Me?* (1983), and *What's So Funny?* (2007). Writing as Richard Stark—one of numerous pseudonyms Westlake employed during his career—he also created a popular series of novels featuring another thief, a ruthless criminal known simply as Parker; among many other titles in the Parker series are *The Hunter* (1962), *The Outfit* (1963), *The Score* (1964), and *Slayground* (1971). Westlake earned an Academy Award nomination in 1991 for his screenplay for the film *The Grifters* (1990). He won the Mystery Writers of America's Edgar Allan Poe Award three times, and the organization bestowed on him the title Grand Master—its highest honour—in 1993.

Wexler, Jerry (GERALD WEXLER), American record producer and music journalist (b. Jan. 10, 1917, New York, N.Y.—d. Aug. 15, 2008, Sarasota, Fla.), coined the term *rhythm and blues* (R&B) in 1949 while working as a reporter for *Billboard* magazine; four years later he became an executive for Atlantic Records and helped transform it from a relatively small independent label to a major record company. Throughout the 1950s and '60s, Wexler enthusiastically championed R&B music while guiding the careers of such classic performers as Ray Charles, Wilson Pickett, and Aretha Franklin. He also added a number of rock acts to the label's roster of artists, most notably signing (1969) the British group Led Zeppelin. After leaving Atlantic in 1975, he remained active as an independent producer, supervising Bob Dylan's Christian-themed recordings *Slow Train Coming* (1979) and *Saved* (1980) as well as albums by Dusty Springfield, Carlos Santana, Linda Ronstadt, and Dire Straits, among others. Wexler was inducted into the Rock and Roll Hall of Fame in 1987. A memoir, *Rhythm and the Blues,* co-written with David Ritz, appeared in 1993.

Wharton, William (ALBERT WILLIAM DU AIME), American novelist and painter (b. Nov. 7, 1925, Philadelphia, Pa.—d. Oct. 29, 2008, Encinitas, Calif.), was best known for his innovative first novel, *Birdy* (1979; filmed 1984), which blended autobiographical elements and fantastic characters and told the story of a man with a lifelong obsession with canaries. After sustaining serious wounds during service in World War II, Wharton (he used the pseudonym William Wharton throughout his writing career) studied painting and psychology at the University of California, Los Angeles. He then spent more than a decade teaching art in the public school system of Los Angeles. He and his wife and children began traveling in Europe in 1958 and after several years settled in Paris. The family divided time between several residences, including a houseboat, and subsisted on profits from his Impressionist-style paintings, which Wharton sold on the street. His second novel, *Dad* (1981; filmed 1989), chronicled the title character's life through the memories of his son and grandson as they care for him in his old age. *A Midnight Clear* (1982; filmed 1992) mined Wharton's experiences in World War II, while *Scumbler* (1984) fantastically embroidered upon his experiences as an artist in Paris. Later novels—including *Pride* (1985), *Tidings* (1987), and *Last Lovers* (1991)—drew less attention than his early work.

Wheeler, John Archibald, American physicist (b. July 9, 1911, Jacksonville, Fla.—d. April 13, 2008, Hightstown, N.J.), was the first American involved in the theoretical development of the atomic bomb. He also originated a novel approach to the unified field theory and popularized the term *black hole.* Wheeler was educated at Baltimore (Md.) City College and Johns Hopkins University, Baltimore (Ph.D., 1933). He also studied with Niels Bohr at the University of Copenhagen. He and Bohr wrote "The Mechanism of Nuclear Fission" (1939), a seminal treatise that singled out uranium-235 for use in the development of an atomic bomb. Wheeler taught physics at the University of North Carolina before joining (1938) the faculty of Princeton University. He served (1966–76) as Joseph Henry Professor at Princeton before his appointment in 1976 as professor of physics at the University of Texas at Austin, where from 1979 he held the Ashbel Smith chair of physics and in 1981 became Blumberg Professor of Physics. Wheeler retired as professor emeritus in 1986. He helped develop (1949–51) the hydrogen bomb at Los Alamos, N.M., and at Princeton he was director (1951–53) of Project Matterhorn. For his work on nuclear fission and the technology of plutonium production, he was given (1968) the Fermi Award by the U.S. Atomic Energy Commission. From 1969 to 1976 he served as a member of the U.S. General Advisory Committee on Arms Control and Disarmament. In later years he turned his attention to the study of unified field theory, the space-time continuum, and gravitation. He was awarded the Niels Bohr International Gold Medal in 1982.

Whitney, Phyllis Ayame, American author (b. Sept. 9, 1903, Yokohama, Japan—d. Feb. 8, 2008, Faber, Va.), wrote juvenile fiction that consists primarily of serious accounts of growing up and of mystery-adventures; her adult fiction combines romance and mystery to great effect. In 1941 Whitney published her first novel, *A Place*

for Ann, and her later works include *Willow Hill* (1947), *Linda's Homecoming* (1950), and *Secret of the Stone Face* (1977). Two of her novels—*The Mystery of the Haunted Pool* (1960) and *The Mystery of the Hidden Hand* (1963)—won Edgar Allan Poe Awards from the Mystery Writers of America. *Emerald* (1983), *Dream of Orchids* (1985), and *The Ebony Swan* (1992) are among the 39 books she wrote for a mature audience. Her *Guide to Writing Fiction* appeared in 1982. Whitney was president of the Mystery Writers of America in 1975 and in 1988 received that organization's Grand Master Award for lifetime achievement.

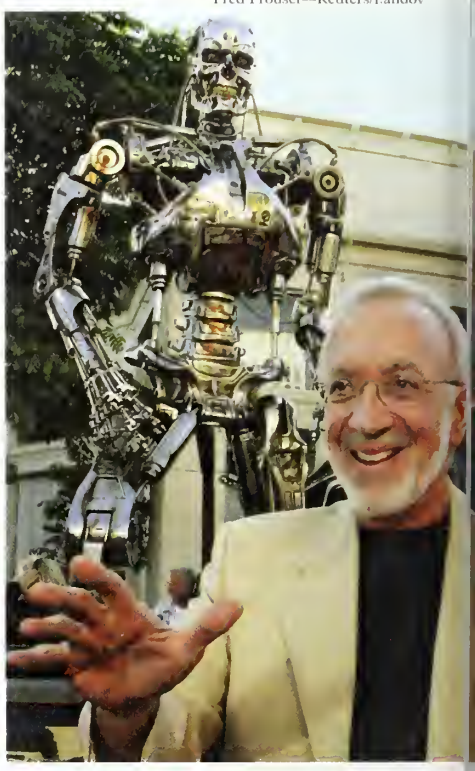
Widmark, Richard, American actor (b. Dec. 26, 1914, Sunrise, Minn.—d. March 24, 2008, Roxbury, Conn.), became an overnight Hollywood sensation following his film debut in *Kiss of Death* (1947), in which he portrayed a maniacal gangster who giggles as he ties up an older woman in a wheelchair and shoves her down a flight of stairs; the role earned him his only Academy Award nomination. Widmark subsequently won top billing in villainous roles in two thrillers, *Road House* (1948) and *The Street with No Name* (1948), but he assumed a nice-guy persona in *Panic in the Streets* (1950) as a doctor tracking down a pneumonic plague-infected man. Over his almost six-decade-long career, Widmark's roles ranged from sinister to heroic, but his characterizations were always tinged with a sense of cynicism. Other films include *No Way Out* (1950), *The Alamo* (1960), *Two Rode Together* (1961), *Cheyenne Autumn* (1964), *The Bedford Incident* (1964), and *Madigan* (1968). He reprised the latter role in the television series *Madigan* (1972–73). Widmark was later the recipient (1990) of the D.W. Griffith Career Achievement Award.

Wijetunga, Dingiri Banda, Sri Lankan politician (b. Feb. 15, 1916, Polgahanga, Ceylon [now Sri Lanka]—d. Sept. 21, 2008, Kandy, Sri Lanka), brought stability to Sri Lanka as the country's head of state (May 7, 1993–Nov. 12, 1994) during the crucial period immediately following the assassination on May 1, 1993, of Pres. Ranasinghe Premadasa. Wijetunga joined the United National Party (UNP) in 1946 and twice (1956, 1960) ran unsuccessfully for Parliament before being elected in 1965. He lost his seat in 1970 but returned in 1977 as part of a UNP electoral majority. Wijetunga held several ministerial portfolios and served a stint (1988–89) as governor of North Western Province. On March 3, 1989, Premadasa unexpectedly appointed him prime minister. This put Wijetunga in position to take over as acting president upon Premadasa's death, and Parliament quickly and unanimously elected him to complete the remainder of Premadasa's term. The unassuming Wijetunga eased restrictions and introduced economic and social reforms; he retired when the UNP lost the subsequent parliamentary and presidential elections in 1994.

Wilson, Sallie, American ballerina (b. April 18, 1932, Fort Worth, Texas—d. April 27, 2008, New York, N.Y.), as a leading dancer with American Ballet Theatre, had an intense stage presence that, coupled with her fine musicality and technique, gained her renown during the 1960s and '70s as one of the best American dramatic ballerinas. She was especially admired for her performances in the works of choreographer Antony Tudor—notably *Pillar of Fire*, *Jardin aux lilas*, *Dim Lustre*, and *Dark Elegies*—and in Agnes de Mille's interpretation of the story of Lizzie Borden, *Fall River Legend*. Most recently, Wilson had served as ballet mistress for the New York Theatre Ballet.

Winston, Stan (STANLEY WINSTON), American special-effects artist (b. April 7, 1946, Arlington, Va.—d. June 15, 2008, Malibu, Calif.), earned praise—and 10 Oscar nominations—for his adeptness at combining makeup, animatronic creatures, and computer-generated images to produce incredibly realistic on-screen special effects. Winston won Academy Awards for *Aliens* (1986; for visual effects), *Terminator 2: Judgment Day* (1991; one for makeup and another for visual effects), and *Jurassic Park* (1993; for visual effects); captured television Emmy Awards for his makeup designs for *Gargoyles* (1972) and *The Autobiography of Miss Jane Pittman* (1974); and in 2001 was the first special-effects artist to receive a star on the Hollywood Walk of Fame. Winston's other memorable creations included the infamous hands in *Edward Scissorhands* (1990) and the armoured suits for *Iron Man* (2008). He also directed two movies, the horror film *Pumpkinhead* (1988) and *A Gnome Named Gnorm* (1990). After performing stand-up comedy for a short time, he began an apprenticeship at the Walt Disney Studios as a makeup artist. In 1972 he opened the Stan Winston Studio, which was initially headquartered in his garage. In 2001 he established Stan Winston Creatures to design toys based on the characters from *Creature Features*, an HBO cable TV series that he produced.

Fred Prouser—Reuters/Landov



Special-effects artist Stan Winston

Woods, Abraham Lincoln, Jr., American civil rights activist (b. Oct. 7, 1928, Birmingham, Ala.—d. Nov. 7, 2008, Birmingham), led the protesters who staged (1963) the first sit-ins at a whites-only lunch counter in downtown Birmingham, a landmark event in the fight for civil rights; authorities blasted hundreds of black demonstrators with fire hoses, set police dogs upon them, and imprisoned them. Woods was jailed along with the Rev. Martin Luther King, Jr. (a friend from his Morehouse College days), who wrote the impassioned "Letter from Birmingham Jail," in which King justified acts of civil disobedience to protest discriminatory laws. While serving (1990–2006) as president of the Birmingham chapter of the Southern Christian Leadership Conference, Woods again took a leading role, this time in organizing (1990) the demonstrations against the whites-only Shoal Creek Golf and Country Club, which was to

host the Professional Golfers' Association championship that year. Woods's actions prompted the withdrawal of major advertising sponsors for the televised event. In response, the club decided to accept blacks as members. Woods, the pastor of St. Joseph Baptist Church, was also on the scene on Sept. 15, 1963, when a dynamite blast claimed the lives of four black girls at the nearby 16th Street Baptist Church. He was instrumental years later in fighting for a reinvestigation of that bombing (only one Ku Klux Klansman [Robert E. Chambliss] had been indicted in 1977). Owing to Woods's effort, two additional Klansmen were convicted—Thomas E. Blanton, Jr. (in 2001), and Bobby Frank Cherry (in 2002).

Wright, Rick (RICHARD WILLIAM WRIGHT), British singer-songwriter and keyboardist (b. July 28, 1943, Pinner, Middlesex, Eng.—d. Sept. 15, 2008, London, Eng.), was a founding member of the rock group Pink Floyd; his jazz-infused, atmospheric keyboard work became a central feature of the group's improvisational, psychedelic sound. Wright studied (1962–64) at London's Regent Street Polytechnic College, where he studied architecture, and then enrolled (1964) at the London College of Music while teaching himself jazz piano and keyboard. By 1965 he had joined with three friends to form a band—drummer Nick Mason, guitarist Roger Waters, and Syd Barrett, the lead guitarist and chief songwriter who dubbed the group Pink Floyd. Their dramatic debut album, *The Piper at the Gates of Dawn* (1967), brought them immediate success, but excessive use of LSD and other drugs pushed Barrett into a mental breakdown. After Barrett's departure in 1968, Pink Floyd released several acclaimed albums, notably *The Dark Side of the Moon* (1973)—for which Wright composed several songs, including "Time," "Us and Them," and "The Great Gig in the Sky"—and *Wish You Were Here* (1975). Wright had a falling out with Waters after *The Wall* (1979) and left to pursue a solo career, though he performed on all but one of the band's later albums. He formally rejoined Pink Floyd for a 1994 reunion tour and for the London Live 8 concert in 2005.

Xiao Ke, Chinese military official and writer (b. July 14, 1907, Jiahe county, Hunan province, China—d. Oct. 24, 2008, Beijing, China), was the last surviving military leader of the Long March (1934–36), the epic 10,000-km (6,000-mi) trek of the Chinese communists into northwestern China. Xiao was the commander of the Red Army's Sixth Army group, which suffered the loss of some 6,000 of its 9,000 troops in an attack by Nationalist forces at the outset of the march. Xiao later served as Red Army field commander Lin Biao's chief of staff. Although named a general in 1955, Xiao was subsequently denounced by Mao Zedong and spent several years in rural exile before being rehabilitated in the 1970s. Xiao became a member of China's Central Military Commission and was a vice-chairman of the Fifth National Committee of the Chinese People's Political Consultative Conference. He was known for his opposition to the use of troops to suppress the pro-democracy demonstrations in Tiananmen Square in 1989—a position he refused to retract despite political pressure to do so. Xiao was also a notable writer; he received a Mao Dun Literature Prize in 1988 for his novel *Bloody Heaven*.

Xie Jin, Chinese film director (b. Nov. 21, 1923, Shaoxing, China—found Oct. 18, 2008, Shangyu, China), examined the consequences of China's Cultural Revolution (1966–76) in a series of epic motion pictures, including *The Legend of Tianyun Mountain* (1980), *The Herdsman* (1982), and, most notably, *Hibiscus Town* (1986). Xie embarked on a career in the film industry in the mid-1940s and first attracted international attention as the writer and director of *Two Stage Sisters* (1964). Denounced and forced to work as a manual labourer during the Cultural Revolution, he was eventually rehabilitated and went on to chronicle the lives of the era's victims in much of his later work. Among Xie's other films were *Garlands at the Foot of the Mountain* (1983), *The Last Aristocrats* (1989), and *The Opium War* (1997).

Chinese film director Xie Jin

Imaginechina/AP

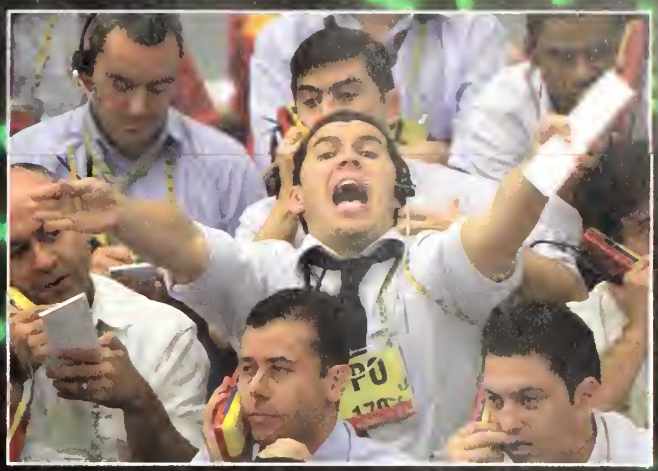
Yen, Vivian Wu, Chinese-born Taiwanese businesswoman (b. December 1913, Wujin, Jiangsu province, China—d. Aug. 9, 2008, Taipei, Taiwan), was the tenacious chairwoman of the Yulon Group, the largest auto manufacturer in Taiwan; she became known as the "Iron Lady" after taking the reins and successfully expanding the conglomerate following the death in 1981 of her husband, Yen Ching-ling. In the 1950s the couple founded the textile and auto companies that eventually formed the core of the conglomerate. For most of her career, Yen focused on managing the textile business, but she proved herself to be an innovative leader in the auto industry as well after the board of directors elected her to succeed her husband as chairperson. In 2007 Yen turned over the chairmanship to her son, Kenneth K.T. Yen.

Zhang Hanzhi, Chinese diplomat and tutor (b. 1935, Shanghai, China—d. Jan. 26, 2008, Beijing, China) provided private English lessons to Chairman Mao Zedong in 1963 but fell out of favour during the early years of the Cultural Revolution, when she was forced to abandon her studies at the Beijing Foreign Studies University. In 1970, however, Mao summoned her back to work as a diplomat for the Foreign Ministry, and the following year during U.S. Secretary of State Henry Kissinger's confidential trip to China, she interpreted for Prime Minister Zhou Enlai. Zhang also served as an interpreter for U.S. Pres. Richard Nixon during his visit to China in 1972 for the signing of the Shanghai Communiqué. After Mao's death in 1976, Zhang was accused of having close ties with his fourth wife, Jiang Qing, and the Gang of Four, who were held responsible for causing social upheavals during the Cultural Revolution; Zhang was held under house arrest until 1980.

2008 Special Reports

Sinking commodity prices spark frenzied activity (top) in the oil-options pit at the New York Mercantile Exchange in September. The effects of the financial crisis are felt worldwide. Traders (middle) huddle on the floor of the New York Stock Exchange, and an employee (bottom) at the Korea Stock Exchange monitors quotes in Seoul.

Photos: (background) Richard Drew/AP; (top) Chip East—Reuters/Landov; (middle) Richard Drew/AP; (bottom) Ahn Young-joon



As global markets decline precipitously in September and October, traders react to the economic meltdown (top left) at the Frankfurt (Ger.) Stock Exchange, (top right) at the Brazilian Mercantile and Futures Exchange in São Paulo, (middle) on the floor of the Indonesia Stock Exchange in Jakarta, and (bottom) at the Kuwait Stock Exchange in Kuwait City.

Photos: (top left) Alex Grimm—Reuters/Landov; (top right) Andre Penner/AP, (middle) Achmad Ibrahim/AP, (bottom) Xinhua/Landov

The Financial Crisis of 2008

by Joel Havemann

Signs advertising residential property for sale line a street in south London in April.

In 2008 the world economy faced its most dangerous crisis since the Great Depression of the 1930s. The contagion, which began in 2007 when sky-high home prices in the United States finally turned decisively downward, spread quickly, first to the entire U.S. financial sector and then to financial markets overseas. The casualties in the United States included a) the entire investment banking industry, b) the biggest insurance company, c) the two enterprises chartered by the government to facilitate mortgage lending, d) the largest mortgage lender, e) the largest savings and loan, and f) two of the largest commercial banks. The carnage was not limited to the financial sector, however, as companies that normally rely on credit suffered heavily. The American auto industry, which pleaded for a federal bailout, found itself at the edge of an abyss. Still more ominously, banks, trusting no one to pay them back, simply stopped making the loans that most businesses need to regulate their cash flows and without which they cannot do business. Share prices plunged throughout the world—the Dow Jones Industrial Average in the U.S. lost 33.8% of its value in 2008—and by the end of the year, a deep recession had enveloped most of the globe. In December the National Bureau of Economic Research, the private group recognized as the official arbiter of such things, determined that a recession had begun in the United States in December 2007, which made this already the third longest recession in the U.S. since World War II.

Each in its own way, economies abroad marched to the American drummer. By the end of the year, Germany, Japan, and China were locked in recession, as were many smaller countries. Many in Europe paid the price for having dabbled in American real estate securities. Japan and China largely avoided that pitfall, but their export-oriented manufacturers suffered as recessions in their major markets—the U.S. and Europe—cut deep into demand for their products. Less-developed countries likewise lost markets abroad, and their foreign investment, on which they had depended for growth capital, withered. With none of the biggest economies prospering, there was no obvious engine to pull the world out of its recession, and both government and private economists predicted a rough recovery.

Origins. How did a crisis in the American housing market threaten to drag down the entire global economy? It began with mortgage dealers who issued mortgages with terms unfavourable to borrowers, who were often families that did not qualify for ordinary home loans. Some of these so-called subprime mortgages carried low "teaser" interest rates in the early years that ballooned to double-digit rates in later years. Some included prepayment penalties that made it prohibitively expensive to refinance. These features were easy to miss for first-time home buyers, many of them unsophisticated in such matters, who were beguiled by

▲ 1/22/2008
Fed lowers its interest rate from 4.25% to 3.5%.

▼ 2/7/2008
Congress passes a fiscal stimulus bill to prevent recession. Bank of England (BOE) lowers its interest rate from 5.25% to 5%.

▲ 2/18/2008
U.K. nationalizes Northern Rock.

▼ 3/3/2008
Oil reaches $103.95 a barrel, breaking the record set in 1980, adjusted for inflation.

▲ 3/6/2008
News surfaces reporting that 7.9% of U.S. mortgages were in foreclosure or past due at year's end 2007.

Sang Tan/AP

the prospect that, no matter what their income or their ability to make a down payment, they could own a home.

Mortgage lenders did not merely hold the loans, content to receive a monthly check from the mortgage holder. Frequently they sold these loans to a bank or to Fannie Mae or Freddie Mac, two government-chartered institutions created to buy up mortgages and provide mortgage lenders with more money to lend. Fannie Mae and Freddie Mac might then sell the mortgages to investment banks that would bundle them with hundreds or thousands of others into a "mortgage-backed security" that would provide an income stream comprising the sum of all of the monthly mortgage payments. Then the security would be sliced into perhaps 1,000 smaller pieces that would be sold to investors, often misidentified as low-risk investments.

The insurance industry got into the game by trading in "credit default swaps"—in effect, insurance policies stipulating that, in return for a fee, the insurers would assume any losses caused by mortgage-holder defaults. What began as insurance, however, turned quickly into speculation as financial institutions bought or sold credit default swaps on assets that they did not own. As early as 2003, Warren Buffett, the renowned American investor and CEO of Berkshire Hathaway, called them "financial weapons of mass destruction." About $900 billion in credit was insured by these derivatives in 2001, but the total soared to an astounding $62 trillion by the beginning of 2008.

As long as housing prices kept rising, everyone profited. Mortgage holders with inadequate sources of regular income could borrow against their rising home equity. The agencies that rank securities according to their safety (which are paid by the issuers of those securities, not by the buyers) generally rated mortgage-backed securities relatively safe—they were not. When the housing bubble burst, more and more mortgage holders defaulted on their loans. At the end of September, about 3% of home loans were in the foreclosure process, an increase of 76% in just a year. Another 7% of homeowners with a mortgage were at least one month past due on their payments, up from 5.6% a year earlier. By 2008 the mild slump in housing prices that had begun in 2006 had become a free fall in some places. What ensued was a crisis in confidence: a classic case of what happens in a market economy when the players—from giant companies to individual investors—do not trust one another or the institutions that they have built.

In December, as the global financial crisis deepens, a store in New York City advertises that it is going out of business.

The Crisis Unfolds. The first major institution to go under was Countrywide Financial Corp., the largest American mortgage lender. Bank of America agreed in January 2008 to terms for completing its purchase of the California-based Countrywide. With large shares of Countrywide's mortgages delinquent, Bank of America was able to buy it for $4 billion on top of the $2 billion stake that it had acquired the previous August—a fraction of Countrywide's recent market value.

The next victim, in March, was the Wall Street investment house Bear Stearns, which had a thick portfolio of mortgage-based securities. As the value of those securities plummeted, Bear Stearns was rescued from bankruptcy by JPMorgan Chase, which agreed to buy it for a bargain-basement price of $10 per share (about $1.2 billion), and the Federal Reserve (Fed), which agreed to absorb up to $30 billion of Bear's declining assets.

If the Fed's involvement in the bailout of Bear Stearns left any doubt that even a conservative Republican government—such as that of U.S. Pres. George W. Bush—could find it necessary to insert itself into private enterprise, the rescue of Fannie Mae and Freddie Mac in September laid that uncertainty to rest. The two private mortgage companies, which historically enjoyed a slight edge in the marketplace by virtue of their congressional charters, held or guaranteed about half of the country's mortgages. With the rush of defaults of subprime mortgages, Fannie and Freddie suffered the same losses as other mortgage companies, only worse. The U.S. Department of the Treasury, unwilling to abide the turmoil that the failure of Fannie and Freddie would entail, seized control of them on September 7, replaced their CEOs, and promised each up to $100 billion in capital if the money became necessary to balance their books.

The month's upheavals were not over. With Bear Stearns disposed of, the

▲ 3/16/2008
JPMorgan Chase will buy Bear Stearns for $2 a share. Fed cuts its rate to financial institutions from 3.50% to 3.25%.

▼ 6/14/2008
G-8 countries declare the global economy is imperiled by slowing growth and rising prices.

▲ 7/1/2008
DJIA falls 0.8%, crossing from a bull market to a bear market.

▼ 7/11/2008
U.S. bank regulators seize IndyMac Bancorp.

▲ 9/7/2008
U.S. takes over Fannie Mae and Freddie Mac.

Mark Lennihan/AP

markets bid down share prices of Lehman Brothers and Merrill Lynch, two other investment banks with exposure to mortgage-backed securities. Neither could withstand the heat. Under pressure from the Treasury, Merrill Lynch, whose "bullish on America" slogan had made it the popular embodiment of Wall Street, agreed on September 14 to sell itself to Bank of America for $50 billion, half of its market value within the past year. Lehman Brothers, however, could not find a buyer, and the government refused a Bear Stearns-style subsidy. Lehman Brothers declared bankruptcy the day after Merrill's sale.

Next on the markets' hit list was American International Group (AIG), the country's biggest insurer, which faced huge losses on credit default swaps. With AIG unable to secure credit through normal channels, the Fed provided an $85 billion loan on September 16. When that amount proved insufficient, the Treasury came through with $38 billion more. In return, the U.S. government received a 79.9% equity interest in AIG.

Five days later saw the end for the big independent investment banks. Goldman Sachs and Morgan Stanley were the only two left standing, and their big investors, worried that they might be the markets' next targets, began moving their billions to safer havens. Rather than proclaim their innocence all the way to bankruptcy court, the two investment banks chose to transform themselves into ordinary bank holding companies. That put them under the respected regulatory umbrella of the Fed and gave them access to the Fed's various kinds of credit for the institutions that it regulates.

On September 25, climaxing a frenetic month, federal regulators seized the country's largest savings and loan, Seattle-based Washington Mutual (WaMu), and brokered its sale to JPMorgan Chase for $1.9 billion. JPMorgan also agreed to absorb at least $31 billion in WaMu's losses. Finally, in October, the Fed gave regulatory approval to the purchase of Wachovia Corp., a giant North Carolina-based bank that was crippled by the subprime-mortgage fiasco, by California-based Wells Fargo. Other banks also foundered, including some of the largest. In November the Treasury shored up Citigroup by guaranteeing $250 billion of its risky assets and pumping an additional $20 billion directly into the bank.

A demonstrator holds up an ominous placard outside the headquarters of Lehman Brothers in New York City on September 15, the same day that the 158-year-old investment bank filed for Chapter 11 bankruptcy protection.

There were competing theories on how so many pillars of finance in the U.S. crumbled so quickly. One held the issuers of subprime mortgages ultimately responsible for the debacle. According to this view, when mortgage-backed securities were flying high, mortgage companies were eager to lend to anyone, regardless of the borrower's financial condition. The firms that profited from this—from small mortgage companies to giant investment banks—deluded themselves that this could go on forever. Joseph E. Stiglitz of Columbia University, New York City, the chairman of the Council of Economic Advisers during former president Bill Clinton's administration, summed up the situation this way: "There was a party going on, and no one wanted to be a party pooper."

Some claimed that deregulation played a major role. In the late 1990s, Congress demolished the barriers between commercial and investment banking, a change that encouraged risky investments with borrowed money. Deregulation also ruled out most federal oversight of "derivatives"—credit default swaps and other financial instruments that derive their value from underlying securities. Congress also rejected proposals to curb "predatory loans" to home buyers at unfavourable terms to the borrowers.

Deregulators scoffed at the notion that more federal regulation would have alleviated the crisis. Phil Gramm, the former senator who championed much of the deregulatory legislation, cast the blame on "predatory borrowers" who shopped for a mortgage when they were in no position to buy a house. Gramm and other opponents of regulation traced the troubles to the 1977 Community Reinvestment Act, an antiredlining law that directed Fannie Mae and Freddie Mac to make sure that the mortgages that they bought included some from poor neighbourhoods. That, Gramm and his allies argued, constituted a license for mortgage companies to lend to unqualified borrowers.

As alarming as the blizzard of buyouts, bailouts, and collapses might have been, it was not the most ominous consequence of the financial crisis. That

▲ **9/14/2008** — **Merrill Lynch sells itself to Bank of America for about $50 billion.**

▼ **9/15/2008** — **Lehman Brothers files for bankruptcy, the biggest such filing in U.S. history.**

▲ **9/16/2008** — **U.S. takes over American International Group (AIG).**

▼ **9/19/2008** — **Treasury Secretary Henry Paulson urges Congress to pass a bill that would give the administration sweeping powers to prevent the collapse of the financial system.**

▲ **9/20/2008** — **Pres. George W. Bush formally proposes a bailout bill that would give the Treasury unlimited authority to buy and sell up to $700 billion in mortgage-related assets.**

Mary Altaffer/AP

occurred in the credit markets, where hundreds of billions of dollars a day are lent for periods as short as overnight by those who have the capital to those who need it. The banks that did much of the lending concluded from the chaos taking place in September that no borrower could be trusted. As a result, lending all but froze. Without loans, businesses could not grow. Without loans, some businesses could not even pay for day-to-day operations.

Then came a development that underscored the enormity of the crisis. The Reserve Primary Fund, one of the U.S.'s major money-market funds, announced on September 16 that it would "break the buck." Money-market funds constitute an important link in the financial chain because they use their deposits to make many of the short-term loans that large corporations need. Although money-market funds carry no federal deposit insurance, they are widely regarded as being just as safe as bank deposits, and they attract both large and small investors because they earn rates of return superior to those offered by the safest of all investments, U.S. Treasury securities. So it came as a jolt when Reserve Primary, which had gotten into trouble with its loans to Lehman Brothers, proclaimed that it would be unable to pay its investors any more than 97 cents on the dollar. The announcement triggered a stampede out of money-market funds, with small investors joining big ones. Demand for Treasury securities was so great that the interest rate on a three-month Treasury bill was bid down practically to zero. In a September 18 meeting with members of Congress, Fed Chairman Ben S. Bernanke was heard to remark that if someone did not do something fast, by the next week there might not be an economy to rescue.

If government policy makers had taken any lesson from the Great Depression, it was that tight money, high taxes, and government spending restraint could aggravate the crisis. The Treasury and the Fed seemed to compete for the honour of biggest economic booster. The Fed's usual tool—reducing short-term interest rates—did not unlock the credit markets. By year's end its target for the federal funds rate, which banks charge one another for overnight loans, was about as low as it could get: a range of 0–0.25%. So the Fed dusted off other ways of injecting money into the economy, through loans, loan guarantees, and purchases of government securities. By December the Fed had pumped more than $1 trillion into the economy and signaled its intention to do much more.

Treasury Secretary Henry Paulson asked Congress to establish a $700 billion fund to keep the economy from seizing up permanently. Paulson initially intended to use the new authority to buy mortgage-based securities from the institutions that held them, thus freeing their balance sheets of toxic investments. This approach drew a torrent of criticism: How could anyone determine what the securities were worth (if anything)? Why bail out the large institutions but not the homeowners who were duped into taking out punitive mortgages? How would the plan encourage banks to resume lending? The House of Representatives voted his plan down once before accepting a slightly revised version.

After the plan's enactment, Paulson, acknowledging that his approach would not encourage sufficient new bank lending, did a U-turn. The Treasury would instead invest most of the newly authorized bailout fund directly into the banks that held the toxic securities (thus giving the government an ownership stake in private banks). This, Paulson and others argued, would enable the banks to resume lending. By the end of 2008, the government owned stock in 206 banks. The Treasury's new stance appeared to open access to the bailout money to anyone suffering from the frozen credit markets. This was the basis for the auto manufacturers' plea for a piece of the pie.

Still, all that money did little, at least at first, to stimulate private bank lending. Everyone with money to lend

A worker at a General Motors plant in Bowling Green, Ky., expresses his anxiety over jobs and the slumping American auto industry in a sign displayed at his work station on December 12.

▲ 9/25/2008
U.S. takes over Washington Mutual and arranges its sale to JPMorgan Chase.

▼ 10/3/2008
House passes a revised bailout bill, and President Bush signs it into law.

▲ 10/14/2008
Iceland uses swap lines to obtain €200 million (about $272 million) each from Denmark and Norway.

▼ 10/21/2008
Fed announces $540 billion to back up money-market mutual funds.

▲ 11/7/2008
U.S. unemployment rose in October to 6.5%, its highest in 14 years.

Joel Imel—Daily News/AP

turned to the safest haven of all—Treasury securities. So popular were short-term Treasuries that investors in December bought $30 billion worth of four-week Treasury bills that paid no interest at all, and, very briefly, the market interest rate on three-month Treasuries was negative.

The Bush administration did little with tax and spending policy to combat the recession. Sen. Barack Obama, who was elected in November to succeed President Bush as of Jan. 20, 2009, prepared a package of about $1 trillion in tax cuts and spending programs that were intended to stimulate economic activity.

Traders at the Philippine Stock Exchange in Manila give the thumbs-down sign to indicate a sharply downward trend in stock prices on September 16.

International Repercussions. Although the financial crisis wore a distinct "Made in the U.S.A." label, it did not stop at the water's edge. The U.K. government provided $88 billion to buy banks completely or partially and promised to guarantee $438 billion in bank loans. The government began buying up to $64 billion worth of shares in the Royal Bank of Scotland and Lloyds TSB Group after brokering Lloyds' purchase of the troubled HBOS bank group. The U.K. government's hefty stake in the country's banking system raised the spectre of an active role in the boardrooms. Barclays, telling the government "thanks but no thanks," instead accepted $11.7 billion from wealthy investors in Qatar and Abu Dhabi, U.A.E.

European Economic and Monetary Affairs Commissioner Joaquín Almunia presents the EU's autumn economic forecast during a news conference in Brussels on November 3.

Variations played out all through Europe. The governments of the three Benelux countries—Belgium, The Netherlands, and Luxembourg—initially bought a 49% share in Fortis NV within their respective countries for $16.6 billion, though Belgium later sold most of its shares and The Netherlands nationalized the bank's Dutch holdings. Germany's federal government rescued a series of state-owned banks and approved a $10.9 billion recapitalization of Commerzbank. In the banking centre of Switzerland, the government took a 9% ownership stake in UBS. Credit Suisse declined an offer of government aid and, going the way of Barclays, elected to raise funds instead from the government of Qatar and private investors.

The most spectacular troubles broke out in the far corners of Europe. In Greece street riots in December reflected, among other things, anger with economic stagnation. Iceland found itself essentially bankrupt, with Hungary and Latvia moving in the same direction. Iceland's three largest banks, privatized in the early 1990s, had grown too large for their own good, with assets worth 10 times the entire country's annual economic output. When the global crisis reached Iceland in October, the three banks collapsed under their own weight. The national government managed to take over their domestic branches, but it could not afford their foreign ones.

As in the U.S., the financial crisis spilled into Europe's overall economy. Germany's economic output, the largest in Europe, contracted at annual rates of 0.4% in the second quarter and 0.5% in the third quarter. Output in the 15 euro zone countries shrank by 0.2% in each of the second and third quarters, marking the first recession since the euro's debut in 1999.

In an atmosphere that bordered on panic, governments throughout Europe adopted policies aimed at keeping the recession short and shallow. On monetary policy, the central banks of Europe coordinated their interest-rate reductions. On December 4 the European Central Bank, the steward of monetary policy for the euro zone, engineered simultaneous rate cuts with the Bank of England and Sweden's Riksbank. A week later the Swiss National Bank cut its benchmark rate to a range of 0–1%. On fiscal policy, European governments for the most part scrambled to approve public-spending programs designed to pump money into the economy. The EU drew up a list of $258 billion worth of public spending that it hoped would be adopted by its 27 member countries. The French government said that it would spend $33 billion over the next two years. Most other countries followed suit, though Germany hung back as Chancellor Angela Merkel argued for fiscal restraint.

▲ 11/14/2008
The euro-zone economy shrank 0.2% in the third quarter and is officially in recession.

▼ 11/17/2008
The Japanese economy fell for the past two quarters and is officially in recession.

▲ 11/28/2008
The U.K. takes majority control of the Royal Bank of Scotland.

▼ 12/1/2008
NBER reports that the U.S. has been in recession since December 2007.

▲ 12/5/2008
533,000 U.S. jobs were lost in November, the largest monthly total since December 1974.

(Bottom) Thierry Roge—Reuters/Landov; (top) Bullit Marquez/AP

Asia's major economies were swept up by the financial crisis, even though most of them suffered only indirect blows. Japan's and China's export-oriented industries suffered from consumer retrenchment in the U.S. and Europe. Compounding the damage, exporters could not find loans in the West to finance their sales. Japan hit the skids in the second quarter of 2008 with a 3.7% contraction at an annual rate, followed by 0.5% in the third quarter. Its all-important exports plunged 27% in November from 12 months earlier. The government announced a $250 billion package of fiscal stimulus in December on top of $50 billion earlier in the year. Unlike so many others, China's economy continued to grow but not at the double-digit rates of recent years. Exports were actually lower in November than in the same month a year earlier, quite a change from October's 19% increase. The government prepared a two-year $586 billion economic stimulus plan, and the central bank repeatedly cut interest rates.

The U.S., Europe, and Asia had this in common—car makers were at the head of the line of industries pleading for help. The U.S. Senate turned down $14 billion in emergency loans; the car companies got into this mess, senators argued, and it was up to them to get out of it. President Bush, rather than risk the demise of General Motors (GM) and Chrysler, tapped the $700 billion financial sector bailout fund to provide $17 billion in loans—enough to keep the two companies afloat until safely after the Obama administration took over in early 2009. In addition, the Treasury invested in a $5 billion equity position with GMAC, GM's financing company, and loaned it another $1 billion. In Europe, Audi, BMW, Daimler, GM, Peugeot, and Renault announced production cuts, but European government officials were reluctant to aid a particular industry for fear that others would soon be on their doorstep. Even in China, car sales growth turned negative. As elsewhere, the industry held out its tin cup, but the government left it empty.

The pressures of the financial crisis seemed to be forging more new alliances. Officials from Washington to Beijing coordinated interest rate cuts and fiscal stimulus packages. Top officials from China, Japan, and South Korea—longtime adversaries—met in China and promised a cooperative response to the crisis. Top-level representatives of the Group of 20 (G-20)—a combination of the world's richest countries and some of its fastest-growing—met in Washington in November to lay the groundwork for global collaboration. The G-20's deliberations were necessarily tentative in light of the U.S. presidential transition in progress.

By year's end, all of the world's major economies were in recession or struggling to stay out of one. In the final four months of 2008, the U.S. lost nearly two million jobs. The unemployment rate shot up to 7.2% in December from its recent low of 4.4% in March 2007, and it was almost certain to continue rising into 2009. Economic output shrank by 0.5% in the third quarter, and announced layoffs and severe cutbacks in consumer spending suggested that the fourth quarter saw a sharper contraction. It was doubtful that the worldwide economic picture would grow brighter anytime soon. Forecast after forecast showed lethargic global economic growth for at least 2009. "Virtually no country, developing or industrial, has escaped the impact of the widening crisis," the World Bank reported in a typical year-end assessment. It forecast an increase in global economic output of just 0.9% in 2009, the most tepid growth rate since records became available in 1970.

Measured by its impact on global economic output, the recession that had engulfed the world by the end of 2008 figured to be sharper than any other since the Great Depression. The two periods of hard times had little else in common, however; the Depression started in the manufacturing sector, while the current crisis had its origins in the financial sector. Perhaps a more apt comparison could be found in the Panic of 1873. Then, as in 2008, a real estate boom (in Paris, Berlin, and Vienna, rather than in the U.S.) went sour, loosing a cascade of misfortune. The ensuing collapse lasted four years.

University students and graduates seek employment at a job fair in Shanghai on November 22.

Joel Havemann is a former editor and national and European economics correspondent for the Washington, D.C., and Brussels bureaus of the Los Angeles Times.

▲ **12/5/2008**
A record 1.35 million U.S. homes went into foreclosure in the third quarter.

▼ **12/16/2008**
Fed cuts its interest rate to a range of 0-0.25%.

▲ **12/19/2008**
U.S. Pres. George W. Bush announces an emergency bailout plan for GM and Chrysler.

▼ **12/31/2008**
DJIA closes the year at 8776.39, the worst annual loss (-33.8%) since 1931, down 37.7% from the all-time high of 14,087.55 in October 2007. Oil closes the year at $44.60. The euro closes the year at $1.3969; the British pound closes at $1.4593.

Imaginechina/AP

The U.S. Election of 2008

President-elect Barack Obama waves to the crowd at a massive election night rally in Chicago's Grant Park on November 4. With him are (from left) his daughters, Sasha and Malia, and his wife, Michelle.

by David C. Beckwith

In a national election laden with historical significance, Barack Hussein Obama (*see* BIOGRAPHIES) captured a decisive majority in the 2008 balloting to become the 44th president of the United States; he was scheduled to be sworn into office on Jan. 20, 2009. Obama, a 47-year-old Democratic U.S. senator from Illinois, won the electoral college vote 365–173 over Republican John McCain (*see* BIOGRAPHIES), a 72-year-old U.S. senator from Arizona. Obama prevailed 52.9–45.7% in the popular vote nationwide on November 4.

Though it seemed that every U.S. election had been hailed as historic, Obama's triumph was exceptional. He became the first African American elected as U.S. president and the first person of colour to head a country with a white-majority population. McCain, in a graceful concession speech, noted the pride that many Americans felt in that development following the long United States record of slavery, segregation, and discrimination. The country, McCain said, is now "a world away from the cruel and prideful bigotry of that time."

Obama's youth and charisma, and his relative political inexperience, provoked comparisons to U.S. Pres. John F. Kennedy. Obama was elected as the country approached crisis, and this prompted allusions to former presidents Franklin Delano Roosevelt and even

Jae C. Hong/AP

Abraham Lincoln. With an unpopular sitting president and the Republican establishment in disarray, Democrats were overwhelming favourites to win the presidency in 2008. After an exhaustive campaign, Obama ultimately made his case by demonstrating an unflappable eloquence that wore away doubts and prompted critics to say that he transcended both racial and partisan politics.

As the party nomination campaigns got under way in early 2007, neither Obama nor McCain was favoured. Obama, especially, was well behind New York Sen. Hillary Clinton; he had first come to national attention only in 2004, in a well-received speech at the Democratic National Convention. Public opinion polls showed that weariness with the U.S. intervention in Iraq was the top issue, but opinion was sharply divided over what should be done. Obama called for a quick withdrawal of U.S. troops, while McCain had long pushed for an escalation in hopes of a decisive military victory. Both approaches appealed to influential elements of their respective party bases.

The Republican U.S. presidential nominee, Arizona Sen. John McCain (second from left), flanked by his wife, Cindy McCain (left), his vice presidential running mate, Alaska Gov. Sarah Palin (second from right), and her husband, Todd Palin, addresses supporters during a campaign rally in Virginia Beach, Va., on October 13.

A U.S. troop "surge" in Iraq approved by Pres. George W. Bush initially produced higher U.S. casualties in early 2007, and many Democrats declared the move a Vietnam-style failure. McCain's campaign nearly collapsed in July when he came close to running out of funds and laid off half of his campaign staff. By late fall, however, it was obvious that the surge was succeeding, and McCain began mounting a notable resurgence. His main opponents—former New York City mayor Rudy Giuliani, former Arkansas governor Mike Huckabee, and former Massachusetts governor Mitt Romney—failed to catch fire, and a late bid by former Tennessee senator Fred Thompson fell short. By early 2008 McCain was the clear Republican frontrunner. The Republican contest was officially over in early March, but McCain was favoured to win the nomination when he defeated Huckabee in a competitive South Carolina primary on January 19.

Obama had a far-more-difficult road. Although he attracted enthusiastic crowds and solid fund-raising totals from the start, he plodded through innumerable 2007 candidate joint appearances without distinguishing himself. Clinton's campaign successfully portrayed her as the inevitable nominee, with a substantial early lead in establishment support, fund-raising, and public opinion polls. Clinton also had serious problems, however. Many Democrats feared that she and her husband, former president Bill Clinton, were polarizing figures and that she could not win a general election; in addition, her campaign staff fought internally and failed to produce a winning strategic plan.

Obama, by contrast, combined an uplifting speaking style with a smoothly functioning campaign that became known as "no-drama Obama." While Clinton went for knockout victories in early deciding Democratic states, Obama played a longer game, seeking delegates by the ones and twos all over the country. His campaign tapped thousands of small contributors through the Internet and then approached them repeatedly for more funding. To counter Clinton's inside experience, Obama underscored his status as an outsider, promising "hope and change" and encouraging rally supporters to proclaim, "Yes we can."

At the first real test of strength, in the Iowa caucuses on Jan. 3, 2008, Obama's organization helped turn out more than 250,000 Iowan caucus goers—double the previous record turnout—and scored a decisive victory. Polls in New Hampshire, the site of the next primary event, showed Obama edging ahead, and it seemed likely that the nomination might be unexpectedly decided in January. Clinton scored a narrow New Hampshire victory, however, and as other candidates began dropping out, Obama and Clinton began a long ground war through the winter and spring.

Obama suffered several setbacks. The underperforming Clinton campaign produced a television ad, "Red Phone 3 AM," that skillfully exploited widespread voter doubts about Obama's readiness to handle an international crisis. Some critics began accenting his middle name, implying that he was Muslim, and hinting that he had benefited from racial preferences. Obama eventually became enmeshed by ties to a series of Illinois allies, including former 1960s radical William Ayers, political fixer Tony Rezko, and the Rev. Jeremiah Wright, Obama's longtime family pastor. Over several weeks, copies of Wright's fiery sermons, laced with black nationalism, and his aggressive press statements put Obama on the defensive. A tape surfaced showing Wright blasting U.S. foreign policy after 9/11—"God damn America"—and Obama defensively claimed he was unaware of many of Wright's views.

Obama confronted the matter head-on, delivering on March 18 a well-received speech on race in U.S. politics at the National Constitution Center museum in Philadelphia. He declared that America had long suffered from excessive attention to racial differences; the choice now was to remain there, preoccupied by a distraction, or alternatively to move on to resolving real American problems. While his remarks

Gary C. Knapp/AP

© 2008 Encyclopædia Britannica, Inc.

were criticized as self-serving, the speech quickly diffused his Wright association problems, and Obama was bolstered by handling his most difficult issue with sober aplomb.

The Obama campaign pounced when Clinton told several audiences about being "under fire" while arriving in 1996 at an airport in Bosnia and Herzegovina. A tape of the event showed a schoolgirl handing her flowers but no gunfire. For his part, Obama was taped telling a wealthy San Francisco fundraising audience that frustrated working-class Americans tended to "get bitter, they cling to guns or religion."

After an extended period of wooing convention superdelegates—usually elected and party officials—Obama finally won sufficient backing to claim the Democratic nomination on June 3, the final day of the primary season. Clinton conceded four long days later. Clinton had won most big primary states—including New York, California, New Jersey, Texas, Ohio, and Massachusetts—and captured more popular primary votes. Obama prevailed, however, with a tortoise-and-hare strategy and his superior organization. He was especially strong in caucus states, where depth of loyalty was tested, and among superdelegates concerned about electability in the general election.

As they prepared to name their vice presidential running mates, both McCain and Obama needed to shore up important segments of their support. McCain, still too moderate for many conservative GOP voters, needed an infusion of party enthusiasm. Obama had been faulted for a lack of foreign policy experience; he made a belated first-ever trip to Afghanistan in late July.

Though supporters of Clinton made a major push on her behalf for the vice presidential spot, Obama eventually selected as his running mate Delaware Sen. Joe Biden (*see* BIOGRAPHIES), chairman of the Senate Foreign Relations Committee. Biden, a 36-year Senate veteran, had earlier dropped his own bid for the nomination, but he was a proven commodity unlikely to produce negative surprises. The choice was readily accepted by the Democratic National Convention in Denver, where Obama gave a highly publicized acceptance speech at Invesco Field before some 75,000 party faithful.

For his part, McCain threw a bombshell into the equation by choosing as his vice presidential running mate Sarah Palin (*see* BIOGRAPHIES), the largely unknown two-year governor of Alaska. Palin arrived on the national stage as a photogenic fresh face, with populist and reformer credentials and solid support from social conservatives. Almost single-handedly, Palin energized the GOP base and electrified what had promised to be a lacklustre Republican National Convention in St. Paul, Minn., in early September. When McCain began touring the country with Palin, his crowds grew notably larger and more enthusiastic. The polling "bounce" from Palin was so large that in early September public opinion polls put McCain ahead of Obama by a small margin.

While Biden had been carefully examined over the years and any shortcomings identified and discounted, Palin was largely unknown to the skeptical national press. She had been selected quickly and had little time to become immersed in federal issues, especially foreign affairs, and this caused critics to question her readiness to assume the presidency. Palin's initial national press interviews had shaky moments, and the news that the Republican National Committee had purchased for her $150,000 in clothing and accessories largely offset her initial boost to the McCain ticket.

Obama made a key decision at midyear. During the primary, under prompting by McCain, Obama stated that he would accept public funding for the general election under a law that capped campaign expenditures. As his fund-raising success exceeded all previous records, however, Obama reversed field, declined federal funds, and eventually collected some $745 million in contributions—double the total of any previous presidential candidate. McCain raised about $320 million, including the $84 million in public financing allotted to each candidate. That disparity allowed Obama to dominate the final months in both media and organization efforts across the country. McCain's camp protested that Obama's reversal on public financing received only modest criticism from news organizations and reflected media bias favouring the Democrat. Obama, again playing it safe and exploiting his financial advantage, later declined McCain's invitation to stage a series of 10 town-hall-style debates across the country.

Relevant election issues shifted over the campaign. With Iraq becoming more secure by the day, public concern over the costly war on terrorism eased, ironically moving a potentially potent McCain issue to the back burner. In the meantime, Obama toned down his early liberal issue positions, balancing his Iraq withdrawal stance by advocating that more U.S. troops be sent to the Afghanistan front. He also exploited a growing uncertainty over the economy by calling for a middle-class tax cut (he promised that 95% of working Americans would see a reduced tax bill) and universal health care for all Americans—to be achieved without a government takeover of the system.

With McCain running as a moderate and Obama tacking toward the centre in the general election, issue distinctions between the candidates were minimized. For example, by mid-2008 voters were more concerned with rising energy prices (gasoline topped $4 per gallon) than with any terrorist threat. On one key hot-button energy issue, however, both McCain and Obama were in agreement—they opposed oil and natural-gas exploration in the Arctic National Wildlife Refuge.

On September 15 the election took a decisive turn when the Lehman Brothers investment banking house collapsed into bankruptcy. As the contagion spread to brokerage and even insurance firms, public confidence in both the economy and government oversight plummeted, causing serious damage to McCain, a free-market advocate, and lending credibility to Obama's mantra for change. McCain's tenuous polling lead disappeared.

As Congress debated the economic situation in late September, McCain dramatically suspended his campaign, returned to Washington, and demanded a White House meeting on the crisis. The same day Lehman failed, he claimed that the "fundamentals of our economy are strong," but a few days later he compared Wall Street to a casino and promised to fire the nation's top securities regulator. He also threatened for a time to boycott the first scheduled debate, which was set to take place on September 26, claiming that action on the economy deserved priority. For his part, Obama joined the White House discussion but took a low-key approach and refused to call off the debate. When McCain could not persuade congressional Republicans to back an initial federal intervention idea, both his leadership and his judgment came under fire.

Obama's coolness in the face of the financial meltdown and McCain's erratic reaction likely sealed the election, eroding remaining doubts about Obama's relative ability to handle a crisis. As *Time* magazine recounted the episode later, "The assumption all year was that if the Furies delivered turmoil to the doorstep of this election, the country would retreat to the safe choice and not risk a rookie. It was Obama's triumph that the financial crisis that might have buried him actually raised him up, let voters judge his judgment in real time, the 3 AM phone call that came night after night."

The three presidential debates were largely uneventful. McCain, seeking to counter opinion that he was too old, debated in an animated and forceful manner, but Obama, who typically avoided as much back-and-forth as possible, appeared calm and presidential by contrast. In mid-October a man hoping to buy a plumbing business challenged Obama during an unscripted campaign visit to an Ohio neighbourhood; the man claimed that small business would be hurt by Obama's plan to increase taxes on upper-income earners. Obama replied that "when you spread the wealth around, it's good for everybody."

The incident provided a final ray of hope for the McCain camp. Republicans implied that Obama's comments endorsed socialism, and at the final debate on October 15, McCain made repeated references to "Joe the Plumber" and the harm Obama's policies might inflict on a fragile economy. Cracks appeared in Joe's life story, however, and the Obama camp claimed that Joe might actually receive a tax cut under their overall plan. As a result, the final barrier to Obama's election faded away.

On election day, voter turnout topped 131 million, or 61.6% of eligible voters, the highest total percentage since 1968. Exit polls showed blacks, Hispanics, and young people voting in notably greater numbers. Obama carried 28 states (including 9 won in 2004 by President Bush), virtually sweeping the Northeast, the Midwest, and the West Coast and even making serious inroads into the Deep South and Mountain West areas that had been recent Republican redoubts. (*See* MAP.) Democrats also made decisive gains in congressional elections, gaining a net 21 House seats (for a 257–178 advantage) and picking up at least 7 Senate seats, or a 58–41 majority. A possible eighth Democratic gain, in Minnesota, was still under dispute at year's end.

Obama's success was based on a large number of factors: his personal charisma and eloquence, his well-organized and sure-footed campaign, voter weariness with a Republican White House, a struggling national economy, and his overwhelming advantage in fund-raising. Despite his best efforts, McCain could not separate himself from the status quo. In the end the American people were ready for change from politics as usual, and Obama had demonstrated that he was best able to provide it.

David C. Beckwith is a freelance writer.

Citizen Journalism: A News [R]evolution

by Lawrence Albarado

Blogger Cynthia Liu shows her support for Democratic presidential nominee Barack Obama and his running mate, Joe Biden, as she poses in front of a computer screen showing a Web site frequented by politically active citizen journalists.

The phenomenon called "citizen journalism" expanded its worldwide influence in 2008 in spite of continuing concerns over whether "citizen" journalists were "real" journalists. Citizens in disaster zones provided instant text and visual reporting from the scene. People in countries affected by violence used a variety of technological tools to share information about hot spots. An unpaid, untrained volunteer journalist broke news about a U.S. presidential candidate and in doing so became news herself. Swirling in the background of these developments was a debate over whether the term *citizen journalism* was itself accurate.

The term *citizen journalism* derived from South Korean online entrepreneur Oh Yeon Ho's declaration in 2000 that "every citizen is a reporter." Oh and three South Korean colleagues started an online daily newspaper in 2000 because, he said, they were dissatisfied with the traditional South Korean press. Unable to afford the costs of hiring professionals and printing a newspaper, they started OhmyNews, a Web site that used volunteers to generate its content. In a speech on the site's seventh anniversary, Oh, the firm's president and CEO, noted that the news site began with 727 citizen reporters and had grown to 50,000 contributors reporting from 100 countries by 2007.

Since OhmyNews's adoption of "Every citizen is a reporter" as its motto, the Internet had spawned thousands of news sites and millions of bloggers (individuals who keep regular online journals called blogs, short for Web logs). Traditional news organizations, while battling declining readership and viewership, leapt into the fray with their own Web sites and blogs by their own journalists, and many newspapers invited readers to contribute community news to the papers' Web sites. Citizens started their own "hyperlocal" online news sites to cover happenings in their neighbourhoods or specialized topics of interest that were not reported by larger media organizations.

Among those who studied and nurtured citizen journalism, the term often went by other names. In a 2007 article for Online Journalism Review (www.ojr.org), Senior Editor J.D. Lasica called it "participatory journalism," though he described it as "a slippery creature. Everyone knows what audience participation means, but when does that translate into journalism? Alas, there's no simple answer." Dan Gillmor, founder and director of the Center for Citizen Media (http://citmedia.org)—a nonprofit affiliated jointly with the Walter Cronkite School of Journalism and Mass Communication at Arizona State University and the Berkman Center for Internet & Society at Harvard University Law School—and author of the book *We the Media: Grassroots Journalism by the People, for the People* (2004), also rejected any single definition for the transformation in news that began taking place in the late 1990s. "It's a time of incredible exploration," because of the democratization of access to inexpensive and ubiquitous publishing tools, said Gillmor. New York University journalism professor and online media thinker Jay Rosen came close to a unified theory of citizen journalism in a July 14, 2008, post on his PressThink blog (http://journalism.nyu.edu/pubzone/weblogs/pressthink/): "When the people formerly known as the audience employ the press tools they have in their possession to inform one another, *that's* citizen journalism."

People around the world participated in this phenomenon. Earthquake victims in China's Sichuan province in May 2008 took up cellular telephones to send

Ric Francis/AP

Amanda Michel, director of the HuffingtonPost Web site's online blog OffTheBus, sits in her New York City office. A citizen journalist on the popular political blog triggered controversy in April when she reported a statement made by Democratic presidential candidate Barack Obama at a private fund-raiser.

text messages and images from the disaster zone to the world. When the Kenyan government shut down traditional media outlets in the violent aftermath of disputed national elections in late 2007, Africa-based bloggers encouraged citizens to use their cell phones to report incidents of violence by voice, text messages, and images. Citizens by the thousands did exactly that. Within the first two weeks of 2008, some of those bloggers created www.Ushahidi.com, which combined Google maps and a "crowdsourced" database of violent incidents to give readers a near real-time visual glimpse of where outbreaks were occurring. In late November 2008 some bystanders used social networking Web sites such as Twitter and Flickr to upload live reports, digital photos, and video of the terrorist attacks in Mumbai (Bombay), while others used their cell phones to send updated reports to more traditional news services or to transmit text messages to people trapped inside the hotels under attack.

An experiment in "hybrid" citizen journalism at www.HuffingtonPost.com generated controversy during the 2008 U.S. presidential campaign when Mayhill Fowler, an amateur writer and supporter of candidate Barack Obama, reported in April 2008 that the Democrat had described working-class Pennsylvanians as "bitter." The incident, buried in a longer post on the site's OffTheBus blog, gave Republicans and some of Obama's Democratic rivals ammunition to call him an "elitist." Fowler's report drew criticism from other media. Some attacked as unethical her reporting of remarks made at a private fund-raiser that had excluded traditional journalists. Rosen, cocreator with Arianna Huffington of the blog, defended Fowler. Rosen wrote in a post on PressThink that he and Huffington "felt that participants in political life had a right to report on what they saw and heard themselves, not as journalists claiming no attachments but as citizens *with* attachments who were relinquishing none of their rights." Traditional journalists disagreed vehemently with Rosen's position, citing the long-held ethical belief that journalists should remain independent from those whom they cover. Most traditional news organizations, in fact, prohibited political involvement by their reporters.

Several groups in 2008 offered training to individuals who wanted to improve their reporting skills and learn how to make ethical decisions. For example the Knight Citizen News Network (www.kcnn.org) sponsored J-Learning (www.j-learning.org). Both KCNN and J-Learning offered textbooks, guides to legal issues from the Electronic Frontier Foundation, and links to other programs, such as online training offered by the Florida-based Poynter Institute at www.newsu.org. The Society of Professional Journalists (www.spj.org), which was preparing to celebrate its 100th year in 2009, began a traveling program in 2008 called Citizen Journalism Academy that provided skills training, information about legal issues, and guidance regarding the society's Code of Ethics.

Jan Schaffer, executive director of J-Lab: The Institute for Interactive Journalism, said that she preferred the term "citizen media makers instead of citizen journalists because we need to understand that the kinds of things we're seeing have their own value propositions, and those may be very different from the values we associate with conventional journalism. Most citmedia makers don't aspire to be 'journalists' and I think we need to be careful not to require them to be members of a tribe that they don't necessarily want to belong to."

Beginning in 2005, J-Lab, based in Washington, D.C., provided start-up funds to 40 citizen media projects through an incubator program called New Voices. The 10 projects that received funds in 2008 included a proposal by Kent (Ohio) State University to train student journalists and general aviation enthusiasts to write about Ohio's 166 public airports, 772 private airfields, and 18,000 pilots for online publication and for newspapers, public radio, and television. Another New Voices-funded project planned to start a digital neighbourhood newspaper using citizen reporters and aimed at building a sense of community across racial, ethnic, and income divisions in Lexington, Ky.

In 2008 Schaffer cited many examples of the variety of citizen-journalism efforts: networked sites, such as NowPublic.com and Helium.com, that sought to aggregate citizen photos, video footage, and articles from around the world; conventional media that attracted citizen-generated content, including CNN's iReport.com and the Denver-based YourHub.com; microlocal community news sites such as NewCastleNow.org and ForumHome.org that were founded by ordinary citizens to fill an information vacuum; and microlocal sites that were founded by former journalists, such as Baristanet.com, MinnPost.com, NewHavenIndependent.com, and HuffingtonPost.com. Bloggers in Third World countries often filled in when the media were government-controlled or absent with sites such as GlobalVoices Online.org, or they used cell phone text messages to report on crisis hotspots. For its efforts, Ushahidi.com won one of J-Lab's 2008 Knight-Batten Awards for Innovations in Journalism. As Schaffer said, "We began to see clearly how citizen media is not just one big phenomenon, but the onset of many different niches being occupied by various citizen media makers."

Lawrence Albarado is Projects Editor for the Arkansas Democrat-Gazette *and a member of the board of directors for the Society of Professional Journalists.*

Suzanne DeChillo—The New York Times/Redux

Skyrocketing Food Prices: A Global Crisis

by Janet H. Clark

A government-funded store in Lahore, Pak., sells sacks of flour to a crowd of women. Soaring prices left many families across the world dependent on such subsidized food relief.

As the year 2008 got under way, upwardly spiraling food prices became of increasing concern to international organizations and relief agencies, national governments, and consumers everywhere. UN officials speculated that the crisis could add an additional 100 million hungry people to the billion already living on less than a dollar a day, the common measure of absolute poverty. The impact of rising food prices was greatest in less-developed countries (LDCs), where spending on food accounted for 40–60% of income, compared with about 15% in industrialized countries.

Even in industrialized countries, poor families were being severely affected by a general rise in prices, especially when combined with an economic downturn and higher unemployment. Food prices in the 30 Organisation for Economic Co-operation and Development (OECD) member countries rose by 7.2% year on year in both July and August, the biggest increases since 1990, and in the U.S. the Department of Labor reported that grocery-store food prices rose by 6.6% in 2008, the largest increase since 1980.

With spiking food costs came a growing threat to food security, which provoked political repercussions in many LDCs. In Haiti, for example, food riots led to the ousting on April 12 of Prime Minister Jacques-Édouard Alexis, and the lack of a replacement until July left the government in a state of paralysis while social and economic conditions continued to deteriorate.

Prices of staple foodstuffs escalated alarmingly on world markets. In the first half of the year, the price of internationally traded food commodities, led by grains, rose by 56%. In the first quarter alone, the prices of wheat and corn (maize) rose by 130% and 30%, respectively, over the same period a year earlier, while the cost of rice climbed 10% in both February and March. By midyear the price of corn, wheat, and soybeans had more than doubled, while that of rice had tripled.

A number of factors contributed to the increases in food prices. One was the economic emergence of China and India, whose populations were becoming increasingly affluent and thus boosting their food consumption; in China annual per capita consumption of meat rose to 54 kg (about 119 lb) from 20 kg (44 lb) in 1985. Another major factor was the increased output of biofuels made from grains and oil seeds in the U.S. and the European Union, where there were generous—and controversial—tax concessions or direct financial support for producers, retailers, or users of biofuels. In July an OECD report strongly criticized these incentives as costly and ineffective and recommended that governments refocus their policies. Partially associated with this was the restrictive and trade-distorting effect of a high level of government support to farmers in many OECD countries, which in 2007 amounted to $258 billion, or 23% of farm incomes. A surge in petroleum prices led to increased fertilizer and transport costs. In many countries adverse weather led to crop failure, speculation on commodity markets, and hoarding. When Cyclone Nargis struck Myanmar (Burma) on May 2, it generated a 4-m (12-ft)-high storm surge that devastated the rice-producing Irrawaddy Delta. During August–September, Haiti, already suffering from food shortages, was battered by four successive hurricanes. The depreciation of the U.S. dollar against the euro and other currencies early in the year contributed to the rise in dollar-denominated commodity prices. The International Food Policy Research Institute (IFPRI) estimated that 15–27% of the increase was from the dollar's decline. At the same time, countries in Asia and the Middle East that linked their currencies to the weakening dollar experienced overheated economies and suffered higher prices than countries with more flexible exchange rates.

The World Food Programme (WFP) was the main distributor of emergency food relief, with activities in more than 75 countries. In March, however, the organization announced that it was short of money because of the soaring price of cereals and other foodstuffs. At the June UN heads of government meeting, the WFP reported that it had received $1.2 billion in aid, including an unexpected $500 million from Saudi Arabia. Among 60 low-income food-deficit countries surveyed early in the year by the Food and Agriculture Organization (FAO), the most widespread response was to remove or reduce import tariffs on food. This was especially

K.M. Chaudary/AP

In July a farmer in Myanmar (Burma) plows his flooded rice field outside Yangou (Rangoon). Myanmar suffered severe food shortages after Cyclone Nargis devastated rice-producing regions in May.

true in South and East Asia, the Middle East, and North Africa. Given that tariff levels on cereals and vegetable oils were already relatively low, however, at 8% and 14%, respectively, only small proportions of the price rises were offset.

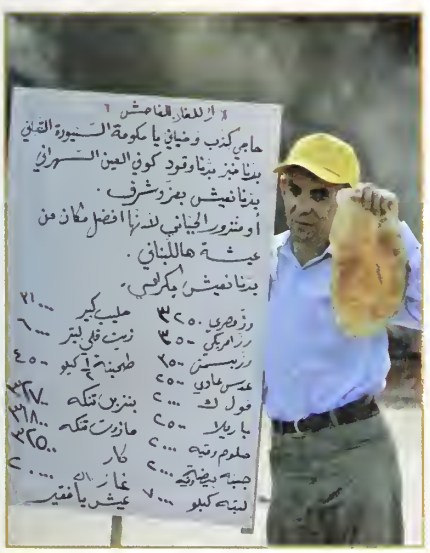
In the Middle East drought reduced the summer harvest, and many major wheat-producing countries, including Iran, Iraq, and Syria, were forced to increase imports. In Saudi Arabia the inflation rate soared to 10.6% in the year to June, its highest rate in 30 years, and wheat production was extremely costly because of huge farm subsidies. The Saudi government decided in August that it would make economic sense to outsource its farming and was considering the purchase of rice farms in Thailand through a new investment fund set up to buy agricultural land overseas. United Arab Emirates investors looking for land for agricultural development favoured Pakistan, Kazakhstan, and The Sudan.

In early May, Prime Minister Samak Sundaravej of Thailand (the world's biggest rice producer) proposed the formation of a cartel of Southeast Asian rice-producing countries (including Vietnam, Myanmar, Laos, and Cambodia) to be set up along the lines of OPEC. Laos and Cambodia favoured the idea, but there were strong protests in the Philippines, the world's biggest rice importer. In August, Thailand announced plans to boost rice production by leasing 160,000 ha (395,000 ac) of unused state land to poor farmers and agribusiness for biofuel crops, sugar cane, palm, and rice. A more novel way of easing food shortages was proposed in July by scientists at the National Autonomous University of Mexico; they asserted that insects, which were nutritious and already provided part of the diet in 113 countries, should be consumed more widely. Thailand, where cricket rearing for food was already practiced by many families, hosted an FAO conference to examine the benefits of insects as a food option.

At an EU summit in July, member countries were divided on trade reform and the need to remove agricultural subsidies and reduce protectionism. For the first time, in 2008 the EU did not use the portion of its agricultural budget designated for buying and stockpiling surplus produce. The resulting unused funds, expected to reach €1 million (about $1.4 million), were to be given to farmers in LDCs. Cut-price discount stores, which were already popular in the U.S., were proliferating in Europe and putting pressure on the more costly chains. The search for cheaper food was gathering momentum even in U.S. cities, where there was a resurgence of freegans who scavenged through supermarket garbage bins and other sources of discarded food. (*See* Special Report on page 184.)

Despite the widespread fear of a continuing rise in global inflation and the number of people needing food aid, the failure to reach agreement on trade liberalization left agricultural producers in LDCs at a continuing disadvantage. The IFPRI calculated that if export bans by some 40 food-exporting countries were lifted, cereal prices would be 30% lower on average. Two small signs of hope emerged in September. Corporate and government leaders attended the first UN Private Sector Forum on Food Sustainability and the Millennium Development Goals. At the same time, the WFP unveiled Purchase for Progress (P4P), an initiative by which governments and private foundations (notably the Bill & Melinda Gates Foundation and the Howard G. Buffett Foundation) would finance WFP purchases of foodstuffs from small farmers in LDCs, which would thus encourage local food production and offer small farmers better access to world markets.

Amid riots in Lebanon in May, a protester brandishes a sign condemning the rising cost of basic foodstuffs, including the bread that he holds in his other hand. In Chiang Mai province, Thai., a woman prepares fried bamboo worms. Thailand was a leader in the campaign to increase the use of insects for food.



Janet H. Clark is an editor, independent analyst, and writer on international economic and financial topics.

(Top) Khin Maung Win—AFP/Getty Images; (bottom left) Hussein Malla/AP; (bottom right) Sakchai Lalit/AP

The Freegans—the Ultimate Recyclers

by Mary Grigsby

In 2008 widespread media attention gave the little-known freegan (*free* + *vegan*) movement greater visibility in mainstream culture. Freegans—the majority of whom lived in cities in relatively affluent countries—believed that global capitalism created a consumerist lifestyle that encouraged and was dependent on conspicuous consumption and waste, was unstable and unsustainable, and was destructive to the environment and to human and animal well-being. The movement advocated dropping out of the economy, for example, by avoiding paid work, by not buying food or consumer goods, and by conserving resources. Freeganism overlapped to some extent with other movements, including the environmental, social-justice, antiglobalization, anarchist, animal rights, and simple-living movements.

The term is believed to have been first used in 1995 by Keith McHenry, one of the founders of the organization Food Not Bombs. McHenry reported that as he and some colleagues walked by a Dumpster, he noticed that a large piece of cheese had been thrown out. He said, "Let's be freegan," and suggested taking the cheese to eat. Food Not Bombs (www.foodnotbombs.net), which established chapters around the world, was founded on the belief that feeding the hungry should be a global priority ahead of military spending. Local chapters prepared donated or found vegetarian food to share with anyone; they also participated in disaster relief by providing meals. Although Food Not Bombs focused on the destructive effects of militarism, in 2008 McHenry in an interview confirmed that freeganism was very compatible with his group's ideas.

Many freegans considered their manifesto to be an essay from 1999 titled "Why Freegan?: An Attack on Consumption, in Defense of Donuts." It has been posted, usually anonymously, on numerous Web discussions of freegan principles. In an interview in 2008, Warren Oakes, the drummer in the punk rock band Against Me!, described having written the piece while he was working as an activist among youth in Venice, Fla. The essay, signed "Koala,"

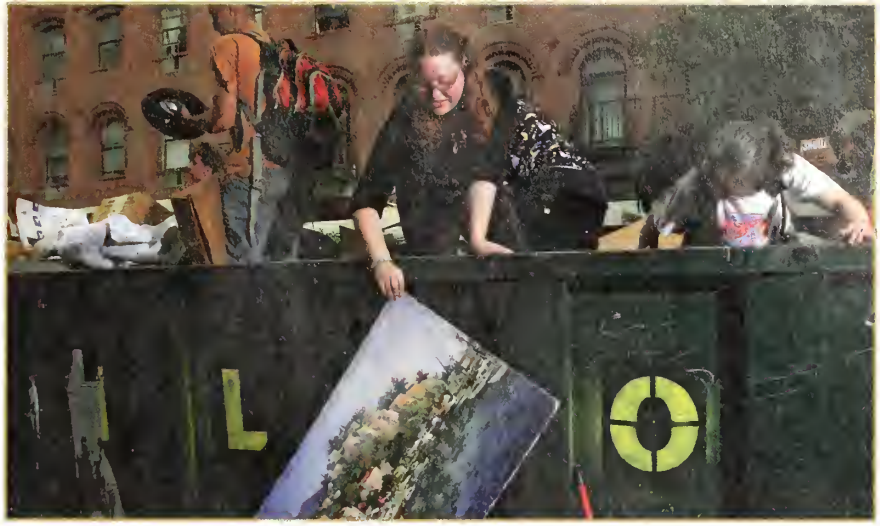
A group of freegans share a rooftop feast in New York City. As an act of resistance to consumerism, freegans try to use only food obtained at no cost or grow their own produce in abandoned lots or community gardens.

Evan Sung—The New York Times/Redux

Oakes's nickname at the time, touched on the values, beliefs, and practices of freeganism. The values derived in part from an anarchist ideology that advocated finding ways to live outside the capitalist system, including the avoidance of work for wages. Other expressed goals included care for the environment and social justice. Practices advocated in the document included Dumpster diving, getting donations from stores or qualifying for food stamps, table diving (i.e., eating off plates left behind on restaurant tables), wild foraging, gardening, bartering, returning goods found in the trash to stores for cash refunds, eating at restaurants but paying only a gratuity, avoiding individual car ownership, bicycling, and living in abandoned buildings (squatting).

Some freegans, as the term suggests, were vegans, people who avoid eating and using animal products. Other freegans used discarded or donated animal products. Some ("meagans") also ate meat, if it had been thrown out. Philosphically, freeganism differed from veganism, however. Vegans sought to protect animals from exploitation, but they might otherwise participate in the prevailing economy. Freegans were especially critical of those vegans who consumed products developed for the vegan market. The freegans instead confronted the exploitation of workers, environmental destruction, and the alienation produced by the work-and-spend cycle promoted by current economic and cultural structures.

The ideas and practices adopted by freegans were available in the broader culture, but freegans used them in distinctive ways. Media reports often focused on freegan Dumpster diving—which freegans prefer to call by other names, such as urban foraging or gleaning—as an arresting image and intriguing practice. Less often reported was the principle of obtaining food and goods for no money as a statement of opposition to the capitalist economy and its allied waste. Other avenues for retrieving and offering food and useful items included "freecycling" (the act of offering items to others, usually via certain Web sites), free stores, and free-exchange venues; freegans pointed to these as collective alternatives to the market economy. Rather than pay for housing, some freegans took up residence in abandoned buildings, reasoning that squatting resisted capitalism through subverting the private ownership of property. Some freegans also advocated planting gardens in abandoned lots ("guerrilla gardening") or participating in community gardens to collectively grow vegetables and fruit and provide green space in urban settings.



A scavenger retrieves a discarded painting from a Dumpster outside a New York University dormitory building. The "dorm dive" is one of the ways that freegans obtain household goods.

Although the freegan movement was very loosely structured, freegans used the Internet extensively for networking, sharing information, and organizing. Some of the examples of freegan Web sites include New York-based Freegan.info (www.freegan.info), UK Freegans (www.freegan.org.uk), and the Australian-originated Live4Free (www.live4free.org) Web site and blog. Numerous YouTube clips showed freegans in action; among the clips were videos taken on Dumpster-diving outings, giving tips for the novice, and showing the preparation of food obtained from the trash.

A freegan in London searches through supermarket bins for food. By such foraging, freegans both avoid being wasteful and challenge consumerism.

Freegans have run into roadblocks and dangers. Squatting, for example, was illegal nearly everywhere, and people who lived in abandoned housing could be forced to move at any time. Gardening on vacant property was also a tenuous proposition, subject to actions by property owners. Even Dumpster diving was not without its dangers, and many cities passed laws against the practice. (Such laws might be justified as protection from identity theft or trespassing.) Hostile retailers poured bleach on discarded food; friendlier business owners, however, put goods carefully in the trash so that they might be recovered.

All movement participants adopted lifestyles that to one degree or another involved getting things for free instead of buying them and bartering and sharing goods and services outside the market economy. Critics charged that the freegan lifestyle was in fact dependent on the capitalist system that it claimed to want to undermine, since participants relied on the system's waste. In response, freegans noted that they would welcome less waste. Meanwhile, they were glad to bring attention to the excesses of the culture.

Mary Grigsby is Associate Professor of Rural Sociology at the University of Missouri at Columbia and the author of Buying Time and Getting By: The Voluntary Simplicity Movement.

(Top) Joe Fornabaio—The New York TImes/Redux,
(bottom) Luke MacGregor—Reuters/Landov

The Precepts of Traditional Chinese Medicine

by Nan Lu

In one of the spectacles for the opening ceremonies of the XXIX Olympiad in Beijing on Aug. 8, 2008, more than 2,000 performers appeared to float onto the performance area while carrying out the graceful movements of *taijiquan*. Many spectators in the global audience outside China may have been familiar with *taijiquan* (or tai chi, as it is commonly called) as one of the internal martial-arts practices. Most, however, were probably unaware that *taijiquan* is used as a treatment for chronic illness or in rehabilitation for pain in traditional Chinese medicine (TCM). Modern research has also recognized this practice as effective for improving a number of health conditions, such as high blood pressure and poor balance. During the Olympics, television viewers worldwide were introduced to various other aspects of TCM, including acupuncture—the most familiar TCM treatment modality in the West.

Traditional Chinese medicine is one of the oldest continuously practiced medical systems in the world. Elements of the system have been in existence for at least 5,000 years. Despite the general lack of knowledge about TCM in the United States, as of 2005 there were more than 22,000 practitioners of AOM (acupuncture and Oriental medicine) licensed to practice in the U.S. (About one-third of these practitioners were in California.) In addition, there were about 7,000 students enrolled in AOM colleges, and about 60 colleges and other institutions were accredited with the Accreditation Commission for Acupuncture and Oriental Medicine, a not-for-profit organization founded in the U.S. in 1982.

What Is Special About TCM? TCM is a by-product of the Eastern spiritual practice of *qigong* (pronounced "chee gung"), or "energy work," which serves to strengthen the mind-body-spirit connection and to help the body operate as one harmonious system. Although the underpinnings of TCM are sometimes considered to be a system of philosophy, TCM practitioners understand that this comprehensive medical system is rooted in natural law and see its principles and theories operating in the physical world. One key principle is yinyang. It states that two types of complementary energies make up the whole of everything physical and nonphysical. Whenever yin or yang energy is out of balance, problems will arise. Applied to human health, imbalances of yin and yang within the body are manifested through different kinds of health disorders.

Whereas Western medicine focuses primarily on disease and disease management, TCM works to achieve health

A patient at the Huangzhigno Traditional Chinese Massage and Acupuncture Clinic in Shanghai is shown receiving moxibnstion treatment, in which the herb moxa *is being burned atop needles. The clinic is the largest private clinic for Chinese traditional massage and acupuncture in Shanghai.*

Nir Elias—Reuters/Landov

through balance and harmony of the body as a whole in which complementary energies seamlessly intertwine and move together as one. It strives to return the body to an internal state of balance, after which the body will automatically regulate itself to maintain its harmony within. For that purpose TCM employs six major healing techniques: acupuncture, acupressure, *qigong*, herbal therapy, healing foods, and Chinese psychology.

The Role of Qi and Meridians. An essential aspect of TCM is an understanding of the body's qi (life force, or energy), which flows through invisible meridians (channels) of the body. This energy network connects organs, tissues, veins, nerves, cells, atoms, and consciousness itself. Generally speaking, there are 12 major meridians, each of which connects to one of the 12 major organs in TCM theory. Meridians are also related to a variety of phenomena, including circadian rhythms, seasons, and planetary movements, to create additional invisible networks.

In acupuncture, thin needles are inserted into specific points along the meridians. The needles stimulate the meridians and readjust the flow of qi to balance the body's yin and yang. In place of needles, massage (acupressure) can also be used to stimulate the acupuncture points. Acupuncture is sometimes accompanied by moxibustion, the burning of small cones of an herb (typically *Artemisia moxa*) at acupuncture points. Not only can the meridian network be used to alleviate symptoms; it can also endow TCM with the ability to change consciousness in those who receive treatment.

A TCM practitioner uses smell, hearing, voice vibration, touch, and pulse diagnosis to discover the source of an unbalanced health condition, which organ it is related to, and which meridians are affected. In addition, the practitioner typically makes use of what is known as the five-element theory. By observing natural law in action, ancient healers recognized five basic elements in the world—wood, fire, earth, metal, and water—and found that these elements have myriad correspondences, both visible and invisible. This framework helps skilled TCM practitioners to identify unbalanced relationships. For instance, one key correspondence relates to time of day. If an individual always gets a headache at 4 PM, this signals that Bladder qi is unbalanced, since the Bladder (of the TCM Kidney/Bladder organ pair) is in charge of maintaining the body's functions at that time. Using the five-element theory, the practitioner can create a healing plan that might contain such components as acupuncture, herbs, lifestyle changes, and foods for healing. It might also include Chinese psychology, which shows how the energy of unbalanced emotions can affect proper organ function.

In a Singapore TCM pharmacy, members of the staff arrange and wrap various herbs and roots used in herbal therapy.

Chinese Herbal Therapy. TCM makes use of herbs and herbal formulas to strengthen organ function and support good health. An understanding of the essence of various herbal components gives the TCM practitioner a way to create a healing effect that reaches beyond the chemical composition and physical properties of the herbs. The practitioner chooses the herbal formula whose essence, or signature energy vibration, correctly stimulates or adjusts the body's own energy vibration.

Chinese herbal formulas, some in use for about two thousand years, are composed of ingredients chosen to function in combination with each other. In Western medicine, medications are usually prescribed individually for a specific effect. In classical TCM herbal formulas, each herb has a different purpose or role to help the body achieve harmony. For a plant to have been included in the Chinese apothecary, each of its parts had to be identified for a different healing purpose. TCM also looks at the healing properties of foods in the same way. Different foods carry different energies that can go directly to specific organs to help them heal.

TCM Developments. Various Western scientific disciplines have conducted studies to learn how Chinese medicine works, but it is difficult to use a Western yardstick to measure Eastern medicine. Many studies on acupuncture, for example, involve research that attempts to prove that this modality can eliminate or reduce pain or alleviate certain conditions. This elementary approach, however, ignores the deeper insight and experience of Chinese medicine that the human body has unlimited healing power and that the complementary energies of health and disease reflect the yinyang principle within the body. For example, the yinyang principle can be applied to a genetic disease such as inherited breast cancer and its associated genes *BRCA1* and *BRCA2*. According to this principle, if either of these genes is activated, somewhere in another part of the genetic code there also exists a gene to fix the action of the cancer gene, because there is an opposite energy to the one that produced the disease. There must be complementary programs running—one for developing the disease and one for healing it. At present, scientific research is directed only toward exploring the disease aspect of the program, but this is only one-half of the genetic code. We have yet to begin the far-more-promising exploration of the healing aspect of the genetic code. In the future this uncharted territory could yield tremendous healing benefits.

Nan Lu is an Oriental Doctor of Medicine and the Founding Director of the Traditional Chinese Medicine World Foundation.

Peter Kneffel—dpa/Landov

A Serious Fracture in the Anglican Church

by R. Scott Appleby

In 2003 the American Episcopal Church opened a rift in the worldwide Anglican Communion (Church of England) by consecrating the first openly gay bishop, the Right Rev. V. Gene Robinson. Reflecting the challenges of maintaining unity across the diverse cultural landscapes contained within a global church, the controversy rose to a fever pitch in 2008, prior to the decennial conference of the Anglican bishops, held July 16–August 3 in Canterbury, Eng. The Anglican bishops of Africa, Asia, and South America, whose collective following vastly outnumbered communicants in Great Britain and North America combined, strenuously objected to the consecration, calling it both an abomination and an abandonment of doctrine. Prelates and priests from these conservative wings cited Old Testament texts prohibiting sodomy and accused the progressive wing of the church of being "culturally deaf."

Bishops from around the world file out of Canterbury Cathedral in July following a service to mark the opening of the Anglican Communion's decennial Lambeth Conference.

The rift handed Rowan Williams, archbishop of Canterbury and head of the Anglican Communion since 2002, the most significant crisis of his tenure. Williams, however, remained silent for the most part, refraining from taking sides. He neither explicitly endorsed nor condemned the appointment of Bishop Robinson, but his calls for restraint by both sides largely went unheeded. In stark contrast, Archbishop Peter Akinola of Nigeria and Archbishop Henry Luke Orombi of Uganda were outspoken critics of what they judged to be the liberal drift of the Anglican Church on matters of sexuality and gender, citing the official "tolerance" of homosexuality, the sanctioning of same-sex marriages (in parts of Canada and the U.S.), and the ordination of women to the clergy. Conservative elements of the church in Great Britain and North America rallied to the support of these dissenting bishops, who called for the establishment of a separate conservative section of the communion with its own governing bishops. Shortly there appeared the early signs of a full-blown schism dividing the Anglican Communion into separate churches.

The looming possibility of a schism could not be explained by examining religious issues in isolation from their historical, demographic, geographic, and political contexts. For example, the rift reopened historical arguments about the location of governing authority in the communion. Historically, the archbishop of Canterbury, embodying the unity of the church, has exercised supreme doctrinal and organization authority over its various congregations. The enduring controversy over sexuality is thus also a challenge to the traditional seat of Anglican governance and calls into question the viability of the whole Anglican Church as a communion.

Demographic trends likewise argue in favour of a shift in the location of authority away from Canterbury. Membership in the church has been growing rapidly in Africa, where more than half of all Anglicans worldwide now reside, while membership in the Global North—Britain and North America—has been steadily declining. Hence, Africa and Asia are aware that they represent the future of the church, and their bishops and pastors are increasingly unwilling to obey the "dictates" of the Global North. These self-proclaimed "traditionalists" locate authority for their pronouncements not in a particular episcopal see but rather in a strict reading of scriptural passages. Archbishop Akinola has been especially vocal on this point, and his language has often been incendiary. He has declared that he and his followers "will not abdicate our God-given responsibility and simply acquiesce to destructive modern cultural and political dictates."

The conservative insurgency was bedeviled by its own internal fractures,

Gareth Fuller—PA Photos/Landov

however, which stalled momentum toward a formal schism. A relatively small, hard-line subset of the larger conservative movement issued its formal declaration of a schism. Calling on the U.S. Episcopal Church to repent and rescind Bishop Robinson's ordination, the hardliners issued a declaration of beliefs, titled "The Way, the Truth and the Life," which was partly authored by Archbishop Akinola. "We want unity, but not at the cost of relegating Christ to the position of another 'wise teacher' who can be obeyed or disobeyed," the statement read. "We earnestly desire the healing of our beloved Communion, but not at the cost of re-writing the Bible to accommodate the latest cultural trend. . . . This very Communion has already been broken by the actions of the American and Canadian Churches."

This declaration of a formal schism failed to be supported, however, by a larger gathering of conservative clerics who, meeting in Jerusalem a month prior to the Lambeth Conference, convened to state their positions formally. The Jerusalem conference, known as GAFCON (Global Anglican Future Conference), drew back from declaring a formal schism but nevertheless produced some divisive pronouncements, most significantly the establishment of a fellowship of conservative Anglicans within the communion, to be governed by its own separate group of archbishops. GAFCON also repudiated the archbishop of Canterbury's authority to decide who is or is not Anglican. Archbishop Williams condemned the move, asserting that "the new body has no legal standing and challenges Christian teachings of tolerance."

The alliance between conservatives in the Global South and conservatives in the Global North is an alliance of convenience. "Traditionalists" in the Global South support a hard-line position on the issue of homosexuality because of specific political circumstances. Unlike conservatives in the Global North, however, they support liberal positions on global warming and multilateral interventions for security and humanitarian causes. In Africa, especially in Nigeria, bishops such as Akinola feel compelled by political necessity to take a hard-line position on issues such as homosexuality. Christian churches in Nigeria compete with Islam for converts and fear being characterized as "soft on homosexuality" in contrast to Islam's uncompromising condemnation. In addition, an intolerant attitude toward homosexuality is a legacy of British colonial law.

Although barred from attending the Lambeth Conference, the Right Rev. V. Gene Robinson, the Anglican Church's first openly gay bishop, tours an area outside the meeting where various Christian organizations run booths and display signs.

Philip Jenkins, professor of religious studies and history at Pennsylvania State University, notes that the Old Testament, read with exacting devotion to its (presumed) literal meaning, is the sacred text of choice in the Global South. Not least, African and some Asian Christians, struggling to survive in agrarian societies still plagued by drought, disease, famine, and other hardships, find resonance in the biblical accounts of the plight of the Israelites. As these regions are likely to be severely affected by climate changes and global warming, members of the church community in the Global South take more liberal positions on international political issues—but not on social issues. The plagues visited upon the Israelites are remote for most Anglicans of the West, who prefer an allegorical reading of the way the Bible relates to the lives of wealthier Christians. As a consequence, interpretations of scripture by Global North conservatives tend to stand apart from, or even undermine, the hermeneutics, or strategies of interpretation, favoured by conservatives of the Global South. Nonetheless, some parishes in the Global North (in Virginia, Pennsylvania, and South Carolina, for example) and in Australia placed themselves under the authority of bishops in Africa to protest what they view as an excessively progressive home church—thereby violating the "one territory, one church" rule.

Further evidence of the possibility of a permanent schism arrived with the announcement, in early December 2008, that conservatives alienated from the Episcopal Church were founding their own rival denomination, known as the Anglican Church in North America. In a history-making departure from tradition, the province is to be defined not by geography but by theological orientation. Bishop Robert Duncan of Pittsburgh, a conservative who led his diocese out of the Episcopal Church in October, was named the archbishop and primate of the North American church, which said that it would have 100,000 members (compared with 2.3 million in the Episcopal Church). The conservatives intend to seek the approval of leaders in the global Anglican Communion for the new province. If they should receive broad approval, their effort could lead to new defections from the Episcopal Church, the American branch of Anglicanism. In short, the bonds of the family of churches in the Anglican Communion have weakened significantly; the conservative faction is powerful and growing in numbers, especially in the Global South; and the dissidents will doubtless be a force in determining the future course of the Anglican Church.

R. Scott Appleby is a Professor of History and John M. Regan, Jr., Director of the Joan B. Kroc Institute for International Peace Studies at the University of Notre Dame.

Andrew Winning—Reuters/Landov

Turkey's Secular/Islamic Conundrum

In early February head-scarf-wearing demonstrators in Istanbul show their support for a constitutional amendment that would lift the ban on the Muslim head scarf at Turkish universities.

by Metin Heper

By the summer of 2008, there was an urgent need in Turkey for a consensus on the true meaning of laicism (secularism) between the secularist establishment (primarily the military, the Constitutional Court, and members of the opposition Republican People's Party [CHP]) on the one hand and the centre-right, religiously oriented Justice and Development Party (AKP) government led by Pres. Abdullah Gul and Prime Minister Recep Tayyip Erdogan on the other. Turkey's ability to solve this conundrum was proving to be rather difficult; members of the secularist establishment believed that the country was in danger from political Islam and thus subscribed to a kind of didactic laicism for keeping Turkey a secular country, while the AKP government did not accept that Turkey faced such an existential threat and insisted on democratic laicism for advancing liberal democracy in the country.

According to its 1924, 1961, and 1982 constitutions, Turkey was defined as a "laic" (secular) republic. This very concept of laicism, however, had been a matter of bitter conflict since 2002, when the AKP won a majority of seats in the Grand National Assembly and Erdogan formed the party's first government. The secular establishment perceived laicism as an overall way of life. In this view the state has the authority to dictate the manner in which Muslim citizens of the country are allowed to practice their religion; this includes the enforcement of a dress code that forbids the wearing of the Muslim head scarf by female students at primary and secondary schools and at universities. The AKP argued that the state should only ensure that religion is not used for political purposes but should otherwise remain indifferent to the religious preferences of the people and the manner in which they live their faith.

The secular establishment in Turkey adopted a didactic approach apropos of religion because it viewed Islam as a dogmatic threat to the country's secular foundations. In order to render legitimate their self-designated role as guardians of this particular conception of Islam, representatives of this group presented themselves as "Ataturkists." Kemal Ataturk, founder of the Republic of Turkey, was still held in high esteem by a great majority of the Turkish people, although not all of them necessarily had a similar take on their religion.

For those in the secular establishment, Islam should be only an apolitical religious belief and, at most, an ethical system. Thus, the wearing of a Muslim head scarf took on symbolic importance; for many devout Muslims it was regarded as central to the expression of their religious beliefs, while secularists perceived it as a way of injecting Islam into the communal life and politics and thus as part of an organized effort for doing away with the laic republic. Although many people both in Turkey and in other countries disagreed, the secular establishment assumed that the practicing Muslims in the AKP government had a hidden agenda to bring back a

Sezayi Erken—AFP/Getty Images

state based on Islam. The issue returned to the forefront when Gul was elected president in 2007 and his wife, Hayrunnisa, insisted on appearing in public wearing a head scarf, despite its having been banned at all official functions.

With these views in mind, the CHP took the lead to prevent the AKP from pursuing what the secular opposition considered antilaic policies. Unable to defeat the AKP at the voting booth, the CHP covertly called upon the military to take a stand against the "Islamist stance on the part of the AKP government" and applied to the Constitutional Court in order to have the AKP's "antilaic" legislation annulled by that court. One such annulment concerned a constitutional amendment passed in February 2008 that lifted the ban on the wearing of head scarves at Turkish universities. The Constitutional Court in early June overturned that legislation, effectively reinstating the ban.

After the 2002 election Pres. Ahmet Necdet Sezer frequently vetoed "suspicious" legislation initiated by the AKP government and/or referred these laws to the Constitutional Court, which often annulled the contested legislation. Meanwhile, the military leadership from time to time made public announcements and advised caution to the government on matters related to laicism. On the eve of the 2007 presidential election, an e-memorandum appeared on the military's official Web site and registered its opposition to Gul's assuming the office of president. To what extent the e-memorandum really conveyed the views of the military High Command became a matter of debate, however, because the manner in which it was written and the fact that it was made public rather late at night differed from earlier memorandums.

The secular establishment's strongly held reservations about the AKP also derived from the way in which previous religiously oriented political parties and their leaders had conducted themselves. The impetus for the founding of the National Order Party (NOP), Turkey's first religiously oriented party, came from Mehmet Zait Kotku, a sheikh of the Nakshibandi religious order, who said that Turkey was in need of moral development based on Islam. Necmettin Erbakan, the leader of the NOP as well as two pro-Islamic successor parties (the Welfare Party and the Felicity Party), argued that there was an inherent contradiction between Islam and secularism and that religiously oriented people would eventually come to power, although it was not certain whether it would be "a bloody or bloodless" affair. When the Welfare Party formed a coalition government with the secular True Path Party in July 1996 and Erbakan became Turkey's first Islamist prime minister, the first country that he visited was Iran. The secularist establishment took this and similar developments and statements as harbingers of worse to come.

When the AKP won the 2002 election, it presented itself as a conservative-democratic party and, on the whole, acted as such. Not unlike other post-1980 governments, the AKP pursued pro-market policies, maintained Turkey's pro-Western foreign-policy stance, and, among other things, succeeded in getting accession negotiations started with the European Union. Domestically, the government tried to maintain harmonious relations with other political parties and with such state institutions as the military and the Constitutional Court. For instance, when the AKP faced stiff opposition to its efforts to enable the graduates of Muslim prayer leader and preacher high schools to compete equally for university admission with the graduates of other high schools, the government quickly put that project on the back burner.

In the 2007 general elections, the AKP won 46.6% of the vote (up from 34.3% in 2002) and 341 of the Grand National Assembly's 550 seats (a drop of 22). The CHP became the official opposition after finishing second with 20.9% and 112 seats, and the right-wing Nationalist Action Party was third with 14.3% of the vote and 71 seats. Having now obtained a clear mandate from the people, the AKP government selected Gul as president, initiated the constitutional amendment to drop the head scarf ban, and prepared a draft constitution that, if adopted, would take away some of the powers enjoyed by the military and the Constitutional Court. In March 2008 a prosecutor filed a lawsuit accusing the AKP of antisecular actions and demanding that AKP leaders be banned from further political activities for five years. The Constitutional Court on July 30 narrowly ruled that the AKP had not violated Turkey's secular principles to the point that it should be banned but that it had veered too far in an Islamic direction and therefore its public funding had to be cut in half. Although the ruling left the elected AKP government in power, it remained to be seen whether a delicate balance between pro-Islamists and the secular establishment could truly be achieved in Turkey.

A secularist student waves a flag bearing a portrait of Kemal Ataturk, the founder of the Republic of Turkey, as part of a counterdemonstration against those showing support for lifting the country's ban of Muslim head scarves on university campuses.

Burhan Ozbilici/AP

Metin Heper is a founding member of the Turkish Academy of Sciences and Dean of the Faculty of Economics, Administrative and Social Sciences at Bilkent University, Ankara, Turkey.

Terror in Mumbai

An Indian soldier takes cover outside the Taj Mahal Palace on November 29 as security forces prepare to launch a final push to end the nearly three-day terrorist siege, in which nearly 175 persons lost their lives and 300 were injured.

by Dr. Shanthie Mariet D'Souza

Beginning on the evening of Nov. 26, 2008, multiple terrorist attacks in Mumbai (Bombay), India's financial epicentre and the capital of western Maharashtra state, turned much of the city into a war zone for more than 60 hours. The attacks resulted in the deaths of at least 174 people, including 20 security force personnel and 26 foreign nationals. More than 300 persons were injured.

A group of 10 terrorists carried out the attacks, using automatic weapons and hand grenades as they targeted civilians at numerous sites in the southern part of the city, including the Chhatrapati Shivaji railway station, the popular Leopold Café, two hospitals, and a theatre. While most of the attacks ended within a few hours after they began at around 9:30 PM, the terror continued to unfold at three locations where hostages were taken—the Nariman House, where a Jewish outreach centre was located, and the luxury hotels Oberoi Trident and Taj Mahal Palace & Tower. By the time the standoff ended at the Nariman House on the evening of November 28, six hostages as well as two gunmen had been killed. At the two hotels, dozens of guests and staff were either trapped by gunfire or held hostage. Indian security forces ended the siege at the Oberoi Trident around midday on November 28 and at the Taj Mahal Palace on the morning of the following day. Nine of the 10 terrorists were killed, and one was arrested.

Amid speculation regarding the identity of the terrorists, an unknown group calling itself Mujahideen Hyderabad Deccan claimed responsibility for the attacks in an e-mail; however, the e-mail was later traced to a computer in Pakistan, and it became obvious that no such group ever existed. The way the terrorists had reportedly singled out Western foreigners at both of the luxury hotels and at the Nariman House led some to believe that the Islamic militant group al-Qaeda was possibly involved, but this appeared not to be the case after the lone arrested terrorist, Mohammad Ajmal Amir, provided substantial information regarding the planning and execution of the attacks. Amir, a native of Pakistan's Punjab province, told investigators that the 10 terrorists underwent prolonged guerrilla-warfare training in the camps of the Pakistani-based terrorist organization Lashkar-e-Taiba. He further revealed that the team of terrorists had spent time at the headquarters of a second and related organization, Jamaat-ud-Dawa, in the city of Muridke before traveling from Punjab to the port city of Karachi and setting out for Mumbai by sea. After first traveling aboard a Pakistani-flagged cargo ship, the gunmen hijacked an Indian fishing boat and killed its crew; then, once they were near the Mumbai coast, they used inflatable dinghies to reach Badhwar Park and the Sassoon Docks, near the city's Gateway of India monument. At that point the group of terrorists split into small teams and set out for their respective targets.

The November attacks exposed loopholes in the security system that India had in place to deal with this "new brand" of terrorism—urban warfare characterized by symbolic attacks, multiple targets, and high casualties. Subsequent reports indicated that several intelligence warnings by Indian as well as U.S. sources had preceded the attacks but that authorities, citing the lack of "actionable intelligence," had ignored them. Moreover, there was an inordinate delay in the deployment of India's elite National Security Guards, whose commandos reached the besieged hotels only some 10 hours after the first shootings took place on November 26. The lack of coordination between authorities in the Indian capital of New Delhi and officials in Maharashtra state also weakened the immediate crisis response. India's interior minister, Shivraj Patil, who was widely criticized in the aftermath of the attacks, tendered his resignation on November 30, declaring that he took "moral responsibility" for the assault.

With evidence pointing to the attacks' having originated within Pakistan's territory, India on November 28 requested the presence of Lieut. Gen. Ahmed Shuja Pasha, director general of Pakistan's intelligence agency, as its investigation process got under way. Pakistan at first agreed to this request but subsequently backpedaled, offering to send to India a representative for the director general instead of Pasha himself.

David Guttenfelder/AP

The immediate impact of the attacks was felt on the ongoing peace process occurring between the two countries. Alleging inaction by Pakistani authorities on terrorist elements, Pranab Mukherjee, India's external affairs minister, stated, "If they don't act, then it will not be business as usual." India later canceled its cricket team's tour of Pakistan that had been scheduled for January–February 2009.

India's attempt at pressuring Pakistan to crack down on terrorists within its borders was strongly supported by the international community. U.S. Secretary of State Condoleezza Rice and British Prime Minister Gordon Brown toured both India and Pakistan following the attacks in Mumbai. In a flurry of diplomatic activity that was essentially viewed as an exercise in "conflict prevention," U.S. officials and others urged Pakistan's civilian government to take action against those suspected of involvement in the attacks. The danger that tensions might escalate between the two nuclear-armed neighbours ran high. India, however, refrained from amassing troops at the Pakistani border as it had following the Dec. 13, 2001, attack on India's Parliament, which had also been carried out by Pakistani-based militants. Instead, India focused on building international public support through various diplomatic channels and through the media. India made a plea to the UN Security Council for sanctions against Jamaat-ud-Dawa, contending that the group was a front organization for Lashkar-e-Taiba, which had been banned by Pakistan in 2002. Acceding to India's request, the Security Council imposed sanctions on Jamaat-ud-Dawa on December 11 and formally declared the group a terrorist organization.

Pakistan claimed to have arrested Zaki-ur-Rehman Lakhvi, a senior leader of Lashkar-e-Taiba and the suspected mastermind of the Mumbai attacks, on December 8. Pakistani security forces carried out raids on the Jamaat-ud-Dawa offices across the country. This crackdown, however, lasted only a few days, after which the security cordons that had been placed around Jamaat-ud-Dawa offices were relaxed. In explanation, Pakistani Prime Minister Yousaf Raza Gillani stated that the activities of Jamaat-ud-Dawa should not be blocked, since "thousands of people are benefiting" from what he described as the group's "welfare activities." Pakistan further maintained that India did not provide it with sufficient evidence against a number of suspected terrorists and that any action against these suspects was possible only after such evidence had been provided "through diplomatic channels instead of the media." Pakistan refused India's demand that it extradite 20 persons for their alleged involvement in several terrorist attacks on Indian territory.

The terrorist attacks in Mumbai prompted the Indian government to introduce important new institutions as well as legal mechanisms to fight terrorism. On December 17 the Indian Parliament consented to the creation of the National Investigation Agency, a federal counterterrorism group whose functions would be similar to many of those of the U.S. Federal Bureau of Investigation. Parliament also approved amendments to the Unlawful Activities (Prevention) Act that incorporated stringent mechanisms to contain and investigate terrorism. Although myriad comparisons were made between the Sept. 11, 2001, attacks in the U.S. and those that occurred in Mumbai, the latter outbreak of terrorism was of a much more limited scale, in terms of both casualties and financial implications. The Mumbai attacks did, however, evoke a similarly strong national and international outcry against such violence and renewed calls to increase efforts to deal with the menace of terrorism.

Employees and guests of the Taj Mahal Palace & Tower—one of the sites of the multiple terrorist attacks that rocked Mumbai in late November—use curtains to escape the top floor of the luxury hotel.

Lorenzo Tugnoli—AFP/Getty Images

Dr. Shanthie Mariet D'Souza is an Associate Fellow at the Institute for Defence Studies and Analyses in New Delhi.

Games of the XXIX Olympiad

by Melinda C. Shepherd

During Aug. 8–24, 2008, Beijing, along with six other cities in China (Qingdao, Hong Kong, Tianjin, Shanghai, Shenyang, and Qinhuangdao), opened the Middle Kingdom to the world as the host of the Games of the XXIX Olympiad. A record 204 National Olympic Committees (NOCs)—including first-time participants Marshall Islands and Tuvalu and separate teams for Montenegro and Serbia—sent about 11,000 athletes to the Games. Since 2001, when the International Olympic Committee (IOC) selected Beijing as host city, China had invested huge sums of money in urban renewal, expanded infrastructure, and construction of Olympic facilities in the seven cities. In the lead-up to the Games, journalists complained about restricted access to some international Web sites from within China, and pro-Tibet demonstrators interrupted the Olympic torch relay, especially in some European cities. Air pollution was less of an issue than had been expected, though heat and rain interfered with some events. Overall, the Games were well received, and the architecturally stunning facilities, notably the Bird's Nest stadium and Water Cube swimming facility, were deemed outstanding.

Five new events were added to the Olympic schedule in Beijing: BMX motocross cycling (for men and women), 10-km open-water swimming (for men and women), and women's 3,000-m steeplechase in track and field (athletics). Competitors set 132 Olympic records (66 in swimming), including 43 world records (25 in swimming).

A record 87 NOCs earned at least one of the 958 medals awarded (302 gold) in the 28 sports, with 68 winning more than one medal. Afghanistan, Mauritius, Tajikistan, and Togo earned their first-ever medals, while Bahrain, Mongolia, and Panama took home their first golds. China, with a total of 100 medals, won the most golds (51), but the U.S. captured the most medals overall, 110 (36 gold). Russia finished third with 72 (23), followed by Great Britain with 47 (19) and Australia with 46 (14).

Fireworks shoot high above the Bird's Nest, Beijing's National Stadium, during the spectacular Olympic closing ceremony on August 24. The striking Water Cube aquatic facility (left) was where American swimmer Michael Phelps captured a record eight gold medals during the 2008 Olympic Games.

Xu Jiajun—Xinhua/Landov

Among the individual athletes, 132 were multiple medalists, led by American swimming icon Michael Phelps, who captured a record eight gold medals and seven world records (plus one additional Olympic record) in his eight finals and thus broke the record for a single Olympics set by swimmer Mark Spitz of the U.S. at the 1972 Munich Games. Phelps's 8 golds, added to the 6 he earned in Athens in 2004, made him the most outstanding Olympian in history, while his career total of 16 medals put him second only to Soviet gymnast Larisa Latynina, with 18 career medals (9 gold). Phelps's teammate Natalie Coughlin was the top woman competitor in Beijing, with six medals (one gold), while American gymnast Anastasia (Nastia) Liukin (*see* BIOGRAPHIES) earned five, including gold in the women's individual all-around competition.

On the track, Jamaica's Usain Bolt (*see* BIOGRAPHIES) accomplished a sensational hat trick, taking gold in all three of his events in world-record time: the 100- and 200-m sprints and the 4 × 100-m relay. China won seven of the eight diving gold medals, including two more for defending double champion Guo Jingjing (*see* BIOGRAPHIES). Other standouts included Scottish cyclist Chris Hoy (*see* BIOGRAPHIES), whose three gold medals helped to lead Great Britain to its best Olympics in 100 years; American Dara Torres, who confounded the naysayers by taking three swimming medals (all silver) at age 41; Italy's five-time foil fencing world champion Valentina Vezzali, who won her third straight individual Olympic gold (plus the bronze for team foil); and three-time beach volleyball world champions (and defending Olympic champions) Misty May-Treanor and Kerri Walsh of the U.S. (*see* BIOGRAPHIES).

Melinda C. Shepherd is Senior Editor of Encyclopædia Britannica Yearbooks.

Archery

Event	Men	Women
Individual	V. Ruban (Ukr.)	Zhang Juan Juan (China)
Team	South Korea	South Korea

Badminton

Class	Gold Medalist
Men's singles	Lin Dan (China)
Men's doubles	Indonesia
Women's singles	Zhang Ning (China)
Women's doubles	China
Mixed doubles	South Korea

Baseball

Gold Medalist South Korea

Basketball

Men United States **Women** United States

Boxing

Class	Gold Medalist	Class	Gold Medalist
48 kg	Zou Shiming (China)	69 kg	B. Sarsekbayev (Kazakh.)
51 kg	S. Jongjohor (Thai.)	75 kg	J. Degale (GrBrit.)
54 kg	B. Enkhbat (Mong.)	81 kg	Zhang Xiaoping (China)
57 kg	V. Lomachenko (Ukr.)	91 kg	R. Chakhkiev (Russia)
60 kg	A. Tishchenko (Russia)	91+ kg	R. Cammarelle (Italy)
64 kg	F. Díaz (Dom Rep.)		

Canoeing—Men

Event	Gold Medalist	Time*
500-m kayak singles	K. Wallace (Austl.)	1:37.252
1,000-m kayak singles	T. Brabants (GrBrit.)	3:26.323
500-m kayak pairs	S. Craviotto/C. Perez (Spain)	1:28.736
1,000-m kayak pairs	M. Hollstein/Andreas Ihle (Ger.)	3:11.809
1,000-m kayak fours	Belarus	2:55.714
Slalom kayak singles	A. Grimm (Ger.)	171.70 pt
500-m canoe singles	M. Opalev (Russia)	1:47.140
1,000-m canoe singles	A. Sandor Vajda (Hung.)	3:50.467
500-m canoe pairs	Meng Guanliang/Yang Wenjun (China)	1:41.025
1,000-m canoe pairs	A. Bahdanovich/A. Bahdanovich (Belarus)	3:36.365
Slalom canoe singles	M. Martikan (Slvk.)	176.65 pt
Slalom canoe pairs	P. Hochschorner/P. Hochschorner (Slvk.)	190.82 pt

Canoeing—Women

Event	Gold Medalist	Time*
500-m kayak singles	I. Osypenko-Radomska (Ukr.)	1:50.673
500-m kayak pairs	Hungary	1:41.308
500-m kayak fours	Germany	1:32.231
Slalom kayak singles	E. Kaliska (Slvk.)	192.64 pt

Cycling—Men

Event	Gold Medalist	Time*
Road race	S. Sanchez (Spain)	6:23.49
Individual time trial	F. Cancellara (Switz.)	1:2:11.43
Individual pursuit	B. Wiggins (Gr.Brit.)	4.16.977
Team pursuit	Great Britain	3:53.314†
Sprint	C. Hoy (Gr.Brit.)	
Team sprint	Great Britain	43.128
Points race	J. Llaneras (Spain)	60 pt
Madison	J. Curuchet/W. Pérez (Arg.)	
Keirin	C. Hoy (Gr.Brit.)	
Mountain bike	J. Absalon (Fr.)	1:55:59
Motocross/BMX	M. Strombergs (Latvia)	36.190

Cycling—Women

Event	Gold Medalist	Time*
Road race	N. Cooke (Gr.Brit.)	3:32.24
Individual time trial	K. Armstrong (U.S.)	34.51.72
Individual pursuit	R. Romero (Gr.Brit.)	3.28.321
Sprint	V. Pendleton (Gr.Brit.)	
Points race	M. Vos (Neth.)	30 pt
Mountain bike	S. Spitz (Ger.)	1:45:11
Motocross BMX	A.-C. Chausson (Fr.)	35.976

Diving—Men

Event	Gold Medalist	Score
3-m springboard	He Chong (China)	572.90
10-m platform	M. Mitcham (Austl.)	537.95
3-m synchronized	Wang Feng/Qin Kai (China)	469.08
10-m synchronized	Lin Yue/Huo Liang (China)	468.18

Diving—Women

Event	Gold Medalist	Score
3-m springboard	Guo Jingjing (China)	415.35
10-m platform	Chen Ruolin (China)	447.70
3-m synchronized	Guo Jingjing/Wu Minxia (China)	343.50
10-m synchronized	Wang Xin/Chen Ruolin (China)	363.54

Equestrian

Event	Individual/Horse	Team
3-day event	H. Romeike (Ger.)/Marius	Germany
Dressage	A. van Grunsven (Neth.) Salinero	Germany
Jumping	E. Lamaze (Can.)/Hickstead	United States

Fencing

Event	Men	Women
Individual foil	B. Kleibrink (Ger.)	V. Vezzali (Italy)
Team foil		Russia
Individual epee	M. Tagliariol (Italy)	B. Heidemann (Ger.)
Team epée	France	
Individual sabre	Zhong Man (China)	M. Zagunis (U.S.)
Team sabre	France	Ukraine

Field Hockey

Men Germany **Women** The Netherlands

Gymnastics—Men

Event	Gold Medalist	Score
Team	China	286.125
All-around	Yang Wei (China)	94.575
Floor exercise	Zou Kai (China)	16.050
Vault	L. Blanik (Pol.)	16.537
Pommel horse	Xiao Qin (China)	15.875
Rings	Chen Yibing (China)	16.600
Parallel bars	Li Xiaopeng (China)	16.450
Horizontal bar	Zou Kai (China)	16.200
Trampoline	Lu Chunlong (China)	41.00

Gymnastics—Women

Event	Gold Medalist	Score
Team	China	188.900
All-around	N. Liukin (U.S.)	63.325
Floor exercise	S. Izbasa (Rom.)	15.650
Vault	Hong Un Jong (N.Kor.)	15.650
Uneven bars	He Kexin (China)	16.725
Balance beam	S. Johnson (U.S.)	16.225
Trampoline	He Wenna (China)	37.80
Indiv. rhythmic	Y. Kanayeva (Russia)	75.500
Team rhythmic	Russia	35.550

Handball

Men France **Women** Norway

Judo—Men

Class	Gold Medalist
60 kg	Choi Min Ho (S.Kor.)
66 kg	M. Uchishiba (Japan)
73 kg	F. Mammadli (Azer.)
81 kg	O. Bischof (Ger.)
90 kg	I. Tsirekidze (Geo.)
100 kg	I. Naidan (Mong.)
100+ kg	S. Ishii (Japan)

Judo—Women

Class	Gold Medalist
48 kg	A. Dumitru (Rom.)
52 kg	Xian Dongmei (China)
57 kg	G. Quintavalle (Italy)
63 kg	A. Tanimoto (Japan)
70 kg	M. Ueno (Japan)
78 kg	Yang Xiuli (China)
78+ kg	Tong Wen (China)

Modern Pentathlon

Men A. Moiseyev (Russia) **Women** L. Schoneborn (Ger.)

Rowing—Men

Event	Gold Medalist	Time*
Single sculls	O. Tufte (Nor.)	6:59.83
Double sculls	D. Crawshay/S. Brennan (Austl.)	6:27.77
Quadruple sculls	Poland	5:41.33
Coxless pairs	D. Ginn/D. Free (Austl.)	6:37.44
Coxless fours	Great Britain	6:06.57
Eights	Canada	5:23.89
Ltwght double sculls	Z. Purchase/M. Hunter (Gr.Brit.)	6:10.99
Ltwght fours	Denmark	5:47.76

Rowing—Women

Event	Gold Medalist	Time*
Single sculls	R. Nevkova (Bulg.)	7:22.34
Double sculls	G. Evers-Swindell/C. Evers-Swindell (N.Z.)	7:07.32
Quadruple sculls	China	6:16.06
Coxless pairs	G. Andrunache/V. Susanu (Rom.)	7:20.60
Eights	United States	6:05.34
Ltwght double sculls	K. van der Kolk/M. van Eupen (Neth.)	6:54.74

Shooting—Men

Event	Gold Medalist	Score
Rapid-fire pistol	O. Petriv (Ukr.)	780.2‡
Free pistol	Jin Jong Oh (S.Kor.)	660.4
Air pistol	Pang Wei (China)	688.2
Small-bore rifle, 3 pos.	Qiu Jian (China)	1272.5
Small-bore rifle, prone	A. Ayvazian (Ukr.)	702.7
Air rifle	A. Bindra (India)	700.5
Trap	D. Kostelecky (Cz.Rep.)	146‡
Double trap	W. Eller (U.S.)	190‡
Skeet	V. Hancock (U.S.)	145‡

Shooting—Women

Event	Gold Medalist	Score
Pistol	Chen Ying (China)	793.4‡
Air pistol	Guo Wenjun (China)	492.3‡
Small-bore rifle, 3 pos.	Du Li (China)	690.3‡
Air rifle	K. Emmons (Cz.Rep.)	503.5‡
Trap	S. Makela-Nummela (Fin.)	91‡
Skeet	C. Cainero (Italy)	93‡

Soccer

Men Argentina **Women** United States

Softball

Gold Medalist Japan

Swimming—Men

Event	Gold Medalist	Time*
50-m freestyle	C. Filho (Braz.)	21.30‡
100-m freestyle	A. Bernard (Fr.)	47.21
200-m freestyle	M. Phelps (U.S.)	1:42.96†
400-m freestyle	Park Tae Hwan (S.Kor.)	3:41.86
1,500-m freestyle	O. Mellouli (Tun.)	14:40.84
100-m backstroke	A. Peirsol (U.S.)	52.54†
200-m backstroke	R. Lochte (U.S.)	1:53.94†
100-m breaststroke	K. Kitajima (Japan)	58.91†
200-m breaststroke	K. Kitajima (Japan)	2:07.64‡
100-m butterfly	M. Phelps (U.S.)	50.58‡
200-m butterfly	M. Phelps (U.S.)	1:52.03†
200-m individual medley	M. Phelps (U.S.)	1:54.23†
400-m individual medley	M. Phelps (U.S.)	4:03.84†
4 x 100-m freestyle relay	United States	3:08.24†
4 x 200-m freestyle relay	United States	6:58.56†
4 x 100-m medley relay	United States	3:29.34†
10-km open water marathon	M. van der Weijden (Neth.)	1:51:51.6

Swimming—Women

Event	Gold Medalist	Time*
50-m freestyle	B. Steffen (Ger.)	24.06‡
100-m freestyle	B. Steffen (Ger.)	53.12‡
200-m freestyle	F. Pellegrini (Italy)	1:54.82†
400-m freestyle	R. Adlington (Gr.Brit.)	4:03.22
800-m freestyle	R. Adlington (Gr.Brit.)	8:14.10†
100-m backstroke	N. Coughlin (U.S.)	58.96
200-m backstroke	K. Coventry (Zimb.)	2:05.24†
100-m breaststroke	L. Jones (Austl.)	1:05.17‡
200-m breaststroke	R. Soni (U.S.)	2:20.22†
100-m butterfly	L. Trickett (Austl.)	56.73
200-m butterfly	Liu Zige (China)	2:04.18†
200-m individual medley	S. Rice (Austl.)	2:08.45†
400-m individual medley	S. Rice (Austl.)	4:29.45†
4 x 100-m freestyle relay	The Netherlands	3:33.76‡
4 x 200-m freestyle relay	Australia	7:44.31†
4 x 100-m medley relay	Australia	3:52.69†
10-km open water marathon	L. Ilchenko (Russia)	1:59:27.7
Synchronized duet	A. Davydova/A. Yermakova (Russia)	99.251 pt
Synchronized team	Russia	99.500 pt

Table Tennis

Event	Gold Medalist
Men's singles	Ma Lin (China)
Men's team	China
Women's singles	Zhang Yining (China)
Women's team	China

Taekwondo—Men

Event	Gold Medalist
58 kg	G. Pérez (Mex.)
68 kg	Son Tae Jin (S.Kor.)
80 kg	H. Saei (Iran)
80+ kg	Cha Dong Min (S.Kor.)

Taekwondo—Women

Event	Gold Medalist
49 kg	Wu Jingyu (China)
57 kg	Lim Su Jeong (S.Kor.)
67 kg	Hwang Kyung Seon (S.Kor.)
67+ kg	M. Espinoza (Mex.)

Tennis

Event	Gold Medalist
Men's singles	R. Nadal (Spain)
Men's doubles	R. Federer/S. Wawrinka (Switz.)
Women's singles	Y. Dementyeva (Russia)
Women's doubles	S. Williams/V. Williams (U.S.)

Track and Field (Athletics)—Men

Event	Gold Medalist	Score
100 m	U. Bolt (Jam.)	9.69†
200 m	U. Bolt (Jam.)	19.30†
400 m	L. Merritt (U.S.)	43.75
4 x 100-m relay	Jamaica	37.10†
4 x 400-m relay	United States	2:55.39‡
800 m	W. Bungei (Kenya)	1.44.65
1,500 m	R. Ramzi (Bahrain)	3:32.94
5,000 m	K. Bekele (Eth.)	12:57.82‡
10,000 m	K. Bekele (Eth.)	27:01.17‡
Marathon	S. Kamau Wansiru (Kenya)	2:06:32‡
110-m hurdles	D. Robles (Cuba)	12.93
400-m hurdles	A. Taylor (U.S.)	47.25
3,000-m steeplechase	B. Kiprop Kipruto (Kenya)	8:10.34
20-km walk	V. Borchin (Russia)	1:19:01
50-km walk	A. Schwazer (Italy)	3:37:09‡
High jump	A. Silnov (Russia)	2.36 m
Long jump	I. Aranda (Pan.)	8.34 m
Triple jump	N. Évora (Port.)	17.67 m
Pole vault	S. Hooker (Austl.)	5.96 m‡
Shot put	T. Majewski (Pol.)	21.51 m
Discus throw	G. Kanter (Est.)	68.82 m
Javelin throw	A. Thorkildsen (Nor.)	90.57 m‡
Hammer throw	P. Kozmus (Slvn.)	82.02 m
Decathlon	B. Clay (U.S.)	8,791 pt

Track and Field (Athletics)—Women

Event	Gold Medalist	Score
100 m	S.-A. Fraser (Jam.)	10.78
200 m	V. Campbell-Brown (Jam.)	21.74
400 m	C. Ohuruogu (Gr.Brit.)	49.62
4 x 100-m relay	Russia	42.31
4 x 400-m relay	United States	3:18.54
800 m	P. Jelimo (Kenya)	1:54.87
1,500 m	N. Jebet Langat (Kenya)	4:00.23
5,000 m	T. Dibaba (Eth.)	15:41.40
10,000 m	T. Dibaba (Eth.)	29:54.66‡
Marathon	C. Tomescu (Rom.)	2:26:44
100-m hurdles	D. Harper (U.S.)	12.54
400-m hurdles	M. Walker (Jam.)	52.64‡
3,000-m steeplechase	G. Samitova-Galkina (Russia)	8.58.81†
20-km walk	O. Kaniskina (Russia)	1:26:31‡
High jump	T. Hellebaut (Belg.)	2.05 m
Long jump	M. Higa Maggi (Braz.)	7.04 m
Triple jump	F. Mbango Etone (Camer.)	15.39 m‡
Pole vault	Y. Isinbayeva (Russia)	5.05 m†
Shot put	V. Vili (N.Z.)	20.56 m
Discus throw	S. Brown Trafton (U.S.)	64.74 m
Javelin throw	B. Spotakova (Cz.Rep.)	71.42 m
Hammer throw	A. Miankova (Bela.)	76.34 m‡
Heptathlon	N. Dobrynska (Ukr.)	6,733 pt

Triathlon

Men J. Frodeno (Ger.) **Women** E. Snowsill (Austl.)

Volleyball

Event	Men	Women
Beach	P. Dalhausser T. Rogers (U.S.)	M. May-Treanor K. Walsh (U.S.)
Indoor	United States	Brazil

Water Polo

Men Hungary **Women** The Netherlands

Weightlifting—Men

Class	Gold Medalist	Performance
56 kg	Long Qingquan (China)	292 kg
62 kg	Zhang Xiangxiang (China)	319 kg
69 kg	Liao Hui (China)	348 kg
77 kg	Sa Jae Hyouk (S.Kor.)	366 kg
85 kg	Lu Yong (China)	394 kg
94 kg	I. Ilin (Kazakh.)	406 kg
105 kg	A. Aramnau (Bela.)	436 kg†
105+ kg	M. Steiner (Ger.)	461 kg

Weightlifting—Women

Class	Gold Medalist	Performance
48 kg	Chen Xiexia (China)	212 kg‡
53 kg	P. Jaroenrattanatarakoon (Thai.)	221 kg
58 kg	Chen Yanqing (China)	244 kg‡
63 kg	Pak Hyon Suk (N.Kor.)	241 kg
69 kg	Liu Chunhong (China)	286 kg†
75 kg	Cao Lei (China)	282 kg‡
75+ kg	Jang Mi Ran (S.Kor.)	326 kg†

Wrestling—Men

Class	Freestyle	Greco-Roman
55 kg	H. Cejudo (U.S.)	N. Mankiyev (Russia)
60 kg	M. Batirov (Russia)	I.-B. Albiyev (Russia)
66 kg	R. Sahin (Tur.)	S. Guénot (Fr.)
74 kg	B. Saytiyev (Russia)	M. Kvirkelia (Geo.)
84 kg	R. Mindorashvili (Geo.)	A. Minguzzi (Italy)
96 kg	S. Muradov (Russia)	A. Khushtov (Russia)
120 kg	A. Tavmazov (Uzbek.)	M. López (Cuba)

Wrestling—Women

Class	Freestyle
48 kg	C. Huynh (Can.)
55 kg	S. Yoshida (Japan)
63 kg	K. Icho (Japan)
72 kg	Wang Jiao (China)

Yachting (Sailing)

Event	Gold Medalist
Men's 470	N. Wilmot/M. Page (Austl.)
Women's 470	E. Rechichi/T. Parkinson (Austl.)
Men's RS:X	T. Ashley (N.Z.)
Women's RS:X	Yin Jian (China)
Finn (open)	B. Ainslie (Gr.Brit.)
49er (open)	J. Warrer/M. Ibsen (Den.)
Laser (men)	P. Goodison (Gr.Brit.)
Laser radial (women)	A. Tunnicliffe (U.S.)
Star (men)	I. Percy/A. Simpson (Gr.Brit.)
Tornado (open)	F. Echavarri/A. Paz Blanco (Spain)
Yngling (women)	Great Britain

*Hr:min:sec, except as marked. †World record. ‡Olympic record.

Events of 2008

Thai demonstrators loyal to exiled former prime minister Thaksin Shinawatra surround the parliament in Bangkok on December 30.

Sakchai Lalit/AP

Anthropology and Archaeology

Researchers described the oldest-known HOMININ remains in Europe and the oldest evidence for human occupation in the Americas. Unique finds shed light on PRE-COLUMBIAN DIETS, and an 11,500-year-old SANCTUARY complex was revealed in Turkey.

ANTHROPOLOGY

Among the key developments in 2008 in the field of physical anthropology was the discovery by a large interdisciplinary team of Spanish and American scientists in northern Spain of a partial mandible (lower jaw) with several teeth still in place and an isolated lower premolar from the same individual. A combination of three different dating techniques indicated that the remains were 1.1 million–1.2 million years old, which made them the oldest-known hominin fossils in Europe by at least 250,000 years. The mandible was associated with 32 simple stone artifacts, including chert flakes, and with animal remains that clearly showed evidence of human processing. The site, Sima del Elefante, was located near Gran Dolina and several other sites in the Sierra de Atapuerca that had yielded many pre-*Homo sapiens* fossils. The new material was provisionally assigned to *Homo antecessor*, the supposed ancestor of *Homo heidelbergensis*. (*H. antecessor* was the same taxon to which previously reported remains from Gran Dolina had been assigned.) Similarities to earlier mandibular material from Dmanisi, Georgia, dated to 1.77 million years ago led to the following speculative scenario: hominins that emerged from Africa about 1.8 million years ago settled in the Caucasus and eventually evolved into *H. antecessor*, which in turn populated western Europe by 1.3 million years ago. Europe would therefore have been inhabited by hominins much earlier than previously thought and from migrations that originated in western Asia rather than directly from Africa.

A new study by two American paleoanthropologists confirmed that the six-million-year-old taxon *Orrorin tugenensis* was the oldest upright bipedal hominin in the fossil record. These Kenyan fossils, which were discovered in 2000, had been a source of controversy in terms of their supposed hominin affinities and locomotor capabilities. Previously, the oldest certain evidence for hominin bipedalism came from the 3.9-million–4.2-million-year-old Kenyan and Ethiopian fossils known as *Australopithecus anamensis*. The new analysis of *Orrorin* demonstrated that its femur (thighbone) most strongly resembled those of the australopithecines, including specimens from *Australopithecus afarensis* and members of the genus *Paranthropus*. *Orrorin* also shared distinctive hip biomechanics with the australopithecines that clearly distinguished their bipedalism from the structurally and functionally distinctive bipedalism characteristic of the genus *Homo*. Thus, the type of bipedalism characteristic of the australopithecines persisted for a period of at least four million years until adaptations specific to *Homo*, such as a shorter neck on the femur and a weaker mechanical advantage for the gluteus muscle, combined to produce a new kind of bipedalism. Since *Orrorin* differed so much from *Homo* in these analyses, the direct evolutionary connection that had once been proposed for these two taxa was considered highly unlikely.

An interdisciplinary team of Indian and American scientists discovered four tiny posterior teeth of the oldest-known Asian member of the Anthropoidea, the group that contains monkeys, apes, and humans. The fossil teeth, found in a lignite mine in Gujarat state in western India, were dated to about 54 million–55 million years ago by associated age-diagnostic marine-plankton fossils. The teeth, assigned to *Anthrasimias gujaratensis*, extended the fossil record of Asian anthropoids back 9 million–10 million years to the beginning of the Eocene. *Anthrasimias* was a very small primate, weighing only about 75 g (2.6 oz) and about the size of a modern mouse lemur. Its diet probably contained both fruit and insects. An analysis of the evolutionary history of 75 taxa and 343 craniodental and postcranial traits placed *Anthrasimias* at the base of the eosimiid clade (family Eosimiidae), an extinct group of primates. This analysis also supported the placement of *Ahlatlasius*, known from 58-million-year-old Moroccan fossil teeth, in the Eosimiidae family (and Anthropoidea), contrary to previous studies. As a consequence, the authors speculated that the origin of the order Primates probably occurred much earlier than these two genera, either in the early Paleocene or—as had been indicated previously by numerous molecular genetics studies—even in the preceding Cretaceous.

A team of human evolutionary geneticists extensively revised the standardized human Y-chromosome evolutionary tree, which was first published by the Y Chromosome Consortium in 2002. The new study, published

This partial lower jawbone, unearthed from a cave in northern Spain, showed that hominins lived in Europe at least 1.1 million years ago.

Jordi Mestre, EIA—Reuters/Landov

Prof. Dr. Klaus Schmidt

Prof. Dr. Klaus Schmidt

The excavation (left) uncovered one of a number of circles of stone pillars at Gobekli Tepe, a site in southeastern Turkey that was believed to have been a temple complex. Animal carvings (right) were found on another pillar at the site.

in May 2008 in *Genome Research*, more than doubled both the number of genetic markers (599) and the number of resulting haplogroups (311) and led to four major structural changes in the tree. Each marker was an identifiable paternal DNA variation that was inherited by the male descendants of the person in which the variation first occurred. The markers therefore revealed genetically related groupings of Y chromosomes, or haplogroups, which in turn helped show the migratory patterns of humans and how various populations were related to one another. The original standardized Y-chromosome tree had 18 major clades (branches), which corresponded to the major haplogroups designated A through R. The revised tree had two additional clades (haplogroups S and T), which were formerly part of haplogroup K. The deepest unresolved multiple branching in the tree was addressed by the discovery of a new genetic marker. The resulting supercluster of haplogroups was not typically found in sub-Saharan Africa and might have been carried out of Africa early in the modern human diaspora 65,000–70,000 years ago. The low level (about 2%) of homoplasy (marker duplication from independent identical mutations) that had been found in the Y-chromosome tree implied that it contained more accurate phylogenetic information than the maternally based human mitochondrial-DNA tree. Mitochondrial DNA had much higher levels of homoplasy owing to its frequent recurring mutations. The estimated ages for 11 major clades in the Y-chromosome tree ranged from 68,900 to 18,500 years. (STEPHEN L. ZEGURA)

ARCHAEOLOGY

Eastern Hemisphere. Two female figurines carved out of mammoth tusk some 22,000 years ago were among the finds that came to light in 2008 at the Upper Paleolithic site of Zaraysk, 155 km (96 mi) southeast of Moscow. The figurines, unearthed from a pair of storage pits, appeared to have been ritually buried. According to archaeologists Hizri Amirkhanov and Sergey Lev of the Russian Academy of Sciences, each figurine had been placed atop deposits of light, fine-grained sand and red ochre before being covered with a mammoth scapula and buried in earth.

An unusual carved chalk figure, thought to represent a hedgehog or a pig, was found in a child's grave that was unearthed in 2008 during archaeological excavations at Stonehenge, near Salisbury, Eng. According to Joshua Pollard of the University of Bristol, Eng., the small sculpture, which was dated to between 800 and 20 BC, might have been made for the baby or placed in the grave as an offering in memory of the child. The excavations were being conducted along a 6-m (19.5-ft)-high timber wall-and-ditch system built to the east of the Stonehenge core about 1,500–2,000 years after the well-known megaliths were erected (about 2,000 BC). The burial suggested that the site had continued to serve an important religious function later than previously believed.

The tomb of the Roman general Marcus Nonius Macrinus, a confidant of Roman emperor Marcus Aurelius (ruled AD 161–180), was found during construction work on the Via Flaminia on the east bank of Rome's Tiber River. Among the ruins of the 15-m (50-ft)-long column-lined mausoleum, a team led by archaeologist Daniela Rossi documented about one dozen biographical inscriptions that detailed the career of the Brescia-born general, who had served as a police commissioner and magistrate before playing a key role in the emperor's campaigns against the Germanic tribes of the North.

Hailed as the earliest-known temple in the world, the sanctuary complex of Gobekli Tepe in southeastern Turkey was unveiled to the public after more than a decade of investigations led by Klaus Schmidt of the German Archaeological Institute. The hilltop sanctuary, dated to about 9500 BC, contained numerous T-shaped limestone pillars that stood in circles that ranged from 10 to 30 m (33 to 100 ft) across. Twenty such circles had been located with ground-penetrating radar, and seven had been excavated to date. The pillars, up to

4 m (13 ft) in height, were thought to be highly stylized anthropomorphic figures, and many of them were carved with the images of animals, including boars, birds, snakes, foxes, lions, and scorpions. Residential architecture had yet to be found at the site, which underscored its role as a cult centre. Built by seminomadic hunter-gatherers in an age before the wheel, pottery, or domesticated plants and animals, Gobekli Tepe predated Mesopotamia's first cities by more than 5,500 years. Prior to its discovery, it was believed that such monumental sites could have been constructed only by the complex civilizations that arose after the adoption of agriculture.

Also in southeastern Turkey, the remains of a Neo-Assyrian governor's palace were unearthed during rescue excavations at Ziyaret Tepe, where the Assyrian king Ashurnasirpal II (ruled 883–859 BC) established his provincial capital of Tushhan in 882 BC. In addition to rooms with colourful wall paintings and tiled baths that would have had running water, excavations at the site revealed five cremation burials in the palace courtyard. Two of the burials were filled with opulent offerings—bronze vessels, stone and ivory objects, seals, and pearls. According to Dirk Wicke of the Johannes Gutenberg University, Mainz, Ger., the site would likely be inundated following the construction of the controversial Ilisu Dam.

The remains of a 5,000-year-old altar found in Greece atop Mt. Lykaion, one of several mythical birthplaces of Zeus, suggested that the site was in use as a cult centre 1,000 years before worship of the Greek deity began. According to David Gilman Romano of the University of Pennsylvania Museum of Archaeology and Anthropology, the site, which was near Olympia, also yielded abundant pottery, the remains of animals that may have been sacrificed there, and a rock-crystal seal that bore the image of a bull. The seal dated to the Late Minoan period (1400–1100 BC) and suggested a possible early connection between the Minoan civilization of Crete and the mainland.

The oldest-known sample of Hebrew writing was unearthed at Khirbet Qeiyafa, a 3,000-year-old fortified site 30 km (20 mi) southwest of Jerusalem. The five lines of script in proto-Canaanite, a precursor to Hebrew, were found on a potsherd at the two-hectare (five-acre) site and, according to project director Yosef Garfinkel, contained the words for *judge, slave, king,* and an early form of the Hebrew verb *to do.* A carbon-14 date obtained from olive pits and other pottery fragments at the site placed the writing of the text between 1000 and 975 BC—the time, said Garfinkel, of the legendary Israelite king David.

A section of the stone wall that encircled the city of Jerusalem 2,100 years ago reemerged during excavations on Mount Zion by Yehiel Zelinger and a team from the Israel Antiquities Authority. Although the structure had been uncovered by archaeologists in the 19th century, it was soon reburied. The mortarless wall, which dated to the so-called Second Temple Period, might represent ancient Jerusalem at its greatest extent. Early fertility figurines were recovered at the site in addition to objects that were left behind by the 19th-century excavators—beer bottles, a gas lamp, and a shoe. A second wall that was built during the Byzantine period was found in the upper levels of the excavation.

Evidence of mass killings was found at the 5,800-year-old site of Tell Majnuna, near Syria's border with Iraq and Turkey. Three mass graves were excavated by Augusta McMahon of the University of Cambridge. They contained the bones of 222 individuals—mostly young men of fighting age who were probably killed in local skirmishes or early invasions of the area by southern Mesopotamian city-states. The arrangement of the bones—skulls and long bones piled in separate heaps—and the absence of hands and feet suggested that the corpses had been left to decay for weeks or even months before they were buried, and broken pottery and cattle bones found in the upper levels of one grave were seen as evidence of a postkilling celebration.

In April a diamond-mining company that was building a seawall along Namibia's Skeleton Coast uncovered the remains of a 16th-century Portuguese trading ship, or *nau,* which had been carrying a cargo of copper, tin ingots, and ivory. Among the large number of recovered artifacts from the 30-m-long ship were cannon, cannonballs, and swords to fend off pirates; Oriental ceramics; pewter plates and jugs; rare navigational instruments; and more than 2,400 gold and silver Portuguese and Spanish coins, some of which had been minted in 1525. According to chief archaeologist Bruno Werz of the Southern African Institute of Maritime Archaeology, the vessel likely foundered while attempting to navigate the treacherous currents along this area of the African coastline.

A team of archaeologists found a 19-m (62-ft)-long statue of the Buddha in a sleeping position buried in the ground in Afghanistan's Bamiyan valley not far from where two enormous 1,500-year-old standing figures of the Buddha were destroyed by the Taliban regime in 2001. The statue—dated to the 3rd century AD—was badly damaged except for the neck and right hand. The archaeologists, led by Afghan-born Zemaryalai Tarzi, also recovered coins and ceramics that had been left by Buddhist pilgrims. Caves at the site yielded mid-7th-century-AD murals rendered in oil paint, which predated the first known use of the medium in Europe by more than 100 years.

In Jiangxi province in eastern China, archaeologist Changqing Xu unearthed a 2,500-year-old grave that contained 47 coffins and the remains of 28 people—likely servants sacrificed to accompany a provincial potentate into the afterlife. Among the hundreds of artifacts that were found in the burials, which dated to the late Spring and Autumn Period (770–476 BC), were elaborate silk textiles, gold and bronze pieces, and a lacquer sword decorated with a painted dragon design in gold, black, and red.

(ANGELA M.H. SCHUSTER)

Western Hemisphere. A report published in 2008 analyzed DNA from human coprolites (fossilized feces) that a team of excavators led by University of Oregon archaeologist Dennis Jenkins had unearthed several years earlier in the Paisley Caves of south-central Oregon. The DNA study identified genetic signatures that were associated with founding groups of Native Americans. The coprolites had been radiocarbon dated to 14,340 years ago, and they provided the earliest evidence for human occupation of the Americas. The date agreed well with the few other established dates for early settlement in North America and was more than 1,000 years earlier than the Clovis Paleo-Indian culture found throughout North America.

Terry Jones of California Polytechnic State University and colleagues showed that early humans in the Americas might have had less of a role in wiping out species of game than was once thought. *Chendytes lawi* was an extinct flightless sea duck that once flourished along the Pacific coast. The duck was a defenseless creature that was easily hunted by humans, and near Daisy Cave on San Miguel Island off the southern California coast, it was hunted

David Mercado—Reuters/Landov

An archaeologist works in a Tiwanaku burial in Bolivia near Lake Titicaca. The burial contained a gold pendant and headband (lower right).

as early as 9000 BC. For years it had been assumed that the ducks became extinct in a relatively short time, as many large Ice Age animals in the Americas did. The researchers, however, recovered *Chendytes* bones that dated to as recently as 500 BC. The species managed to survive in the face of human predation for more than 8,000 years, which suggested that if large Ice Age animals in the Americas were killed off through hunting, their extermination would have occurred over an extended period of time.

American and Russian archaeologists uncovered evidence that whaling in the Bering Strait took place 1,000 years earlier than previously suspected. The Un'en'en site, on the shore of Russia's Chukotka Peninsula, dated to about 1000 BC and was a community of semisubterranean dwellings with wooden roofs. There whale hunters watched for juvenile bowhead or gray whales in the strait and then harpooned them from open boats. An ivory carving found in one of the houses depicted men hunting whales, dragging what appeared to be a carcass to shore, and shooting arrows at a bear. This important find shed new light on the origins of northern Pacific whaling, a subsistence activity that became all-important in later times.

Cerén in El Salvador was a small Mayan community that was buried under 5 m (16.5 ft) of ash when a nearby volcano erupted in AD 600. Payson Sheets of the University of Colorado at Boulder and co-workers excavated well-preserved houses in which they discovered furnishings, domestic artifacts, and the remains of meals that the inhabitants apparently abandoned as they fled. As in other Mayan communities, the local farmers cultivated a wide variety of crops, including maize (corn) and beans. In 2007 excavators were digging in what they thought was an ancient cornfield when they discovered perfectly preserved cassava (manioc, or yuca) roots under the volcanic ash. This unique find was the first evidence that the ancient Maya cultivated cassava—one of the basic staples of other ancient Native American farmers, especially in South America.

A well-preserved prehistoric site with a central plaza came to light in southern Puerto Rico during preparations by the U.S. Army Corps of Engineers for a new dam. The site, which may date between AD 600 and 1500, was used by pre-Taino or Taino Indians, Arawak people who lived on the islands before European settlement. The plaza measured 40 × 49 m (130 × 160 ft) and yielded petroglyphs that included the figure of a person with masculine features and frog legs. Archaeologists also recovered several graves in which the bodies were facedown and the legs bent at the knees.

In AD 700 Tiwanaku was the most powerful kingdom in the southern Andes, with domains that extended throughout areas of Bolivia, Argentina, Chile, and Peru. The burial of a high-status individual was found in a niche under the Akapana pyramid. Located in the vicinity of Lake Titicaca, the pyramid was one of the largest structures known from ancient South America. The corpse was buried with a llama, a fist-sized gold pendant, and a golden headband. The deceased, a 25-year-old man, had suffered from malnutrition as a child. Bolivian archaeologists believed that he had been an important member of society, perhaps a priest. The llama might have been included in the burial as a status symbol or perhaps as a source for food in a journey to the afterlife.

In a discovery based upon laboratory studies, researchers determined that Inca children who had been selected for ritual sacrifice were fattened up with high-protein diets before their death. Andrew Wilson of the University of Bradford, Eng., and colleagues analyzed strands of hair from four child mummies that were found high in the Andes in the 1990s. Chemical tests showed what the children had eaten in the time leading up to their deaths. One of the mummies, known as the Llullaillaco Maiden, was named after the Argentinian peak on which she was found in 1999, and the remains were dated to the period AD 1430–1520. Her hair was 25 cm (9.8 in) long and represented two years of growth. The analysis of the hair indicated that at first she was raised on a protein-poor diet of potatoes. Twelve months before her death, however, her diet became much richer in protein, an indication that she might have begun to be fed a diet of llama meat and maize normally reserved for the nobility. When the time came, she embarked on an arduous journey up the mountain, was drugged, and then was sacrificed.

A shipwreck discovered lying in 3 m (10 ft) of water off Catalina Island in the Dominican Republic was investigated by Charles Beeker of Indiana University at Bloomington and colleagues. They suggested that it was the *Quedagh Merchant*, which William Kidd captured in the Indian Ocean in 1698. The ship had been laden with gold, silver, silk, and other goods. Kidd, who was known as Captain Kidd, had been a British privateer—someone commissioned by Great Britain to attack enemy ships. In 1699 Kidd left the *Quedagh Merchant* in the Caribbean and traveled to New York City in an attempt to clear himself of piracy charges. The crew scavenged the ship and then set it afire, leaving it to drift down the Rio Dulce into the ocean. The ship was in superb condition, in water too shallow to be reached by treasure-hunter boats equipped with magnetometers. Numerous iron cannons lay stacked atop multiple anchors, an unusual layout that had been described by Kidd. Captain Kidd was eventually hanged in London for piracy, but several centuries later his ship was to become part of an underwater reserve.

In 1864 Confederate sailors captured the Union gunboat *Water Witch* in a bloody midnight attack in the Vernon River south of Savannah, Ga. Divers located what Georgia archaeologists believed to be the *Water Witch* under 3 m of mud at the location where an 1865 map indicated that Confederate soldiers had burned the ship to prevent it from falling into the hands of Gen. William Sherman's army. At the site, in an area 60 m (200 ft) long, a magnetometer detected large iron objects, which might include the 50-m (165-ft) ship's steam engine. The *Water Witch* served on both sides of the Civil War, but because of the Union blockade, she never went back to sea after her capture. (BRIAN FAGAN)

Architecture and Civil Engineering

Impressive new buildings in BEIJING were completed for the 2008 OLYMPIC GAMES. Innovative design in ART MUSEUMS was a continuing trend in many countries, and a prominent structure from the MODERN MOVEMENT in architecture was restored.

ARCHITECTURE

Beijing was the centre of the world of architecture for two weeks in August 2008, when several spectacular new buildings housed the Olympic Games. People all over the world were able to witness the daring new architecture during the television coverage of the events. Most notable was the National Stadium, designed by the Swiss architects Herzog & de Meuron. The stadium—called the Bird's Nest because its steel beams appeared to be woven together like the twigs of a nest—held 91,000 persons and accommodated the major Olympic ceremonies as well as the track and field events. After the Games it was to be used for association football (soccer) and other sports. Another remarkable Olympic venue was the National Aquatics Centre, which was called the Water Cube. Its roof and walls were made of more than 4,000 plastic pillows that were stitched together like a quilt. The pillows resembled soap bubbles, and, like bubbles, they were translucent. During the day they allowed daylight to illuminate the swimming competitions. At night the whole building, lit from within, glowed like a huge tent in a watery aqua colour. (For photograph *see* Special Report on page 194.) The architect was an Australian firm called PTW.

Not an Olympic venue but equally impressive was the new Terminal 3 at Beijing Capital International Airport. Terminal 3 was an immense building about 3.2 km (2 mi) long, with 130 ha (320 ac) of floor area. The architect was the British firm Foster + Partners. Like the Bird's Nest and the Water Cube, the terminal was designed in collaboration with Chinese architects.

As was usually true with daring or experimental architecture, structural engineers were just as important as the architects. The international firm Arup served as engineer for all three of the Beijing buildings. Widely considered an ambitious effort by China to be viewed as a major player on the world architecture scene, the Olympic architecture was a sensational success.

Awards. The 2008 winner of the Pritzker Prize was French architect Jean Nouvel (*see* Biographies), who was best known for having designed buildings in a diversity of styles. The Pritzker citation commended "his courageous pursuit of new ideas" and added, "His inquisitive and agile mind propels him to take risks in each of his projects, which, regardless of varying degrees of success, have greatly expanded the vocabulary of contemporary architecture." Among Nouvel's most notable buildings were the Cartier Foundation for Contemporary Art in Paris; a Cultural and Conference Center in Lucerne, Switz.; the Agbar Tower (Torre Agbar), a cigar-shaped office high-rise in Barcelona; the Guthrie Theater in Minneapolis, Minn.; and the Quai Branly museum in Paris. In November 2007 the Museum of Modern Art in New York City announced plans for a 75-story tower that was to be designed by Nouvel and built on a site adjacent to the museum. In drawings the building seemed to wave back and forth as it rose to a point at the top and was to be occupied by the museum, a hotel, and condominum apartments.

Australian architect Glenn Murcutt was the recipient of the 2009 Gold Medal of the American Institute of Architects (AIA), the organization's highest award. Murcutt, who usually worked without a staff, was known for designing modernist houses that responded to local climate conditions and were sometimes influenced by the vernacular architecture of Maori culture. Although he practiced exclusively

Madrid's Prado Museum addition (right), designed by Rafael Moneo, was built within a confined space bordered by the Church of San Jerónimo (left).

Susana Vera—Reuters/Landov

Hassan Ammar/AP

The Museum of Islamic Art by I.M. Pei was built on an artificial island a short distance from shore in Doha, Qatar.

in Australia, he taught and lectured in other countries, and his longtime interest in creating an architecture in harmony with nature had a profound impact on architects around the world. The AIA presented its 25-Year Award—given to a building that had proved its merit over time—to the Atheneum, a visitors' centre in New Harmony, Ind., that was designed by American architect Richard Meier. The AIA also announced the winners of its annual Honor Awards for outstanding American buildings. The best known of the 13 honourees included Olympic Sculpture Park in Seattle by Weiss/Manfredi, the Shaw Center for the Arts in Louisiana by Schwartz/Silver, the Nelson-Atkins Museum of Art in Kansas City, Mo., by Steven Holl, and the restoration of the Griffith Observatory in Los Angeles by Pfeiffer Partners.

Álvaro Siza of Portugal received the Gold Medal of the Royal Institute of British Architects. Although Siza was not widely known, he was much admired by other architects. Most of his work was in his native Portugal.

Notable Buildings. As an international economic boom came to an end in 2008, a large number of remarkable buildings were completed. Continuing a trend of recent years, most of the buildings that were interesting architecturally were built for cultural purposes, especially as art museums.

Spanish architect Rafael Moneo designed an addition to one of the world's most famous museums, the Prado in Madrid. Tucked modestly next to a church behind the old Prado, Moneo's extension was built of red brick with bronze trim and provided space for a cafeteria, a store, cloakrooms, and an auditorium.

In Doha, Qatar, Chinese-born American architect I.M. Pei designed a new Museum of Islamic Art. He designed a building of simple bold white shapes that heaped up to a loose pyramid. The structure was built on an artificial island about 60 m (200 ft) from shore on Doha Bay in the Persian Gulf. One critic wrote that the "colossal geometric form has an ageless quality" that was "brought to life by the play of light and shadow under the gulf's blazing sun."

Far to the north, in Oslo, the firm Snøhetta created an amazing building that was both an opera house and a landscape (*see* photograph on page 445). Members of the public could walk up the building's gently sloping ramps, walls, and roofs to a plaza at the top with a fine view of the city's harbour. From across the harbour, the opera house looked rather like a big white iceberg. Inside were facilities for the Norwegian Opera and Ballet, including a horseshoe-shaped auditorium (with 1,360 seats and a rotating stage) and two smaller theatres. Snohetta won the job of designing the opera house in a competition involving 240 architects.

In New York City the firm Allied Works transformed the former Huntington Hartford Museum on Columbus Circle, built in 1964 by architect Edward Durrell Stone, into a new venue for the Museum of Arts and Design (formerly the American Craft Museum). The change sparked a controversy in which some architects and others argued that Stone's original building, although long abandoned, should have been restored to its original form as an example of the romantic, Arab-influenced architecture that he admired.

In Seattle a steep waterfront site was transformed into the Olympic Sculpture Park, which zigzagged its way down a hill to the harbour's edge and crossed above streets and a railroad line along the way. The park, which displayed works of sculpture, was designed by architects Weiss/Manfredi.

In San Francisco a new California Academy of Sciences, sited in Golden Gate Park, debuted to replace a building that had been destroyed by an

(continued on page 208)

The undulating roof of Renzo Piano's California Academy of Sciences in Golden Gate Park, San Francisco, contained many skylights and was covered with a field of native plants.

Chip Chipman—Bloomberg News/Landov

Notable Civil Engineering Projects (in work or completed, 2008)

Name	Location		Year of completion	Notes
Airports		**Terminal area (sq m)**		
Beijing Capital (new Terminal 3)	northeast of Beijing	986,000	2008	Opened Feb. 29; is the world's largest airport terminal
Dubai International (new Terminal 3)	near Dubai, U.A.E.	532,000	2008	Opened Oct. 14, total area including concourse and car park is 1,459,000 sq m, 40 km from Al Maktoum International Airport
Changi (new Terminal 3)	mostly on landfill at eastern tip of Singapore	380,000	2008	Opened Jan. 9, new terminal in Asia's 6th busiest airport in passenger traffic
Miami International (North Terminal)	northwest of central Miami	316,000	2011	Largest U.S. airport expansion under way in 2008; original terminal is being remodeled and expanded to become the North Terminal
Barcelona International (El Prat) (South Terminal)	southwest of Barcelona	300,000	2009	New second terminal building to be located midfield
Berlin Brandenburg International	Schoenfeld airport, southeast of Berlin	220,000	2011	Schoenfeld to be expanded; other Berlin airports closed on Oct. 30 (Tempelhof) or will close in 2011 (Tegel)
Tripoli International (1st of 2 new terminals)	south of Tripoli (Tarabulus), Libya	165,000	2009	1st of 2 planned same-sized terminals under construction from 2007
Cairo International (new Terminal 3)	northeast of Cairo	164,000	2009	Africa's 2nd busiest airport
New Doha International (phases 1 and 2)	near Doha, Qatar	140,000	2011	Being built on 28 sq km of Persian Gulf landfill
Col. H. Wen Cook Terminal Building	west of Indianapolis	116,000	2008	Opened Nov. 11, new midfield terminal replaced old terminal
Warsaw Frederic Chopin Airport (Terminal 2)	southwest of Warsaw	94,000	2008	Became fully operational on March 12; airport formerly known as Okecie International
Raleigh-Durham International (new Terminal 2, phase 1)	midway between Raleigh and Durham, N.C.	85,000	2008	Opened Oct. 26 for passengers; phase 2 to be completed in 2011
Bengaluru International Airport	near Devanhalli, northeast of Bengaluru (Bangalore), India	71,000	2008	Opened May 23; new airport
Heathrow (new Terminal 5, phase 1)	southwest of London	70,000	2008	Opened March 27 for passengers; biggest construction project in the U.K. from 2002; includes world's 1st personal rapid transit system (opening in 2009) and underground links to 2 rail lines
John F. Kennedy International (redesigned Terminal 5)	New York City	59,000	2008	Opened Oct. 22; terminal space is linked to 1962 modernist TWA terminal designed by Eero Saarinen
Al Maktoum International	at Jebel Ali, southwest of Dubai, U.A.E.	38,000[1]	2015	To become largest commercial airport in the world; [1]size of cargo terminal; will be the world's largest maintenance and repair centre
Bridges		**Length (main span; m)**		
Manifa Causeway	in Persian Gulf offshore of Manifa, Saudi Arabia	41 km[1]	2011	Includes 20 km of laterals from main causeway to drilling islands; will enable massive oil field redevelopment
Hangzhou Bay Transoceanic	near Jiaxing, China–near Cixi, China	36 km	2008	Opened to traffic May 1, world's longest transoceanic bridge/causeway
I-95 (Woodrow Wilson #2)	Alexandria, Va.–Md. suburbs of D.C.	1,852[2]	2008	2 bascule spans forming wider inverted V shape for ships; outer span opened June 10, 2006, inner span on May 30, 2008
Nihoumen	Zhoushan archipelago, China (linking Jintang and Cezi islands)	1,650	2007	Opened to traffic Dec. 16, 2007; world's 2nd longest suspension bridge
Fourth Yangtze Bridge	Nanjing, China	1,418	2013	To be world's 5th longest suspension bridge
Sutong	Nantong, China (100 km from Yangtze mouth)	1,088	2008	Opened to traffic May 25; cable-stayed bridge holds world record for length of main span, height of main bridge tower, and depth of foundation piers
Stonecutters (Angchuanzhou)	Tsing Yi–Sha Tin, Hong Kong	1,018	2009	To be world's 2nd longest cable-stayed bridge; links container terminals
Second Inch'on (Incheon)	Inch'on–Yongjong (Yeongjong) Island, S. Kor.	800	2009	To be world's 7th longest cable-stayed bridge
Pelješac	Neretva Channel of Adriatic Sea, Croatia	568	2011	Directly links southernmost Dalmatia to the Croatian mainland bypassing Bosnia and Herzegovina; will be Europe's 2nd longest cable-stayed bridge
Chaotianmen ("Face the Sky")	Chongqing, China (across the Yangtze)	552	2009	To be world's longest steel arch bridge, designed to resemble the Sydney Harbour Bridge (completed 1932)
John James Audubon	New Roads–St. Francisville, La. (across the Mississippi)	483	2010	To be longest cable-stayed bridge in North America
Chenab River	between Katra and Laole, Jammu and Kashmir, India	480	2009	To be world's 6th longest steel arch bridge; bridge will be 359 m above the river, making it the highest railroad bridge in the world
Hoover Dam Bypass Project	Ariz.–Nev. border (just south of Hoover Dam)	323	2010	274 m above the Colorado River, to be world's 4th longest concrete arch bridge
Pont Gustave Flaubert	Rouen, France (over the Seine)	116[3]	2008	In service Sept. 25; [3]liftable section; highest vertical lift bridge in the world (from 7 m to 55 m)
Hangzhou Bay #2	between Jiaxing and Shaoxing, China	?	2012	Will be world's longest all-span cable-stayed bridge
Buildings, Observation/Television Towers[3]		**Height (rooftop; m)**		
Burj Dubai ("Dubai Tower")	Dubai, U.A.E.	688	2009	Claimed to be world's tallest building on July 21, 2007; [3]as of September 2008, final height with spire is undisclosed
Pentominium	Dubai, U.A.E.	618	2012	Will be world's tallest residential tower
Guangzhou TV & Sightseeing Tower	Guangzhou, China	610	2010	To be world's tallest observation/television tower; height to rooftop 454 m, with spire 610 m
Freedom Tower or 1 World Trade Center	New York City	"1,776 ft" (541.3 m)	2013	Complex to include 6 new buildings, a memorial, and a museum
Burj Al Alam ("World Tower")	Dubai, U.A.E.	510	2011	One of the world's tallest buildings when completed
Shanghai World Financial Center	Shanghai	492	2008	Opened to public Aug. 30; world's 2nd tallest completed building (to rooftop)
Abraj Al Bait ("Royal Clock") Towers	Mecca, Saudi Arabia	485	2009	To be world's 4th tallest building (to rooftop); height with spire = 595 m; 6 residential/hotel towers to house 65,000 people
International Commerce Centre	Hong Kong	484	2010	To be Hong Kong's tallest (in 2010) and have world's highest hotel
Trump International Hotel and Tower	Chicago	360	2008/2009	Topped out at 360 m on Sept. 24; height with spire will be 415 m; will be Chicago's 2nd tallest building to rooftop
Torre Central of Faros del Panama	Panama City, Pan.	346	2010	Torre Central will be the tallest building in Latin America; part of a 3-building complex, 346 m includes spire
Dams		**Crest/embankment length (m)**		
Sardar Sarovar (Narmada) Project	Narmada River, Madhya Pradesh, India	1,210	2009	Largest dam of controversial 30-dam project; drinking and irrigation water for Gujarat state
Merowe (earth core rockfill) Dam	on Nile, 350 km north of Khartoum, Sudan	841	2009	To contain 20% of Nile annual flow; to double The Sudan's power capacity
Bakun Hydroelectric Project	Bahu River, Sarawak, Malay.	750	2010	To be largest concrete-faced rockfill dam in the world
Xiluodu (part of Upper Yangtze Hydropower Development scheme)	184 km upriver of Yibin, China	698	2015	First of 4-dam scheme that will generate more electricity than Three Gorges
Nam Theun 2	Nam Theun River, central Laos	325	2009	Hydroelectricity to be sold to Thailand
Manuel Piar (Tocoma) (4th of 4-dam Lower Caroni Development scheme)	Caroni River, northern Bolivar, Venez.	?	2010	Final unit of world's 3rd largest hydroelectric complex
Santo Antonio	Madeira River (the longest tributary of the Amazon), Braz.	?	2012	To provide, with sister dam Jirau, 8% of the electricity for Brazil by 2013

1 m = 3.28 ft, 1 km = 0.62 mi. [1]Length of entire causeway. [2]Length of each span. [3]Construction of 2 Moscow buildings (the Russia Tower [to be the world's second tallest building] and the East Tower of Federation Tower [to be Europe's tallest building with the spire]) was halted in late 2008.

Notable Civil Engineering Projects (in work or completed, 2008) continued

Name	Location		Year of completion	Notes
Highways		**Length (km)**		
Interoceanic Highway	Iñapari (at Brazilian border)–Ilo/Matarani/San Juan de Marcona, Peru	c. 3,100	2010	To be paved road for Brazilian imports/exports from/to Asia via 3 Peruvian ports, some construction is at c. 4,000 m
"East-West Economic Corridor"	Danang, Vietnam–Moulmein, Myan. (via Laos and Thailand)	1,450	2008	All-weather gravel road linking the Pacific and Indian oceans, considered to be virtually complete in July 2008
East-West Highway (across northern Algeria)	Tunisian border (near Annaba)–Algerian border (near Tlemcen)	1,216	2010	To facilitate economic development and trade across North Africa
Egnatia Motorway	Igoumenitsa–Kipoi, Greece	670	2009	First Greek highway at int'l standards; 76 tunnels, 1,650 bridges
A2 Motorway ("east to west expressway across Poland")	Polish border near Frankfurt an der Oder, Ger.–Brest, Belarus (via Warsaw)	610	2011	Construction began in 2001; 252 km completed in 2008, will link to German autobahn
Transylvanian Motorway	Brasov–Bors, Rom.	415	2013	To link Romania and Hungary and open Transylvania to tourism
Trans-Labrador Highway (phase III)	Happy Valley–Goose Bay to Cartwright Junction, Labrador, Can.	280	2009	Final phase of all-weather gravel road near timberline wilderness; 64% complete by end of 2007–08 construction season
"North-South Economic Corridor" Laotian link (National Route 3)	Boten–Houayxay, Laos	228	2008	Opened March 31; final link of 1,150-km highway network from Kunming, China, to Bangkok; former opium-smuggling route across northwest Laos is now a 2-lane paved road
Canals and Floodgates		**Length (m)**		
Arabian Canal	Dubai	75,000	2010	Largest civil engineering project in the history of the U.A.E.; 150-m-wide waterway to turn arid interior into exclusive waterfront property
St. Petersburg Flood Protection Barrier	Gulf of Finland embankment, Russia (Gorskaya–Bronka via Kotlin Island)	25,400	2010	To protect city from tidal surges; navigation channel opened October 2008; begun 1980, halted 1987, resumed 2003
New Orleans Surge Barrier	Gulf Intercoastal Waterway–Mississippi River Gulf Outlet, New Orleans	2,283	2011	Central component of 3-km-long project to prevent storm-surge flooding using barrier walls and floodgates
South to North Water Diversion Project	Yangtze River–south of Beijing	—	2011	To bring crucial irrigation and drinking water from the Yangtze River in the south to the dry plains of north China over 2 routes totaling 2,423 km
Project Moses (flood-protection plan)	lagoon openings near Venice	—	2012[2]	Rows of 79 20-m-wide submerged gates in 3 lagoon openings will rise in flood conditions, controversial plan was begun in 2003
Panama Canal Expansion	between Panama City and Colon, Pan.	—	2014	Will include new wider and longer 3-chamber locks, doubling the canal's capacity and allowing the passage of world's biggest container ships
Railways (Heavy)		**Length (km)**		
Benguela Railway (rehabilitation; closed by civil war 1975–2002)	Benguela–Luau, Angola (at DR Congo border)	1,314	2011	Reopening to Huambo (423 km) by end of 2008 is expected; will enable resumption of copper exports from DR Congo and Zambia
Sena Railway (destroyed during 1976–92 civil war)	Moatize–Beira, Mozambique	665	2010	Rehabilitation began in 2005, declared free of land mines in 2006, important for coal export
Xinqiu–Bayan Ul Railway	Xinqiu, Liaoning–Bayan Ul, Inner Mongolia, China	487	2010	To be important for coal transport, future link to Mongolia expected
North-South Railway (in part)	Araguaina, Tocantins–Palmas, Tocantins, Braz.	361	2009	Rail exports of agriculture, forestry, and mineral products from vast area of interior of north Brazil is expected
Kashmir Railway	Udhampur–Baramula, Jammu and Kashmir, India	292	2012	80% bridges or tunnels in mountainous terrain, 66-km Rajwansher–Anantnag section opened on Oct. 11
KATB rail project	Baku, Azer.–Kars, Tur. (via Georgia)	258	2011	Caspian Sea to Turkey link, bypassing Armenia; 98 km of new rail, remainder modernized; new transport outlet for Georgia
Lhasa–Xigaze railway	Lhasa–Xigaze, Tibet, China	254	2010	Extension of the world's highest railroad will link Tibet's two largest cities, future extension to Nepal is a possibility
North Luzon Railway System project	Caloocan (north Metro Manila)–Clark international airport, Philippines	84	2011	To accelerate development of central Luzon
Railways (High Speed)		**Length (km)**		
Beijing–Shanghai Express Railway	Beijing–Shanghai	1,318	2013	To halve travel time between capital and financial centre
Spanish high speed	Madrid to France (via Barcelona)	719	2009	Madrid to Barcelona link opened Feb. 20
Turkish high speed	Ankara–Istanbul	533	2010	To connect capital with largest city
Italian high speed	Milan–Bologna section	210	2008	Opened Dec. 13; entire line from Turin to Naples scheduled for completion in 2009
Bothnia Line (Botniabanan)	Nyland–Umea, Swed.	190	2010	Along north Swedish coast, difficult terrain with 25 km of tunnels
HSL-Zuid	The Hague–Amsterdam–Belgian border	125	2009	To enable high-speed links with Brussels, London, and Paris
Beijing–Tianjin high speed	Beijing–Tianjin, China	113	2008	Opened Aug. 1; world's fastest intercity train, available for 2008 Olympic Games
Gautrain	Johannesburg–Pretoria	80	2010	To link the capital with the commercial centre
Subways/Metros/Light Rails/ Commuter Rails		**Length (km)**		
Shanghai Metro	Shanghai	199.1	2009/2010	120.5 km = length of 4 lines/extensions (7, 8, 9, and 11) expected to become operational in 2009
New Mexico Rail Runner Express (commuter rail service)	Belen–Santa Fe, N.M. (via Albuquerque)	c. 141	2008	Operational in Albuquerque area in 2006; final c. 67-km extension to Santa Fe in service from Dec. 17
Delhi Metro	Delhi	124.8	2010	Many extensions of lines under construction between 2008 and 2010
Dubai Metro (Red/Green lines)	Dubai, U.A.E.	69.7	2009/2010	To be world's longest fully automated driverless transport system
Beijing Metro	Beijing	57.7	2008	Length of 3 lines opened on July 19 prior to Olympics
Circle MRT	Singapore	33.3	2010	To connect 3 existing MRT lines
Namma Metro	Bengaluru (Bangalore), India	33.0	2011	2 lines to be built, construction began in 2007
Valley Metro Rail	Phoenix–Tempe–Mesa, Ariz.	32.2	2008	Opened Dec. 27; Arizona's first light-rail system
Santo Domingo Metro (Line 1)	Santo Domingo, Dom. Rep.	14.5	2008	Opened to general public on Dec. 22
Métro d'Alger (Line 1, phase 1)	Algiers	9.0	2009	Mainly underground near the city centre and eastward
Nurnberg Metro U3 ("Line 3," phase 1)	Nurnberg, Ger.	6.1	2008	Service began June 15; first metro service in the world to operate driverless trains on same route (in part) with manned (U2) trains
Metro de Lausanne (m2) (crosses city north to south)	Lausanne, Switz.	6.0	2008	Began operation Oct. 27, very steep gradient—replaces 1877 funicular (in part); world's smallest city with metro
Tunnels		**Length (m)**		
Apennine Range tunnels (9)	Bologna, Italy–Florence (high-speed railway)	73,400	2009	Longest tunnel (Vaglia, 18.6 km); tunnels to cover 93% of railway
Marmaray railroad project tunnels	connecting European and Asian portions of Istanbul	13,600	2011	To include 1 4-km-long bored tunnel, world's deepest sunken-tube tunnel (56 m under the Bosporus strait)
East and West tunnels of A86 ring road	western outskirts of Paris	10,000/7,500	2010	Two tunnels under Versailles and nearby protected woodlands
Kallang–Paya Lebar Expressway tunnels	Singapore	8,500	2008	Expressway opened Sept. 20; longest underground expressway in Southeast Asia
Eiksund Undersea	Ørsta–Hareidlandlet (Herov Island), Nor.	7,765	2008	Opened to traffic Feb. 23; world's deepest underwater tunnel (287 m under water surface)

1 m=3.28 ft, 1 km=0.62 mi [1]Length of entire causeway. [2]Length of each span. [3]Construction of 2 Moscow buildings (the Russia Tower [to be the world's second tallest building] and the East Tower of Federation Tower [to be Europe's tallest building with the spire]) was halted in late 2008.

(continued from page 205)

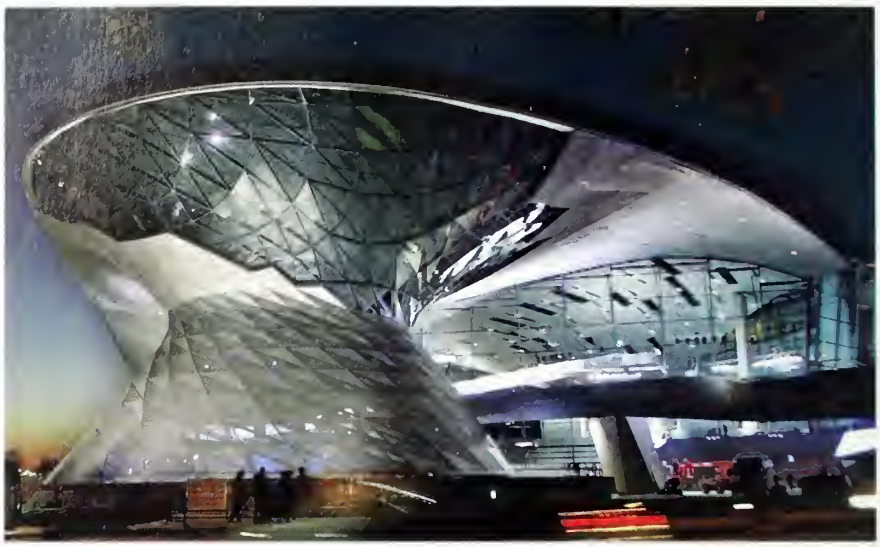
earthquake in 1989. Designed by noted Italian architect Renzo Piano, the building was a science museum, with exhibits and displays of different kinds of habitats from around the world. Its most notable feature was the roof, a hilly green surface on which a variety of local California plants grew.

A new art museum by Álvaro Siza, the Iberê Camargo Museum, opened in Porto Alegre, Braz. It was built of white concrete in a sculptured style. The building's exhibition spaces were arranged on three floors around a central atrium, and visitors walked from floor to floor on ramps in asymmetrical enclosures that projected from one side of the building.

Among commercial buildings, the most widely noted was probably Piano's 52-story tower for the offices of the *New York Times* in New York City. Piano wrapped the building in a lacy screen made of thin ceramic tubes. The screen gave the tower a soft, almost misty appearance and acted as a sunshade that reduced sun glare inside the building while allowing people to look out. The ground floor included a performance hall that looked onto an interior garden.

Another commercial building that drew considerable attention was the BMW Welt ("World") in Munich. Designed by a firm of architects from Vienna that called itself Coop Himmelb(l)au, it was mostly a very large space for the display of BMW cars. Like the work of some other contemporary architects, this space had few straight lines or right angles but was freely formed with dramatically curving and sloping ramps, walls, and roof. Such free forms had first emerged some years earlier in the work of American architect Frank Gehry. They were made possible by advances in methods of construction and engineering and especially by new computer technology.

Diether Endlicher/AP



The Austrian firm Coop Himmelb(l)au designed this building, called the BMW Welt, to house showrooms and a museum for BMW automobiles in Munich.

Exhibitions, Preservation, and News Events. A number of major exhibitions of architecture appeared during the year. The Museum of Modern Art in New York City presented "Home Delivery: Fabricating the Modern Dwelling." It covered the history of prefabricated houses. As part of the show, five complete premanufactured houses for visitors to wander through were erected adjacent to the museum.

In 2008 the Biennale exhibition held annually in Venice was devoted to architecture. Entitled "Out There: Architecture Beyond Building," the international exhibition included a display of thousands of architectural drawings, photos, and models. A theme addressed in many of the works was the need to conserve energy by means of so-called green architecture.

"Eero Saarinen: Shaping the Future," at the Cranbrook Art Museum in Bloomfield Hills, Mich., presented the work of one of the leading architects of the mid-20th century. Finnish-born American architect Saarinen designed such notable buildings as Dulles Airport in Washington, D.C., and the Gateway Arch in St. Louis, Mo. "Richard Rogers + Architects: From the House to the City" displayed the life work of the noted British architect. It opened at the Centre Pompidou in Paris, a building Rogers designed in 1977 when he was in partnership with Piano. At the Hammer Museum in Los Angeles was "Between Earth and Heaven: The Architecture of John Lautner," with photos and models of modern houses that the architect designed in the mid-20th century. He was known for creating dramatic spaceship-like houses, many of them perched in the Hollywood hills with views out over the cityscape of Los Angeles.

One preservation success in the growing effort to save works of the modern movement in architecture was the complete restoration of the Yale School of Art and Architecture. It was a masterpiece by the noted modernist architect Paul Rudolph, who built with rough-surfaced concrete in the architectural style sometimes called New Brutalism. The building was to be named Rudolph Hall. Several houses by Rudolph, however, were either demolished or in danger, and a Rudolph high school in Sarasota appeared to be doomed despite a major effort by preservationists. In the United Kingdom a battle rose over whether to demolish another New Brutalist structure, the Robin Hood Gardens affordable-housing complex of 1972 by noted architects Alison and Peter Smithson.

The year also had its disappointments. After seven years nothing had yet been completed on the site of the former World Trade Center in New York City, and in New Orleans, despite many efforts, little had been done to replace the housing lost in the Hurricane Katrina floods of 2005. In Berlin a new U.S. embassy, by California architects Moore Ruble Yudell, opened in July to criticism by some Europeans that it appeared to be a security-conscious fortress.

Deaths. Ettore Sottsass, a major figure in Italian design, died at age 90. He created houses and interiors but was better known for the ordinary objects such as typewriters and fibreglass chairs that he designed in a bold, colourful, often witty manner. Other prominent members of the architectural community who died during the year were Julian de la Fuente, 76, for many years the chief assistant to the great architect Le Corbusier; Walter Netsch, 88, a former partner in the firm of Skidmore, Owings & Merrill and the designer of the Air Force Academy chapel in Colorado Springs, Colo.; and Ralph Rapson, 93, the dean of the University of Minnesota College of Architecture for 30 years and the architect of U.S. embassies in Denmark and Sweden. (ROBERT CAMPBELL)

Art and Art Exhibitions

The art world could not avoid the ECONOMIC STORMS of 2008, yet RECORD PRICES were fetched in several sales. Works in MIXED MEDIA and huge OUTDOOR INSTALLATIONS drew attention in Europe and the United States. The Olympics brought CHINESE artists into the spotlight, and photographic COMMEMORATIONS of the events of 1968 abounded.

ART

The art market enjoyed an astonishing run of record-breaking sales through the first nine months of a volatile 2008. In May Lucian Freud's *Benefits Supervisor Sleeping* (1995), a candid portrayal of a corpulent female nude slumbering on a flowered divan, sold by Christie's in New York City for $33.6 million, surpassing by almost a third the record for a living artist set by Jeff Koons's *Hanging Heart* in the previous year. Another record fell the next day at Sotheby's in London with the $86.3 million sale of Francis Bacon's *Triptych, 1976*. This large, ambitious figurative allegory, inspired by the ancient Greek myth of Prometheus, exceeded its price estimate by more than $16 million, marking the top auction price for a contemporary work. Other contemporary artists, including Gerhard Richter, Gilbert and George, Bridget Riley, Rachel Whiteread, and Antony Gormley, broke their own previous sales records. Sotheby's September studio sale, "Beautiful Inside My Head Forever," which featured 223 works (2006–08) by Damien Hirst, blurred the distinctions between auction house and gallery. New works brought in top prices—*The Golden Calf*, a formaldehyde-preserved bull embellished with gold-tipped horns, hooves, and a golden disk sold for more than $18 million—and Hirst's final total of $200.7 million set an all-time record for an artist in a solo sale.

The fall's international financial crisis had an immediate effect on all sales. The highly anticipated auction of works by Banksy and other street artists at Lyon & Turnbull's in London moved only one-third of its lots; partial blame was placed on Banksy's refusal to authenticate his work. Shrinking sales and prices were predicted in all areas with the exception of the rare masterwork, such as the June sale of Claude Monet's *Water Lily Pond* (1919) at $80.4 million, double the price estimate. Some of the highest sales of the year, including the works by Bacon and Freud, went to Russian and Middle Eastern collectors; this trend was expected to continue. China displaced France as the third most influential market for contemporary art, after the United States and the United Kingdom. Major Western galleries were seeking locations in Asia; for one, the Beijing branch of New York City's PaceWildenstein Gallery opened in August. In October the Russian Mercury group purchased the London-based auction house Phillips de Pury & Co.

Market volatility exacerbated the ongoing controversy over blurred boundaries between art exhibitions and commercial endeavours. In the spring "©Murakami," a retrospective of the works of Takashi Murakami at the Brooklyn Museum, incorporated a Louis Vuitton boutique that sold handbags designed by the artist. In the fall Hirst opened Other Criteria, a shop in London's Marylebone district that marketed cheap collectibles such as T-shirts and postcards alongside expensive artist-designed wallpapers and plates. However, the Richard Prince retrospective at the Serpentine Gallery drew critical fire for placing works for sale in a publicly funded venue. Chanel's "Mobile Art" installation, in a chic pavilion designed by Zaha Hadid, took up temporary residence in New York City's Central Park in October to display and sell works inspired by Chanel's classic quilted, gold-chained handbag commissioned from international artists such as Yoko Ono, Pierre & Gilles, and Daniel Buren. Chanel even provided designer hard hats to the workers who constructed the pavilion.

The new branch of the Haunch of Venison gallery, which was opened by Christie's International (The Group) in New York City in September, ignited hot debates over blurring the line between

Benefits Supervisor Sleeping *(1995), a life-size painting by Lucian Freud, sold for $33.6 million, setting a record for a work by a living artist.*

Akira Suemori/AP

Chanel—François Lacour/AP Images

An installation by Swiss artist Sylvie Fleury appears inside Chanel's "Mobile Art" pavilion during its stop in Tokyo in May; architect Zaha Hadid designed the pavilion to resemble Chanel's iconic 1955 quilted handbag.

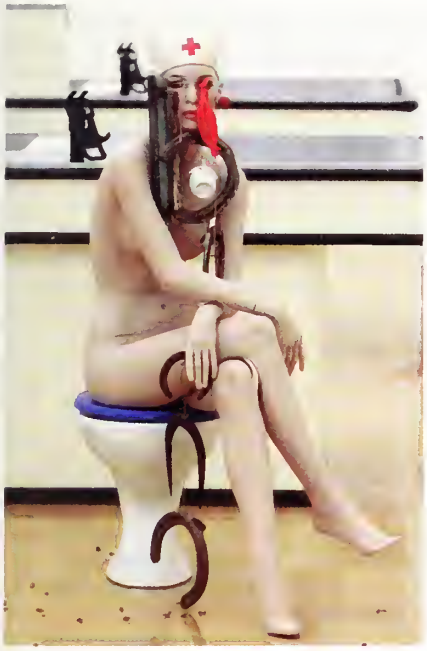
gallery and sales room. The inaugural exhibition, "Abstract Expressionism—a World Elsewhere," which featured works by Jackson Pollock, Clyfford Still, Willem de Kooning, and David Smith, received lukewarm reviews but raised suspicions about the use of a gallery as a potential bulwark for the auction house in a tumbling market. Robert Fitzpatrick, Haunch's international managing director, countered that none of the works on exhibition was for sale, but the gallery's proximity to the auction house's Midtown Manhattan headquarters, as well as the heavy representation of dealers' loans in the exhibition, did little to quiet the controversy. Critics planned to see how the gallery's role in the primary market of discovering and promoting new artists would interact with the auction house's control of the secondary market through setting prices for recognized work.

The installation by Olafur Eliasson (*see* BIOGRAPHIES), *New York City Waterfalls*, provided a summerlong critically acclaimed public spectacle. On four sites along the East River, Eliasson constructed aluminum towers about 27–37 m (90–120 ft) in height to support cascading sheets of water. Monumental in concept, Eliasson's *Waterfalls* was designed to be temporary and environmentally sensitive. To facilitate removal and avoid defacement of the site, the scaffolds were anchored in concrete bases that sat on "bond breakers" of sand and stone dust contained within sheets of plastic. The water, pumped up from the river at a rate of about 132,500 litres (35,000 gal) per minute, was channeled through "intake filter pools" to protect aquatic life by preventing it from entering the pools; in response to fears that the saltwater spray would damage adjacent plant life, Eliasson reduced the scheduled running hours by half. The shimmering falls' dynamic motion captured every nuance of the evanescent season, reflecting changes in light, shifts of wind, and the effects of illumination—natural and artificial—over the course of day into night. The fireworks display at the Beijing Olympics opening ceremonies also thrilled the public. Designed by Cai Guo-Qiang (*see* BIOGRAPHIES), whose self-styled specialty was "explosive works," the exhibition over the Birdcage stadium culminated with vast flashing footprints striding across the city; television viewers around the world were disappointed to discover, however, that the pyrotechnics had been computer enhanced for broadcast. Also during the summer, Anish Kapoor (*see* BIOGRAPHIES), in collaboration with structural engineer Cecil Balmond, unveiled his design for the colossal sculpture *Temenos*, the first of *The Tees Valley Giants* planned for five locations in northeastern England. *Temenos*—which was planned to be some 50 m (164 ft) high and 110 m (361 ft) long and to consist of a taut volume of shaped steel mesh, stretched between two huge rings (one circular and the other oval) and secured by a steel pole—was expected to be a powerful presence in the Middlesbrough landscape.

The overlap of art and other disciplines marked a dominant trend. Inspired by logarithmic equations and the Lobmeyr chandeliers (1965) at the Metropolitan Opera House in New York City, Josiah McElheny explored the big bang theory in *The End of the Dark Ages*, which positioned gas and electric lights around a chrome core. Mark Dion, the winner of the Smithsonian American Art Museum Lucelia Artist Award, described his work as "pseudoscientific," combining the taxonomic methods of natural history with the installation of found and altered objects. The short list for the 24th Turner Prize, released in May, showcased innovation in mixing media. Those honoured included Runa Islam, whose films exposed the technical process behind aesthetic expression; Mark Leckey, for installations that fused film, sound, and performance; Goshka Macuga, who positioned the artist as a collector-curator creating mixed-media environments; and Cathy Wilkes, whose diarist approach featured found objects and ready-mades as well as paintings. In December the prize was awarded to Leckey, who received £25,000 (about $37,500)—five times as much as each of the runners-up. In the United States, Brazilian artist Cildo Meireles (*see* BIOGRAPHIES) received the biennial Ordway Prize, given in recognition for midcareer achievement, for his installation and performance pieces celebrating resistance to political and military oppression. Among the MacArthur fellows in 2008 were two artists, Tara Donavon, a Brooklyn-based sculptor who transformed mundane materials, such as drinking straws and Styrofoam cups, into transcendent site-specific organic installations, and Mary Jackson, a Charleston, S.C.-based fibre artist whose coiled vessels made of palmetto and bulrush preserved and transformed regional traditions of sweetgrass basketry.

Art museums turned away from the recent practice of seeking directors with business backgrounds, preferring instead candidates with academic and curatorial accomplishments. After 31 years as the director, Philipe de Montebello left the Metropolitan Museum of Art; his successor, tapestries expert Thomas P. Campbell, had been a member of the museum's Department of European Sculpture and Decorative Arts for 13 years. Thomas Krens stepped down as director of the Solomon R. Guggenheim Foundation in New York City; to replace him, Richard Armstrong left the helm of the Carnegie Museum of

Lewis Whyld—PA Photos/Landov



Partial view of the installation I Give You All My Money *by Cathy Wilkes, which features a full-size supermarket checkout; as a nominee for the 2008 Turner Prize, the work was installed at Tate Britain in September.*

Art in Pittsburgh. Nicholas Penny, senior curator of sculpture at the National Gallery of Art in Washington, D.C., took over the directorship of London's National Gallery from Charles Saumarez Smith, who left to become the secretary and chief executive of the Royal Academy of Arts. (DEBRA N. MANCOFF)

ART EXHIBITIONS

Existential questions rather than aesthetic issues dominated the debates surrounding the biennials and art fairs of 2008. In a year of staggering auction prices, critics and dealers alike repeatedly wondered whether the huge art festivals had outgrown their function and outlived their purpose. These concerns were reflected in the restrained installation of the 74th Whitney Biennial in New York City, curated by Henriette Huldisch and Shamim M. Momin. More than 80 artists were featured on three floors of the museum and in the Park Avenue Armory, but the biennial was smaller, more focused, and more reflective in its outlook than those of recent years. Site-specific installations, performance works, and the moving image dominated the curatorial selections, including M.K. Guth's *Ties of Protection and Safekeeping*, which featured a 152.4-m (500-ft)-long braid of flannel ribbon and hair that grew to more than three times its length through "therapeutic braiding"—viewers wrote messages on ribbons, which were added, along with hair, throughout the installation—and Coco Fusco's video docudrama *Operation Atropos* (2006) of the experience of the artist and six other women as they underwent a rigorous training program in resisting interrogation. Found objects marked another trend, seen in Jedediah Caesar's *Helium Brick aka Summer Snow* (2006), which was made of studio debris such as paper cups and plywood scraps encased in eerily beautiful resin blocks, and Olaf Breuning's *The Army*, a slyly whimsical light installation using teapots topped with lava lamps. Political statements added to the conversation; for example, works by Adler Guerrier and Omer Fast addressed cultural displacement, and Daniel Joseph Martinez's quietly powerful installation *Divine Violence* (2007) inscribed on plaques the names of organizations that promoted violence.

The fifth Berlin Biennial, "When Things Cast No Shadow," featured the work of more than 110 international artists, including Daniel Guzmán, Goshka Macuga, and Ahmet Ogut, at four very different venues: Mies van der Rohe's sleekly elegant Neue Nationalgalerie, the KW Institute for Contemporary Art, the Schinkel Pavillon, and the 62 vacant lots known as Skulpturenpark Berlin_Zentrum, located in the once-derelict district that had separated East and West Berlin. The innovative program, designed by curators Adam Szymczyk and Elena Filipovic, divided the events into "Day"—focused upon viewing the works—and "Night"—a dense and varied schedule of lectures, workshops, films, and performances. The 39th Art Basel (Switz.), which encompassed more than 300 galleries and 2,000 artists, followed the conventional formula. As always, the festival emphasized contemporary and modern masters; satellite venues featured the work of emerging artists. Although dealers and critics questioned whether the large number of fairs and festivals reduced the quality of works exhibited, the year's schedule was a full one and included the 16th Biennale of Sydney, the 2nd Singapore Biennale, the 2nd Art Dubai (U.A.E.), the 7th SITE Santa Fe (N.M.) International Biennial ("Lucky Number Seven"), and Prospect.1 New Orleans.

Museums offered an impressive range of international contemporary artists in monographic exhibitions. Cai Guo-Qiang's retrospective "I Want to Believe" at the Guggenheim Museum in New York City traced his career-long fascination with explosive materials and pyrotechnics as well as his embrace of modern physics, Daoist cosmology, Buddhist philosophy, and Chinese myth and medicine. (*See* BIOGRAPHIES.) His spectacular installation *Inopportune: Stage One* (2004), a simulation of a car bombing using sequenced lighting and nine autos that appear to tumble through space, filled the central rotunda of the museum in a destabilizing convergence of appalling violence and breathtaking

Olaf Breuning's The Army, *an installation made up of teapots and lava lamps, was displayed from March to June as part of the 74th Whitney Biennial in New York City.*

Ruby Washington—The New York Times/Redux

beauty, and his *Fetus Movement II: Project for Extraterrestrials No. 9* (1991) featured exploded gunpowder and ink on paper; the work was mounted on wood to create an eight-panel screen. "Past, Present, Future" at the Institute of Contemporary Art in Boston featured 14 serenely monumental sculptures by Anish Kapoor. (*See* BIOGRAPHIES.) In London comprehensive surveys shed new light on the work of Peter Doig at Tate Britain and of Cy Twombly at Tate Modern. "©Murakami" at the Brooklyn Museum demolished the already-crumbling barrier between art and commodity in an overview of Takashi Murakami's anime- and manga-influenced paintings, videos, and marketable designs such as handbags and phone caddies; in contrast, Olafur Eliasson's solo show "Take Your Time" at the Museum of Modern Art (MoMA) in New York City emphasized a deep engagement with nature and sustainable living. (*See* BIOGRAPHIES.)

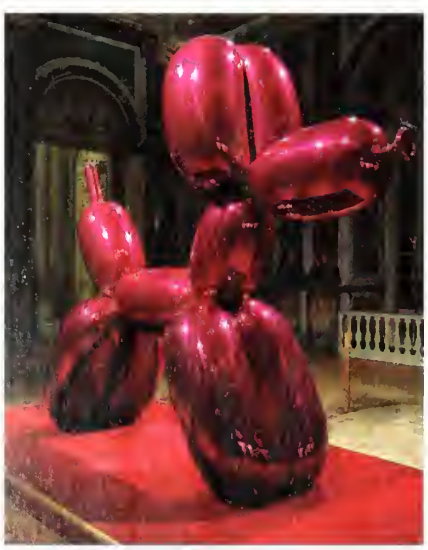
The Museum of Contemporary Art (MCA) in Chicago hosted the largest traveling exhibition since the 1990s of the work of Jenny Holzer. Her signature LED (light-emitting diode) signs filled the galleries, and projected light works illuminated the exteriors of historic buildings around the city, including the Merchandise Mart, the Civic Opera House, and the Tribune Tower, as well as the museum's facade. The MCA also presented a selective survey of Jeff Koons's best-known works, but far more controversial was the installation of 17 of his sculptures in eye-popping colours, including his grand-scale *Balloon Dog (Magenta)*, on the grounds and in the palace at Versailles, France. As the first contemporary art retrospective presented at the château, "Jeff Koons Versailles" polarized public and critical opinion about the suitability of the elegant venue for Koons's often cartoonlike creations.

New York City museums provided perspectives on the historic art of the 20th century. "Action/Abstraction: Pollock, de Kooning, and American Art," curated by Norman L. Kleeblatt at the Jewish Museum, investigated post-World War II painting and sculpture from the diametric positions of rival critics Harold Rosenberg and Clement Greenberg. Postwar art was also the subject of "Color Chart: Reinventing Color, 1950 to Today," curated by Ann Temkin at MoMA. In "Buckminster Fuller: Starting with the Universe" at the Whitney Museum in New York City, curators Michael Hays and Dana Miller presented the breakthrough designs of one of the most visionary thinkers of the 20th century. Fuller—who was known for his desire to do "more with less," as well as for his hallmark Dymaxion car and geodesic dome—appeared prescient in his concerns with homelessness and diminishing resources. "Art and China's Revolution" at the Asia Society and Museum presented the first critical overview of revolutionary sentiment under the regime of Chairman Mao Zedong. Curators Melissa Chiu and Zheng Shengtian (who was a young artist during Mao's rule) gathered works ranging from traditional ink scroll paintings to posters and other ephemera, as well as characteristic large-scale oil paintings, such as Chen Yanning's *Chairman Mao Inspects the Guangdong Countryside* (1972).

Three interlinked exhibitions in Paris explored Pablo Picasso's response to iconic works of European art history. "Picasso and the Masters" at the Grand Palais traced Picasso's enduring engagement with his Spanish forebears El Greco, Diego Velázquez, and Goya, as well as his admiration for French modernists, including Eugène Delacroix, Manet, Gauguin, and Cézanne. The Louvre displayed Picasso's variations (1954–55) on Delacroix's *Women of Algiers in Their Apartment* (1834), and Picasso's invention (1962) upon Manet's *Déjeuner sur l'herbe* (1863) was featured at the Musée d'Orsay.

In an unprecedented loan exhibition, "The Impressionists: Master Paintings from the Art Institute of Chicago," 92 hallmark works by painters such as Monet, Renoir, Gustave Caillebotte, Van Gogh, Gauguin, and Cézanne, traveled to the Kimbell Art Museum in Fort Worth, Texas. An exhibit seen only at the Art Institute, "Watercolors by Winslow Homer: The Color of Light," curated by Martha Tedeschi, defined the central importance of Homer's mastery of the luminous medium to his life and career through a close investigation of more than 100 works within a technical and critical context.

The sculpture Balloon Dog (Magenta) *by American artist Jeff Koons was on view in the palace at Versailles, France, from September to December as part of a controversial retrospective.*



Benoit Tessier—Reuters/Landov

Several major artists died, including American modernist Robert Rauschenberg, American sculptors Robert Graham and George Brecht, and the witty British painter Beryl Cook. (*See* OBITUARIES.) Other losses included those of groundbreaking Iraqi painter Naziha Salim; John Russell, longtime critic for the *New York Times* and *The Times* (London); Anne d'Harnoncourt, director of the Philadelphia Museum of Art; and art scholar Michael Baxandall.

(DEBRA N. MANCOFF)

PHOTOGRAPHY

The year 2008 marked the 40th anniversary of a series of global upheavals that came to define 1968: the student riots in Paris, the Tet Offensive of the Vietnam War, the assassinations of U.S. Sen. Robert F. Kennedy and the Rev. Martin Luther King, Jr., and the Prague Spring, which culminated in the invasion of Czechoslovakia (now the Czech Republic and Slovakia) by the Soviet Union. Each of these anniversaries was remembered with exhibitions across Europe and North America. The international agency Magnum Photos went farther than most by launching a Web site dedicated to the year (www.magnum1968.com).

In other notable news, in a merger agreement private equity firm Hellman & Friedman in February paid $2.4 billion for Getty Images. British photographer Vanessa Winship captured headlines when she won the $25,000 top prize at the inaugural Sony World Photography Awards.

Magnum's 1968-themed exhibitions began with "1968 on Record: A Year of Revolution," which was mounted (February 8–June 20) at the British Library, London, featuring photographs by Bruno Barbey and Philip Jones Griffiths. Sadly, Griffiths died during the exhibition (*see* OBITUARIES).

In New York City "Invasion 68: Prague," a collection of photographs

Tomas Hudcovic—isifa/Getty Images

Peter Dubcek—son of Alexander Dubcek, Czechoslovakia's leader during the Prague Spring of 1968—visits a photographic exhibit commemorating the period on August 21 in Bratislava, Slvk.

taken by Josef Koudelka during the Soviet invasion of Prague, was cohosted by the Aperture Gallery (September 4–October 30) and the Pace/MacGill Gallery (September 4–October 11). New York was an appropriate location for the exhibit; Koudelka's negatives had first surfaced there after being smuggled out of Prague soon after the invasion.

New York also became the final destination in December 2007 of the mysterious "Mexican Suitcase," which contained an archive of more than 3,500 negatives made during the Spanish Civil War (1936–39) and believed lost for many years. The negatives—the work of Magnum cofounders Robert Capa and David Seymour and of colleague Gerda Taro—had been abandoned by Capa when he left Paris for the United States in 1939. The International Center of Photography in New York City was given the task of restoring and digitizing the archive for eventual posting on the Magnum Web site.

George Rodger, another Magnum cofounder, was the subject of a major show marking the centenary of his birth. "Contact: George Rodger's War Photographs," on view (February 9–April 27) at the Imperial War Museum North, Manchester, Eng., featured 100 prints from the World War II era, including images of the London blitz and the liberation of the Bergen-Belsen concentration camp.

On a more intimate scale, Wexford Arts Centre, Cornmarket, Ire., hosted (March 3–April 12) an evocative series of black-and-white images by Michael Snoek. "Portraits of the Artist as an Old Man" focused on Johnny Whitty, an octogenarian blacksmith working near the village of Ballymitty, County Wexford. The dramatic impact of globalization on the landed peasantry and the working classes in China infused Tokyo-based American photographer James Whitlow Delano's exhibition "Empire: Impressions from China." This large collection of black-and-white images, which were taken over a 10-year period (1994–2004) and had been on view in several other countries, drew vast crowds (May 17–June 18) at the m97 Gallery in the heart of Shanghai.

Modern Chinese society was ably illustrated by contemporary Chinese photographer Chen Chunlin, who was awarded his first solo exhibition (June 28–August 21) at the m97 Gallery. His show, "Lessons Learned in One Day," comprised a series of giant 3 × 1.8-m (about 118 × 71-in) photographs from different Chinese cities, each showing dozens of separate portraits of members of the public taken in one day at the same location.

An exhibition in China of work by a modern Chinese photographer would have been unheard of even 10 years ago, a point made plain earlier in the year by the show "New Photo—Ten Years," held (February 9–March 16) at the Carolina Nitsch Project Room in New York City. The exhibition, which originated in Beijing and later traveled to Houston, commemorated the underground Chinese magazine *New Photo*, which published (1996–98) just four issues. With print runs of 20–30 copies, the magazine still circulated widely enough to provide China's growing legion of modern photographers a vehicle at a time when there were few outlets for their work.

Among the most striking exhibitions of colour photography in 2008 was "Ernst Haas: Total Vision," shown (September 23–November 1) at the Atlas Gallery, London. Haas was one of the first photojournalists to use colour successfully, paving the way for other photographers; the exhibition also revealed his mastery of black and white.

British photographer Martin Parr further cemented his reputation for making arresting flash-lit colour images of contemporary society with his latest show, "Parrworld," at the Haus der Kunst, Munich (May 7–August 17), among other venues. The exhibition demonstrated Parr's usual mix of irony and social extremes—for example, juxtaposing his images of the 2007 Moscow Millionaire Fair with a 2005 Mark Neville print of working-class revelers enjoying their Christmas party at Port Glasgow Town Hall. (Unlike other exhibitions, "Parrworld" was notable for revealing something of the photographer's influences, in this instance displaying a selection of Parr's own collection of photography, postcards, books, and souvenirs.)

In France the sale of a nude portrait taken in 1993 by Michael Comte of former Italian model Carla Bruni (who married French Pres. Nicolas Sarkozy in February) made news on April 10 when it fetched $91,000 at auction at Christie's New York. The portrait sold for more than 20 times its asking price. At the same auction, Irving Penn's 1996 image of British model Kate Moss sold for $97,000. They were both outsold, however, by Richard Avedon's 1959 study of actress Brigitte Bardot, which went for $181,000.

France mourned the loss on September 3 of war photographer Françoise Demulder, age 61, who in 1977 had become the first woman to win the coveted World Press Photo of the Year Award. Her black-and-white image of a Palestinian woman pleading with a Christian Phalangist militiaman in Beirut during Lebanon's civil war was quickly adopted by the Palestine Liberation Organization as a symbol of its struggle for a homeland in the Middle East. In October William Claxton, an American photographer best known for his portraits of jazz musicians and actors, died at age 80. Other losses included Cambodian photojournalist Dith Pran and American *Life* magazine photographer Cornell Capa. (*See* OBITUARIES.)

(KEITH WILSON)

Business Overview

The prices of OIL, GOLD, and other commodities SPIKED at midyear. High fuel prices and tight credit markets DEVASTATED American automakers and PRESSURED airlines and aircraft manufacturers. The CREDIT-MARKET CRISIS also embroiled the FINANCIAL SECTOR and utilities and contributed to a SLUMPING ECONOMY.

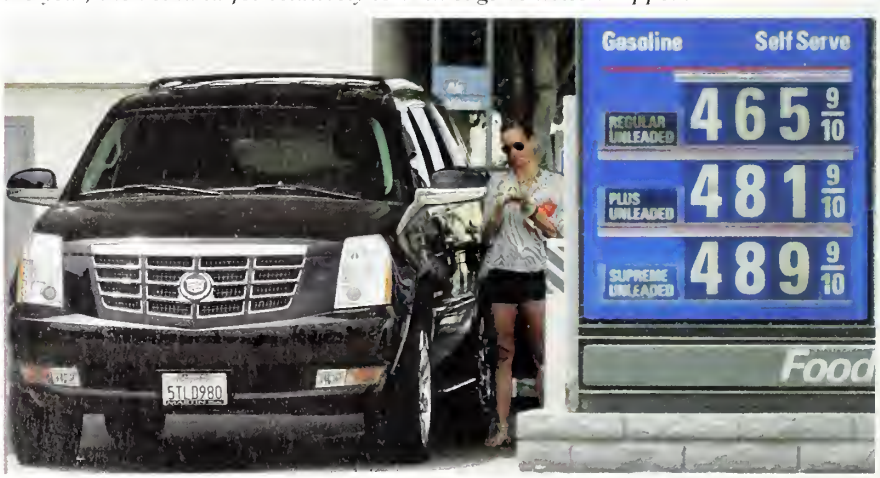
Automobiles. The American automotive industry began 2008 in precarious condition, and as the year unfolded, the situation went from bad to worse. First, gasoline prices of $3.50 to $4 per gallon throughout much of the United States during the spring and summer of 2008 crushed the already-declining demand for sport-utility vehicles (SUVs), pickup trucks, and minivans. Then the credit markets dried up, which affected both automakers, whose borrowing costs spiked, and consumers, who faced tighter lender standards and a reduction in available leases. In June alone, automobile sales in the U.S. fell 18% year on year, and in October they fell 31.9%. By late in the year, facing the prospect of running out of cash, the heads of the Big Three automakers testified before the U.S. Congress to request billions of dollars in government-provided loans to stay afloat. Although the Senate turned down the companies, in mid-December U.S. Pres. George W. Bush drew on a fund primarily intended to help bail out the financial sector to provide General Motors and Chrysler up to $17.4 billion in emergency loans with strict conditions, such as a requirement to cut labour costs. Ford, in the best financial shape of the Big Three companies, opted not to take any federal assistance, but it supported the loans since a failure of either GM or Chrysler would also threaten Ford's suppliers. The ongoing worldwide economic crisis helped push vehicle sales in the U.S. down more than 35% in December year on year, and total sales for 2008 were the lowest in about 50 years.

Although Ford experienced record quarterly losses on the heels of a $2.7 billion loss in 2007, it had a line of credit of about $11 billion that it had negotiated in 2006, and in March 2008 Ford completed the sale of its Jaguar and Land Rover units to India's Tata Motors, which netted Ford $2.3 billion. CFO Don Leclair and two board members abruptly left Ford in October, which suggested to analysts that the Ford family (which controlled 40% of shareholder votes) was attempting to tighten control over the automaker.

Since the late 1990s General Motors had bet heavily on the SUV for its profits, so when the sale of SUVs collapsed, GM was left stranded. In late 2007 its primary SUV plant, in Janesville, Wis., produced 20,000 SUVs per month, but a year later the monthly output was only about 3,000 SUVs, and the plant was slated to be closed. GM posted a loss of $15.5 billion in the second quarter, and by late in the year the company was losing cash at a pace of more than $1 billion per month. After preliminary merger discussions with Ford collapsed in September, GM considered merging with its other Big Three rival, Chrysler. The deal would in theory create a new automaker with $250 billion in annual revenue, a 30% share of the American market, and—most important—about $30 billion in cash reserves. It would also likely entail massive layoffs and downsizing, since GM and Chrysler had several overlapping brands and competing production facilities. The proposed merger soon hit a wall, however, when GM and Cerberus Capital Management, Chrysler's owner, said that they were unable to find investors and banks to provide financing for the deal. As GM struggled to become profitable, it received the first $4 billion of its federal assistance on December 31.

For Chrysler the proposed GM merger came when it also was running out of options. The automaker, which Cerberus had acquired in the spring of 2007, had cut production costs in anticipation of a market slowdown in 2008. The breadth of the market's collapse, however, left Chrysler reeling, and the company said that it would lay off 25% of its white-collar employees by the end of the year. Over the first eight months of 2008, Chrysler lost $400 million as sales slipped by 24%. In September Cerberus approached Chrysler's former owner, Daimler, about purchasing Daimler's remaining 19.9% stake in Chrysler, and it later entered into ne-

After putting gas into her Cadillac Escalade SUV, a woman stands next to her vehicle in June in Santa Monica, Calif. As gas prices rose through the first half of the year, the demand for relatively low-mileage vehicles dropped.



Reed Saxon/AP

Robert Sorbo—Reuters/Landov

On September 3 Boeing machinists in Washington march to their union hall to vote on a company contract offer. Boeing workers rejected the offer and initiated a strike that lasted until November 1.

gotiations with Japan's Nissan and France's Renault to form a manufacturing and development alliance, but no agreements were reached. Chrysler announced in mid-December that it was idling all 30 of its North American manufacturing plants for at least a month to save cash, and at year's end the company anticipated soon receiving its initial $4 billion of federal assistance.

Japanese automaker Toyota profited from the stumbles of its American rivals and was set to outsell GM for the year and become the world's largest automaker. Through June Toyota sold about 300,000 more vehicles than GM worldwide. Nevertheless, Toyota was far from immune to the collapse of the American market, and in December its vehicle sales in the U.S. were down almost 37%. By the end of the year Toyota forecast that it would report its first-ever annual operating loss.

Thanks to sales of passenger cars such as the Civic and Accord sedans, Honda's sales in the U.S. were up 1.7% in the first eight months of 2008, but by year's end it also had recorded a decline in sales, with a drop of 8.2% for the year.

Many European carmakers were hit with declining revenue as buyer demand worsened in the second half of the year. France's Peugeot-Citroën experienced a 5.2% drop in its third-quarter sales and said that it would slash its European car production by 30%. Sweden's Volvo's net profit fell 37% in the third quarter, and the company noted that it had almost as many order cancellations as it did new orders.

The most dramatic growth potential in terms of new-car production and sales was in India and China. India swiftly emerged as a major production hub for small cars, including the Nano, introduced by Tata Motor's chairman, Ratan Tata, in January. (*See* BIOGRAPHIGIES.) Among the manufacturers that were operating plants in India were Nissan and Suzuki from Japan and Hyundai from South Korea. In China overall car sales rose 7.3% for the year to about 6.8 million. China's passenger-car sales shot up 24% in March alone, after foreign automakers introduced 13 new models in the first quarter. In three years China's domestic car sales had expanded by more than half.

Airlines. For 2008 the aviation industry was buffeted on one side by skyrocketing energy prices and on the other by a souring economy with diminished ridership. At least 25 global airlines either were sold or went bankrupt in 2008, and the remainder struggled to keep solvent with a combination of higher fares, reduced flights, and new fees (such as fuel surcharges and checked-bag surcharges). At the start of the decade, an average 15% of the cost of an airline ticket paid for jet fuel, but by the summer of 2008, as the price of oil peaked, the figure had risen to 40%. With the higher ticket costs, ridership was down; the U.S. Federal Aviation Administration (FAA) estimated that about 2.7 million fewer people would fly in the summer of 2008 than in the previous summer. (As fuel prices subsequently declined through autumn, many airlines removed their fuel surcharges only to raise their base fares by about the same amount.)

Delta Air Lines and Northwest merged to form a carrier with more than $35 billion in revenue and a fleet of 800 aircraft. UAL (the parent of United Airlines) spent much of the year in negotiations with U.S. Airways and floated the idea of acquiring Continental, but no deals were reached.

In the United States, energy costs leveled the playing field between legacy carriers and newer discount airlines. A combination of spiraling fuel bills and a decreased ability to tap the capital markets led to the shutdown or bankruptcy of more than a half dozen discount airlines, including Frontier, Skybus, Aloha, and ATA. The once fiercely independent JetBlue Airways sold off a 19% stake to Lufthansa. Even Southwest Airlines, formerly the best performer of the sector, encountered turbulence. In March the airline was forced to ground 38 of its planes because it could not determine whether safety inspections had been performed adequately, a controversy that led the FAA to fine Southwest $10.2 million and to propose new safety rules that affected about 1,200 wide-body jetliners.

European airlines also suffered. Ryanair posted only its second quarterly loss as a public company in June. Silverjet, a British business-class-only airline, shut down in May after only 18 months of service. Alitalia, which had not reported a net profit since 2002, was placed in bankruptcy in August. CAI, a consortium of Italian investors, agreed in December to purchase the airline's main assets.

Aircraft. Aircraft manufacturers in 2008 faced a number of challenges, from the impact of high oil prices to operations that were shut down by strikes. Although industry leaders Boeing and Airbus had compiled a backlog of 7,000 aircraft orders over the previous few years, they faced the potential of cancellation of up to one-third of their bookings as airlines downsized in the face of the declining economy. In February Boeing lost out on a $40 billion air force contract for aerial refueling tankers to a partnership that included Airbus and Northrop Grumman. Boeing, aided by the finding by the U.S. Government Accountability Office that the air force had improperly run the bidding process, pushed to reenter the bidding, and a new competition was set for 2009. About 27,000 Boeing machinists walked off the job in September after talks broke down for a new three-year contract. The strike, which lasted until November 1, was driven in part by machinists' discontent with the delays in Boeing's 787 Dreamliner program, which was kept to a slow pace partly owing to missed deadlines by Boeing's outsourced suppliers. Airbus spent the year trying to reduce costs, with its parent EADS pushing to cut costs by €2.1 billion (about $3.25 billion) by 2010. The measures would include the elimination of 10,000 jobs.

Both Boeing and Airbus also had to contend with a new potential rival. In

(continued on page 217)

The Future of Fossil Fuel

During the first half of 2008, prices of fossil fuels—petroleum (oil), natural gas, and coal—rose steeply. Crude-oil prices, for example, set record highs on a regular basis and soared for a short time to more than double the average price of crude oil in 2007. Because fossil fuels were crucial sources of energy worldwide, the rapid rise in prices spurred debate about the accessibility of global fossil-fuel supplies, the extent to which producers would be able to meet demand in decades to come, and the potential for alternative sources of energy to mitigate concerns about energy supply. The debate focused in particular on petroleum, globally the most important fossil fuel and the primary source of fuel for transportation.

How much oil does the Earth have? The short answer to this question is, "Nobody knows." In its 2000 assessment of total world oil supplies, the U.S. Geological Survey (USGS) estimated that about 3 trillion bbl of recoverable oil originally existed on Earth and that about 710 billion bbl of that amount had been consumed by 1995. The survey acknowledged, however, that the total recoverable amount of oil could be higher or lower—3 trillion bbl was not a guess but an average of estimates based on different probabilities. This caveat notwithstanding, the USGS estimate was hotly disputed. Some experts said that technological improvements would create a situation in which much more oil would be ultimately recoverable, whereas others said that much less oil would be recoverable and that more than one-half of the world's original oil supply had already been consumed.

There was ambiguity in all these predictions. When industry experts spoke of total "global oil reserves," they referred specifically to the amount of oil that was thought to be recoverable, not the total amount remaining in the Earth. What was counted as "recoverable," however, varied from estimate to estimate. Analysts made distinctions between "proven reserves"—those that could be demonstrated as recoverable with reasonable certainty, given existing economic and technological conditions—and reserves that might be recoverable but were more speculative. The Oil & Gas Journal estimated in late 2007 that the world's proven reserves amounted to roughly 1.3 trillion bbl. To put this number in context, the world's population consumed about 30 billion bbl of oil in 2007. At this rate of consumption, disregarding any new reserves that might be found, the world's proven reserves would be depleted in about 43 years.

The world's oil is not distributed evenly by region. The overwhelming majority of proven oil reserves are located in the Middle East. As of 2007 the Middle East region (including Iran but not North Africa) laid claim to about 56% of the world's total proven reserves—that is, more than the rest of the world combined. Following the Middle East were Canada and the United States, Latin America, Africa, and the region occupied by the former Soviet Union. Each of these regions contained less than 15% of the world's proven reserves.

The amount of oil a given region produces is not always proportionate to the size of its proven reserves. As of 2007 the Middle East contained most of the world's proven reserves but accounted for only about 30% of global oil production (though this was still more than any other region). The United States, by contrast, laid claim to only about 1.5% of the world's proven reserves but produced about 10% of the world's oil.

Crude oil is a mixture of hydrocarbons (compounds composed of hydrogen and carbon) with small amounts of other chemical elements, and it exists in a liquid state both when underground and at the Earth's surface. Crude oil accounts for most global oil reserves. Global oil-supply figures typically also include liquid hydrocarbons from other sources, such as (1) condensates and natural gas liquids, which exist underground as gases but naturally condense into liquids as they are brought to the surface, (2) tar sands, which contain a highly viscous form of oil that is expensive to extract, and (3) oil shale, a type of sedimentary rock that can be used to produce an oil substitute called kerogen. Other factors that can enter into global oil-supply figures include refinery gain (volume expansion through the refining process) and supplies of oil substitutes, which can satisfy oil demand. In 2008 about 15% of the global oil supply was made up of liquid hydrocarbons other than crude oil. The percentage was increasing, and some analysts expected that 50% of oil-production growth between 2008 and 2020 would come from alternative forms of oil and from oil substitutes.

The rise in oil prices in early 2008 sparked discussion over whether the world was beginning to run out of oil. It was clear that the Earth had a finite amount of oil and that global demand was expected to increase. In 2007 the National Petroleum Council, an advisory committee to the U.S. secretary of energy, projected that demand for oil would rise from 86 million bbl to as much as 138 million bbl per day in 2030. Yet experts remained divided on whether the world would be able to supply so much oil. Some argued that the world had reached "peak oil"—its peak rate of oil production. The controversial theory behind this argument drew on studies that showed how production from individual oil fields and from oil-producing regions tended to increase to a point in time and then decrease thereafter. (Oil production in the continental United States increased steadily through the early and mid-20th century until it peaked in 1970; by 2008 it had declined by almost 50%.) Peak-oil theory suggested that once global peak oil had been reached, the rate of oil production in the world would progressively decline, with severe economic consequences to oil-importing countries.

A more widely accepted view was that, through the early 21st century at least, production capacity would not be limited by the amount of oil in the ground but could be limited by other factors, such as geopolitics or economics. One concern was that the growing dominance by nationalized oil companies, as opposed to independent oil firms, could lead to a situation in which countries with access to oil reserves would limit production for political or economic gain. A separate concern was that nonconventional sources of oil—such as tar-sand reserves, oil-shale deposits, or reserves that are found under very deep water—would be significantly more expensive to produce than conventional crude oil unless new technologies were developed that reduced production costs.

(LEE HUDSON TESLIK)

(continued from page 215)
May the Chinese government launched Commercial Aircraft Corp. of China (CACC). Aircraft manufacturers expected that China would require up to 2,800 new planes in the next 20 years, and CACC was founded to ensure that Chinese manufacturers secured a substantial share of that market.

Metals. The fortunes of metals producers through the first half of 2008, from steel to copper, depended in great part on the impact of rising commodity prices. Producers walked a thin line between welcoming price inflation, since it boosted their business's bottom lines, and fearing it, since inflation meant increased energy-related costs and, ultimately, lessened demand.

Steelmakers, for example, saw general improvements in their balance sheets over the summer as months of steel-price increases helped reduce the pain of increasing raw material and energy costs. (Global prices rose 40% to 50% between December 2007 and May 2008.) U.S. Steel posted second-quarter net income of $668 million, a more than 100% increase year on year. Luxembourg's ArcelorMittal, the world's largest steelmaker in terms of production, earned a record $13.09 billion in the first half of 2008 and was on pace to match that amount in the second half. As the year waned, however, there were signs of flattening demand.

There was also growing tension between miners and producers. Australian top mining companies Rio Tinto and BHP Billiton pushed for massive increases in their benchmark prices. In early summer, for example, they demanded and received an 85% increase for iron ore in negotiations with China's biggest steelmakers. As demand decreased in the summer and fall, however, China's steel mills began postponing iron-ore deliveries, and analysts predicted that the slowdown could reduce sales by 10% by year's end. BHP spent much of the year attempting to carry out a $130 billion hostile takeover of Rio Tinto.

Other metal sectors also faced dwindling demand. Copper hit a three-year low of $2 per pound in October after Chinese demand waned. The price further fell to below $1.30 per pound in mid-December. From July to September aluminum prices fell more than 20% to $2,500 per metric ton, while producer inventories increased by 40%. By the end of the year, prices dropped to less than $1,500 per metric ton. China, which experienced electric-power shortages, was forced to cut aluminum output by 10%. Even Russia's RUSAL, the world's largest aluminum producer, considered shuttering some of its high-cost smelters. The largest American producer, Alcoa, was slammed by increased costs of production and raw materials and declining demand from automakers and other manufacturers. In the third quarter Alcoa posted a 52% profit decline and said that it would reduce capacity and halt all nonessential capital projects.

Even gold, once considered a safe haven in times of economic volatility, was unpredictable. By March gold futures contracts had reached $1,000 per troy ounce. In the summer, however, with demand collapsing (jeweler demand for gold fell 24% in the second quarter alone), gold prices began to deflate, and by August gold futures had given up all of the year's accumulated gains. Even more frustrating to gold investors, the commodity's price was wildly volatile in the third and fourth quarters, bouncing up to $986 per troy ounce and down to about $700.

Chemicals. The leaders of the global chemicals industry in 2008 largely managed to keep a steady pace as the economic turmoil began, thanks to a combination of price hikes and increased diversification. Dow Chemical posted a 6.2% gain in third-quarter net income, since it was able to use two major across-the-board price hikes in the summer to offset increased energy costs, which rose by 48% during the third quarter alone. Dow hoped that its acquisition of specialty-chemicals maker Rohm and Haas would help widen its profit margins. In December, however, Dow said that it would be reducing its workforce by about 11%, or 5,000 jobs. DuPont was also managing to keep afloat despite the slump in automobiles and housing, and it posted an 18% increase in first-half earnings. The company had sought product diversification with moves into areas such as biofuels, but it also reduced its workforce late in the year, cutting 2,500 jobs.

Petroleum and Natural Gas. In 2008 the global energy sector both benefited and suffered from the caprices of energy prices. For much of the first half of the year, oil and gas prices were at record highs. Oil peaked at $147 per barrel in early July. By August, however, indications of a global recession had appeared, and prices began to collapse. Much of the drop was the result of declining consumption—the U.S. Department of Transportation said that the total distance driven in the U.S. in August fell by 5.6% year on year, the biggest drop reported since 1942, the year data began to be collected. Crude oil fell to $120 per barrel in August and to less than $70 per barrel by the end of October. The price drop prompted OPEC to slash its output by 1.5 million bbl per day, but the price continued to fall, and in late December it slipped to as low as $36 per barrel.

Many analysts expected a wave of consolidation among oil and gas producers, in part because the "supermajor" oil companies such as ExxonMobil and BP and the "superindependents" such as Occidental Petroleum had massive cash reserves. (The five largest Western oil companies had $72.6 billion in cash at the end of second quarter 2008.) Their likely targets included newer companies such as Petrohawk Energy that relied on a mix of debt and equity to finance their growth. With the banks essentially shuttered in terms of lending in the latter months of 2008, such companies faced difficulty in finding capital to keep their wells active.

The top global energy companies also began to address a long-simmering problem—the fact that their production and their oil and gas holdings were leveling off or declining, which left much of the world's untapped oil reserves in the hands of state-owned energy companies. The 10 largest holders of petroleum reserves in the world were all state-owned companies, including Russia's goliath Gazprom, whose daily crude-oil and gas production was greater than that of Saudi Arabia. By contrast, even at the height of the oil-price boom in the second quarter, ExxonMobil said that its production of oil and gas fell by 7.8%.

Oil- and gas-rich countries flexed their muscles, often at the expense of the former top oil producers and would-be competitors. In February Venezuela's state-owned oil company, Petróleos de Venezuela, cut off sales of oil and gas to ExxonMobil in retaliation for a legal dispute. Russia forced top global producers to beg for scraps: Total and StatoilHydro agreed to stringent terms with Gazprom (they would not own the gas and would have to sell all the gas they produced to Gazprom) in order to have access to the Shtokman gas field. Moreover, the Russian government tightened its grip on BP's Russian joint venture, TNK-BP, and several top executives of TNK-BP resigned. The loss of control over its half of TNK-BP could prove catastrophic for BP, since the joint venture had come to account for nearly one-

fifth of BP's reserves and about one-quarter of its oil production.

Utilities. The global utilities market endured a turbulent year marked by wild price swings. As the year ended, utilities braced for an anticipated massive wave of industry consolidation. In October Exelon made a $6.2 billion unsolicited bid to buy NRG Energy, a combination that would create the largest American power company, with $68.8 billion in assets.

Driving the potential of consolidation was the fact that many power companies that sold electricity in deregulated markets were crushed by the stock market collapse in September and October. For example, the market capitalization of Reliant Energy (Houston) fell by 75% in a single month, and the shares of several other major utilities sold at a fraction of the actual value of their power plants, let alone their companies. The credit-market crunch also hurt utilities, many of which relied on the debt markets to finance at least one-half of the costs of building power plants.

Other blockbuster deals included Warren Buffett's Berkshire Hathaway's $4.7 billion purchase of Constellation Energy Group (Baltimore, Md.), which outbid the French utility Électricité de France (EDF). EDF in turn agreed to buy the British Energy Group for $23 billion, a deal that could spur the revival of the British nuclear power industry. EDF said that it intended to build up to five nuclear reactors in Britain.

Pharmaceuticals. In 2008 drug manufacturers readied themselves for a future of limited promise. Top manufacturers, whose profits had been under siege by generic-drug manufacturers, faced within a few years the end of patent protection to more than three dozen of the industry's top-selling drugs, a change that could wipe out $67 billion of annual sales by 2012. Unhappy with the lack of new drug prospects, top manufacturers began downsizing their research and development (R&D) units. GlaxoSmithKline said in October that it would eliminate up to 850 jobs in R&D, about 6% of its R&D staff, and that it would likely increase its use of outside research units. Merck announced that it planned to gut 12% of its workforce and said that it would shutter three research sites as part of the downsizing. Pfizer disclosed that it would abandon research into heart disease (which had resulted in its cholesterol-lowering drug Lipitor), obesity, and bone health to focus on more profitable areas such as cancer research.

Leading manufacturers spent 2008 looking for stopgap solutions to their longer-term woes. GlaxoSmithKline, for example, worked to modify and find new uses for the drugs it already sold, a strategy that had accounted for 27% of its sales growth over the previous seven years. Pfizer extended the profitable life of its blockbuster Lipitor drug by cutting a deal with Indian generic manufacturer Ranbaxy Laboratories. Ranbaxy agreed to keep its generic version of Lipitor off the U.S. market until late 2011. The arrangement would provide Pfizer 20 additional months of exclusivity to Lipitor, which generated $13 billion in revenue annually. In return, Ranbaxy was granted the right to sell a generic version of Pfizer's Caduet seven years before the expiration of its patent.

Tobacco. As they had for much of the previous decade, tobacco manufacturers spent 2008 contending with declining American smoking trends and looking to expand into emerging markets and diversifying their product lines. Manufacturers were betting on continued growth in less-developed countries such as China and India. Philip Morris International, which became a standalone company in March (separating from its parent Altria Group), began an aggressive global push of its products in countries such as Pakistan (where smoking had increased 42% since 2001) and Ukraine. By contrast, Altria's American cigarette-manufacturing operation, Philip Morris USA, faced declining domestic cigarette sales of 2.5% to 3% annually.

Finance. The credit crisis that began in 2007 and the failure of several large banks and other financial institutions, combined with soaring oil and food prices, pushed the world economy into a global recession in 2008. (*See* Special Report, on page 170.) Stock markets fell throughout the year, with all major bourses down by at least 30% and some plummeting 50% or more. In the U.S., the Dow Jones Industrial Average closed at 8776.39, a drop of 33.8% for the worst annual loss since 1931, and a plunge of 37.7% from the all-time high of 14,087.55 set in October 2007. (For Selected Major World and U.S. Stock Market Indexes, *see* TABLE.)

(CHRISTOPHER O'LEARY)

Selected Major World Stock Market Indexes[1]

Country and Index	2008 range[2] High	Low	Year-end close	Percent change from 12/31/2007
Argentina, Merval	2249	829	1080	-50
Australia, Sydney All Ordinaries	6434	3333	3659	-43
Brazil, Bovespa	73,517	29,435	37,550	-41
Canada, Toronto Composite	15,073	7725	8988	-35
China, Shanghai A	5771	1793	1912	-65
France, Paris CAC 40	5550	2881	3218	-43
Germany, Frankfurt Xetra DAX	7949	4127	4810	-40
Hong Kong, Hang Seng	27,616	11,016	14,387	-48
India, Sensex (BSE-30)	20,873	8451	9647	-52
Italy, S&P/MIB	38,063	17,968	19,460	-50
Japan, Nikkei 225	14,691	7163	8860	-42
Mexico, IPC/BOLSA	32,095	16,869	22,380	-24
Russia, RTS	2488	549	632	-72
Singapore, Straits Times	3444	1600	1762	-49
South Africa, Johannesburg All Share	33,233	17,814	21,509	-26
South Korea, KOSPI	1889	939	1124	-41
Spain, Madrid Stock Exchange	1625	848	976	-41
Taiwan, Weighted Price	9295	4090	4591	-46
United Kingdom, FTSE 100	6479	3781	4434	-31
United States, Dow Jones Industrials	13,058	7552	8776	-34
United States, Nasdaq Composite	2610	1316	1577	-41
United States, NYSE Composite	9648	4651	5757	-41
United States, Russell 2000	763	385	499	-35
United States, S&P 500	1447	752	903	-38
United States, Wilshire 5000	14,547	7451	9057	-39
World, MS Capital International	1589	772	920	-42

[1]Index numbers are rounded. [2]Based on daily closing price.
Sources. Bloomberg.com, *Financial Times*, *Wall Street Journal*.

Computers and Information Systems

SMARTPHONES, wireless Internet access, and NETBOOKS were popular with consumers. Microsoft hinted that its much-criticized Windows VISTA might be replaced early. INTERNET VIDEO raised questions about DATA-DOWNLOADING LIMITS, while the amount of TV content distributed through the Internet was increasing.

Smartphone: The New Computer. The market for the smartphone—in reality a handheld computer for Web browsing, e-mail, music, and video that was integrated with a cellular telephone—continued to grow in 2008. According to research firm Gartner, in the second quarter, worldwide smartphone unit sales increased at a rate of 15.7% year-on-year. The fastest-growing market was North America, with 78.7% sales growth. Sales in Western Europe were up 29.3%.

The rise in sales was fueled in part by Apple's introduction in July of the iPhone 3G (the 3G referred to third-generation wireless networks, which sent and retrieved data more rapidly). The iPhone 3G was in high demand; one million iPhone 3Gs were purchased during its first three days on the market. There were early technical problems, which included dropped calls and poor connections, but it was unclear whether the problems were primarily the responsibility of Apple or of AT&T, the only American network on which the iPhone could be used.

The iPhone and a similar device, called iPod Touch, created a new market for third-party applications software, such as games, that could be downloaded from Apple's online App Store. Apple claimed that consumers downloaded more than 100 million applications, some free and some for purchase, in the first 60 days that they were offered.

Google's first smartphone, a model from Taiwan-based cellphone maker HTC called the G1, used Google's Android operating software. Like the iPhone, the G1 was controlled by a touch screen, but unlike the iPhone, it had a physical keyboard rather than a virtual one on the screen. The G1 was initially available only from T-Mobile in Europe and in the U.S., where it initially cost $179 with a two-year cell-phone contract, slightly less than the iPhone. The consensus was that the Google phone had broken little new ground and thus was simply a competitive phone introduced after the iPhone and the BlackBerry, from Research in Motion.

The popularity of smartphones was aided by another technological trend in the United States: more Americans than ever before were giving up their traditional landline telephones for cellular telephones. In a survey of Internet users by Jupiter Research, 12% said that they did not subscribe to a landline-telephone service, and another 12% said that they planned to switch from a landline to a cellular telephone in the next year. Another study, by market researcher Nielsen, said that 17% of all American homes relied exclusively on cellular telephones rather than landline telephones.

T-Mobile introduced its G1 smartphone, based on Google's Android OS, in October. The display panel was designed to slide open to provide access to a keyboard (as shown).

Dan Stemberg/AP

Wi-Fi Service. While the cellular telephone networks continued to serve a growing demand for data, short-range Wi-Fi (wireless fidelity) found in homes, hotels, restaurants, airports, and other public places continued to spread as a common wireless alternative for Internet access. The telecommunications industry began looking ahead to a new wireless standard, called 4G (fourth generation), that would transmit laptop and smartphone data faster than present-day cellular networks while greatly extending the range of its signals. Two competing wireless technologies—WiMax and LTE (Long Term Evolution)—were expected to form the basis of the new standard. In tests by T-Mobile and Nortel Networks, LTE was able to download data at speeds of up to 170 million bits per second and upload data at speeds of up to 50 million bits per second from a car that was traveling about 67 km (42 mi) per hour.

Philadelphia, the first American city to commit to a citywide public Wi-Fi network, tried to reinvigorate the plan after EarthLink abandoned the project in the wake of complaints about weak signals. The Wi-Fi network, which was 80% complete, was being taken over by local investors under the name Network Acquisition Co. Its plan was to sell Wi-Fi service to local businesses and use that revenue to pay for free public Wi-Fi in outdoor locations. The new network operators also hoped to generate Wi-Fi revenue through advertising and transaction processing, such as handling the sale of entertainment tickets.

The automobile manufacturer Chrysler said that it would offer Wi-Fi connections with Internet access as an option on its 2009-model vehicles. Called UConnect

Web, the service was to be offered as entertainment for backseat passengers.

Companies. In October the 2008 revenue forecast for the semiconductor industry was reduced from 4% to 3.5% by research firm iSuppli, which noted that strong sales of desktop and notebook computers could help buffer the computer-chip manufacturers from the worldwide economic woes. A worsening worldwide economic crisis, however, drove sales downward 7.2% from October to November, according to the Semiconductor Industry Association, and in mid-December research firm Gartner forecast that for the year the semiconductor industry worldwide would post a 4.4% decline in revenue.

Computer-chip firm AMD said early in the year that it would eliminate 1,650 jobs, or about 10% of its workforce, because of deteriorating business conditions. By October the firm had announced that it would split into two companies, one that designed computer chips and another that manufactured them. AMD was to retain the design portion and own 44.4% of the manufacturing arm in partnership with the Advanced Technology Investment Co., which was owned by the government of Abu Dhabi, U.A.E., and included two investment funds. In November the company said that it was laying off 500 more employees.

Hewlett-Packard Co. said that it would eliminate 24,600 jobs over the following three years as part of its recently completed $13.9 billion acquisition of Electronic Data Systems Corp. Layoffs had been expected, but the magnitude of the cutbacks, nearly 8% of HP's 320,000 employees, surprised Wall Street.

Intel filed a lawsuit against the European Commission (EC) in which it claimed that it had not been permitted a fair defense against charges that it violated antitrust regulations by giving discounts to retailers. The commission, the EU's antitrust regulator, accused Intel of giving retailers rebates in exchange for their promise not to sell PCs that used chips from Intel competitor AMD. The EU regulator and Intel had been sparring over antitrust complaints since 2001, when AMD complained about Intel's conduct. In a separate incident, South Korea ordered Intel to pay $25.4 million for having allegedly violated fair-trade regulations by offering South Korean computer firms rebates to hinder sales of AMD chips.

The EC fined Microsoft a record $1.35 billion in 2008 for failure to make changes that the EC had ordered in 2004 when it found that Microsoft had abused its position of market dominance. The latest fine brought to $2.3 billion the total amount that the commission had fined Microsoft in the long-running dispute. Microsoft was fined more than $600 million in 2004 for the initial finding of wrongdoing and was fined more than $350 million in 2006 for failing to license networking technology as required in the 2004 ruling.

June marked Bill Gates's departure as a full-time employee of Microsoft, which he cofounded in 1975 after dropping out of Harvard University. He did not exactly leave the company, however. Gates was expected to spend some of his time working on future Microsoft products and services while remaining chairman and Microsoft's largest shareholder. He also planned to devote time to his charitable organization, the Bill & Melinda Gates Foundation.

Apple's stock was adversely affected by persistent rumours that CEO Steve Jobs was seriously ill, something Jobs said was not true. Jobs had appeared unusually thin at the company's Worldwide Developers Conference in June, and it was a widely known fact that Jobs had been treated for pancreatic cancer a few years earlier. The stock reaction was tied to Jobs's perceived key role in determining Apple's strategy and products.

In 2008 Google settled two copyright lawsuits filed in 2005 that had resulted from its plans to digitize and share short excerpts from copyrighted books without official permission. The company agreed to pay $125 million to settle a class-action suit by authors and the Authors Guild and a suit by five members of the Association of American Publishers. The settlements, however, did not resolve whether Google had violated copyright law by its unauthorized scanning of the books in question.

Microsoft, Yahoo!, and Google Interactions. In what would have been the merger of the year in the computer industry, Microsoft sought to acquire all or part of Yahoo! Microsoft, the world's largest software company, pursued separate deals with Yahoo!, but no agreement was reached. Microsoft initially sought to acquire all of Yahoo! and made an offer of $44.6 billion, which was subsequently raised to $47.5 billion. The merger would have put Microsoft in a much better position to compete with Google, the leader in Internet search and increasingly a threat to Microsoft in the new market for Internet-based software applications known as "cloud computing." (In cloud computing, large data centres handle computing applications for PCs, smartphones, and other devices with an Internet connection.) After withdrawing its bid, Microsoft approached Yahoo! about a more limited financial deal—one reportedly worth about $1 billion annually in new operating income for Yahoo! Under that proposal, Microsoft would have owned 16% of Yahoo!, acquired Yahoo!'s search business, and shared revenue for searches that originated with Yahoo! Stating that the sale of its search business to Microsoft was not a good long-term strategy, Yahoo! broke off the second round of talks.

Following the failed talks with Microsoft, Yahoo! turned to Google for a partnership. Google was to place ads next to some search results on Yahoo!'s American and Canadian Web sites. Yahoo! and Google said that the deal would make Yahoo! a more viable business at a time when advertisers wanted to preserve online advertising competition and Yahoo! had fallen behind Google in search advertising. Microsoft opposed the Yahoo!-Google deal, and it was not alone. A group that represented about 18,000 newspapers worldwide, the World Association of Newspapers, opposed the search-advertising partnership between Yahoo! and Google as anticompetitive.

The U.S. Department of Justice (DOJ) showed interest in examining the Yahoo!-Google agreement for possible antitrust implications. The start-up of the partnership was delayed at midyear and again in October to give the department more time to review potential antitrust ramifications. Faced with a postponement in the advertising partnership, Yahoo! said that it would lay off about 10% of its 15,000 employees to reduce expenses. In early November the DOJ indicated that it would block the agreement despite last-minute concessions from both companies, and Google withdrew from the deal. Less than two weeks later, Yahoo! cofounder Jerry Yang announced that he would resign as CEO of the company, although he would retain a role in developing corporate strategy.

Mergers and Acquisitions. Samsung Electronics made an unsolicited $5.85 billion offer for data-storage producer SanDisk, which rejected the proposal because it believed that it undervalued the company. Samsung later withdrew its offer, citing the global financial crisis and SanDisk's worsened financial

circumstances related to lowered demand and falling flash-memory prices.

Electronics retailer Best Buy acquired Napster, a digital-music service, for $121 million. Napster, with about 700,00 subscribers to its online music catalog, bore little relationship to its namesake, the free and illegal music-distribution system created by Shawn Fanning and shuttered by a 2001 court decision. Napster had about one-half of the digital-music subscription market, and Best Buy was seeking a way to deal with declining CD sales and compete against Apple's iTunes.

Time Warner said that by early 2009 it would separate AOL's advertising business from its dial-up Internet-access business, which observers said could be a prelude to selling one or both of the units. AOL had been a financial drag on its parent company, and the dial-up portion had been considered a declining business as dial-up customers moved to higher-speed broadband connections.

The Internet. A survey conducted in the second quarter of 2008 found that twice as many people as a year before (an estimated 63% of American consumers) watched streaming video on their computers, primarily as a result of a wider range of content and an increase in the number of broadband users, said market researcher ABI Research. Although nonprofessional video from Web sites such as YouTube accounted for much of that viewing, there also was growing interest in watching TV shows and movies as streaming video over the Internet, the research firm said. Some shows and movies could be viewed through TV-network Web sites, the online video service Hulu.com, and YouTube (in a partnership with MGM). Netflix, whose main business was delivering movies on DVD via postal mail, also offered Internet streaming movies directly to PCs and indirectly to TVs via Internet-linked set-top boxes from a number of manufacturers. They included the Netflix Player from Roku, Blu-ray high-definition DVD players from LG and Samsung, the Xbox 360 videogame console from Microsoft, and a TiVo digital video recorder.

Sending video over the Internet consumed a large amount of bandwidth, whether it was being transmitted to users from commercial Web sites or—perhaps illicitly—from peer-to-peer networks. A new lobbying group called Arts + Labs, which represented content owners (such as Viacom), Internet-technology firms (such as Microsoft), and the Songwriters Guild of America, said that it wanted to promote the idea that Internet service providers (ISPs) had the right to block file sharing that took up too much bandwidth on their networks. It was unclear whether such a video-blocking policy would run afoul of much-discussed but as-yet-nonexistent government rules on net neutrality, a concept under which ISPs would be prohibited from favouring specific content that traveled over their networks.

At one point ISP Comcast acknowledged that it had slowed down traffic from peer-to-peer networks to prevent bandwidth hogging, but the U.S. Federal Communications Commission ordered the company to stop doing so on the grounds that it was an unreasonable restriction on some Internet users. Other ISPs, including Time Warner Cable, discussed metering Internet use to prevent some users from gobbling up too much bandwidth.

As an alternative to restricting only peer-to-peer traffic on its Internet-access network, Comcast said that it would limit all customers' monthly downloads and uploads of text, graphics, music, movies, photographs, and other information—although the company said that it set the limit so high that fewer than 1% of its customers were likely to be affected. Comcast reserved the right to terminate service to any residential customer who disregarded company warnings and twice violated a monthly limit of 250 gigabytes. Comcast said that the average customer used only about two to three gigabytes per month. Prior to the announcement, there had been no specific monthly limit.

Telephone company Verizon Communications said that it was benefiting from its decision to change the infrastructure of residential Internet and video-delivery services. The firm had made a $23 billion investment to lay fibre-optic cable directly to American homes. In 2008, four years after Verizon's FiOS (fibre-optic service) project began, the firm said that there was strong demand for its services, which included high-speed Internet, high-definition TV, and telephone. About 24% of the homes with FiOS had signed up for the Internet service, which was up to five times faster than normal cable-modem Internet-access speeds, the company said. Some industry observers commented, however, that it was still too early to know whether there would be a sufficient number of new customers to repay Verizon's big investment.

In what was called a sweeping change in the Internet address system, a large number of new Web-address suffixes (such as .news and .sports) were voted into existence by the Internet Corporation for Assigned Names and Numbers, or ICANN. The so-called top-level domain names would include city abbreviations and brand names and were expected to sell for hundreds of thousands of dollars. Multiple requests for the same name would be settled by auction. Some critics predicted that the new system of domain names would confuse Internet users and be expensive for businesses that had to protect their trademarks by registering new domain names such as .coke. The familiar .com, .edu, .gov, .net, and .org domain names were created in the 1980s; new domain names such as .biz, .info, and .name were introduced in 2001 and 2002. Over time, domains also were added for country abbreviations, such as .uk for United Kingdom.

Social networking continued to thrive on Web sites such as Facebook, MySpace, and Flickr, where consumers could share text, pictures, video, and, in a limited way, music with an ever-growing circle of friends and extended common-interest groups. Twitter, one of the newest entrants in the social-networking sphere, was a combination of blogging and text messaging. The Web-based service allowed several million people to send brief but frequent messages detailing their whereabouts and activities to groups of people on the Twitter service who were interested in such minute details of daily life. Users followed the daily routines of others on the service through constant updates, called tweets.

Among users of cellular-telephone data services, Facebook and MySpace were the most popular social networking sites. About 46% of all social networking users had connected to them via a mobile phone, according to ABI Research. In 2008 Facebook settled a lawsuit against the company and founder Mark Zuckerberg that had alleged that Zuckerberg misappropriated the Facebook concept from three fellow Harvard University students who founded ConnectU, a Facebook competitor. The terms of the settlement were not disclosed.

Bloggers, people who wrote personal reports on the Web about events both significant and inconsequential, played a bigger role in the 2008 U.S. political conventions in comparison with previous presidential election years. More than 100 bloggers were admitted to

cover the conventions alongside the mainstream media in the belief that bloggers' moment-by-moment live accounts—often partisan and aimed at niche audiences—would supplement TV viewing for a growing segment of the Internet-user population. The importance of bloggers in the political campaign followed the prominent use of the Internet for political fund-raising. (*See* Special Report on page 180.)

The Wall Street Journal's Web site (which, unlike most major newspaper sites, made most of its content available only to paid subscribers) tried to combine social-networking features with traditional journalism. In addition to being able to comment online about individual stories, a feature found on other news Web sites, the *Journal*'s Web site allowed readers to e-mail each other and create personal profiles that allowed others to view their activities on the *Journal*'s Web site.

E-Commerce. The music industry—which had previously adopted piracy-prevention efforts that had included suing individuals caught sharing songs online—experimented with free advertising-supported online music through MySpace. MySpace Music, a joint venture between MySpace and the four largest music firms—the Warner Music Group, the EMI Group, Sony BMG, and the Universal Music Group—was to be a free online jukebox capable of streaming several million different songs to MySpace users. Streaming allowed a user to listen to songs but not record or keep them. With the new service, MySpace users would be able to create multiple streaming-music playlists of their own and share a playlist with other users by posting it on a MySpace profile. To move the music to a digital music player or another computer, however, a user would have to buy downloadable copies of the same music.

In other action that signaled change in the online music business, the four music labels behind MySpace Music all agreed to deals that permitted subscriber-service Napster and the online store Amazon MP3 to sell songs that did not have digital-rights-management (DRM) software. DRM restricted the devices on which music could be played, and Napster and Amazon MP3 became the first online music companies to sell unprotected music from all four major music firms.

The motion-picture industry complained that the music industry's online piracy problems—a direct result of easy file copying—were about to afflict it as well. Several Hollywood studios—Paramount Pictures, 20th Century Fox, Universal Studios, Warner Brothers, Columbia Pictures, Walt Disney, and Sony—sued RealNetworks, a digital-media company that had introduced a DVD-copying program that could duplicate movies onto more than one personal computer. The suit sought a temporary restraining order to prevent the software from being sold. RealNetworks was also suing several movie studios, seeking a court judgment that the product was legal. DVD movies normally could not be copied because of encryption software; the inability of consumers to copy disks had helped protect the movie industry's $16 billion in annual DVD sales. The $30 RealDVD program for Windows PCs, however, allowed users to make a single copy of a movie (except high-definition movies) on the computer that copied the DVD. It was possible to transfer the copy to up to five other PCs, provided they also had the RealDVD software. The copies made by RealDVD also were encrypted to prevent further copying.

Previously, legal action by the movie industry had kept software for copying DVD movies off the market on the grounds that it infringed the movie industry's copyrights on content. Several movie studios and the Motion Picture Association of America had won a court victory in 2004 over 321 Studios, which had marketed a program called DVD X Copy. In that case, the court said that the DVD X Copy program violated the Digital Millennium Copyright Act. In 2007 the DVD Copy Control Association (an alliance of film distributors) was unsuccessful when it sued Kaleidescape, a firm that sold computer servers capable of copying and storing movies. While the Kaleidescape case was under appeal, RealNetworks concluded from the initial ruling in the case that it could legally sell a DVD-copying program.

Equal access to the Internet was also an issue. Target Corp. paid $6 million to settle a class-action lawsuit that claimed that visually impaired people had been blocked from using the Target.com Web site in 2006 by technical problems that the company declined to solve. The suit was filed by the National Federation of the Blind on behalf of California residents. Visually impaired customers could access Web sites by using software that read text aloud and identified technical features such as animated buttons or drop-down menus. The suit alleged that problems with the Web site made it impossible for the software to read the "checkout" button needed to make online purchases.

Computer Security and Crime. A potentially huge Internet security problem that would have enabled hackers to misdirect Web traffic to phony Web sites was uncovered and fixed before it became a major problem. The security flaw allowed an attacker to take control of a domain name server, a computer that helped transfer a computer user to a requested Web page. That in turn enabled the attacker to redirect the unsuspecting user to a bogus Web site in an effort to steal information or commit fraud. In one incident some Internet users were sent to a false Google site where programs automatically clicked on certain ads to make money for hackers, who then claimed the profits from the advertising activity.

An activist cyber-monitoring group, the Citizen Lab at the University of Toronto, and American firms such as Arbor Networks said that the Russian invasion of Georgia in August was accompanied by cyberwarfare designed to disable the Georgian Internet infrastructure. The reports seemed to confirm long-held suspicions that cyberwarfare would increasingly be utilized as part of conventional wars.

In one of the largest online crime sprees of its type, federal charges were filed in the U.S. against 11 persons from five countries in the theft of more than 41 million credit-card and debit-card numbers. The numbers were gained through tapping into the wireless computer networks of major brick-and-mortar retailers, including OfficeMax, Barnes & Noble, the Sports Authority, and T.J. Maxx. U.S. federal authorities in Boston said that the hackers electronically identified wireless networks with security flaws simply by driving past stores. Hackers then used "sniffer programs" to capture transaction information such as card numbers. The stolen numbers were either sold online or encoded in the magnetic strips of blank cards that could be used to withdraw money from automated teller machines (ATMs). The total amount of money stolen as a result of the card-number thefts was unclear.

In a separate incident, a computer break-in allowed hackers to steal an undisclosed number of customer PINs, or personal identification numbers, from a network of ATMs operated by Citibank at convenience stores. The theft was notable because PINs were

protected by encryption that should have rendered them unreadable. It appeared that some PINs were unprotected while being sent between the ATMs and the remote computers that handled ATM transactions.

A gang of malicious programmers who were apparently based in Russia launched a new type of attack on American computers with software tools that were typically used by computer network administrators. By secretly installing their malicious software in legitimate data centres that ran programs for customer companies, the attackers were able to take control of about 100,000 other computers and capture their user information, such as passwords and bank records.

MySpace won a record $230 million in damages in a Los Angeles federal court against two purveyors of spam, or junk e-mail, although it was in doubt whether it could collect such a large award. The pair allegedly used MySpace accounts—their own and those of others—to send spam e-mail to other MySpace members in an effort to lure them to marketing-oriented Web sites.

In an unrelated case, a U.S. Federal Trade Commission (FTC) investigation resulted in an international spam operation's being shut down by a U.S. federal court under the CAN-SPAM Act of 2003. In what the FTC said was one of the largest spam operations foiled to date, the group sent billions of spam messages over a 20-month period in an effort to sell purported luxury products, bogus drugs, and pornography. Federal officials said that criminal charges might eventually be filed against the spammers.

Some brick-and-mortar retailers sought legislation that would force eBay and other online sellers to police whether people were selling stolen merchandise through their Web sites. The legislation would force online marketplaces to remove merchandise listings when there was sufficient evidence that the goods had been stolen. It also sought to make selling stolen merchandise on the Internet a felony.

Government Issues. Congressional hearings in 2008 on Internet-privacy issues—in particular, the extent to which Web sites captured personal information and the way the information was used to aim advertisements at specific groups of consumers—generated concern but no new privacy legislation. Some Internet firms told Congress that they had used targeted advertising on consumers, based on the consumers' personal information, without clearly saying that they were doing so.

In a new twist on Viacom's 2007 copyright-infringement lawsuit against Google and YouTube, which sought more than $1 billion in damages, a U.S. federal judge ordered Google to provide Viacom with records of which of its users watched YouTube videos. That raised privacy concerns, since the court order potentially could have revealed the viewing choices of millions of YouTube users, but Google and Viacom said they would try to protect users' identities during the lawsuit. The situation was a reminder that the vast amounts of user data collected by many Web sites could be disclosed as a result of a lawsuit.

The open-source software movement won a significant legal victory when a U.S. federal appeals court ruled that free software could be protected by open-source licensing terms. The case revolved around a company that sold commercial software for model trains but did not disclose that its software contained code from a competing open-source program, even though the open-source license required acknowledgement of the code's use and a description of how it had been modified. The ruling also was expected to boost the use of free software by large organizations that previously had worried about the code's legal standing.

Computer Games. Video games, once aimed solely at boys and men, continued to draw a growing female audience, a trend that had begun in recent years. By 2008 girls and women made up 40% of the game-playing population, said the Entertainment Software Association, a trade group. With worldwide sales reaching $9.5 billion in 2007, the video-game industry sought further growth by increasing investment in games and game machines that might attract women. Nintendo was a leader in appealing to women customers, first with its handheld DS game machine and then with the Wii console, both of which featured general-interest games and required less button-pushing expertise than other consoles.

Music games proved to be a category that attracted both men and women. The music industry and game industry jointly succeeded with video games such as *Guitar Hero* from Activision and *Rock Band* from MTV Games. *Guitar Hero* allowed users to "play along" on simplified versions of guitars that essentially mimicked the rhythm of a song. The games were accessible to casual game players, and they provided the music industry with a new way to license its songs.

Microsoft cut the price of its Xbox 360 video-game console in September; the company said that the cut would stimulate demand because there was a broader market for a console that cost less than $200. The Xbox 360's base price was lowered from $279 to $199 at a time when the $249 Nintendo Wii was clearly the top-selling video-game machine and sales of Sony's $400 PlayStation 3 appeared to be slightly ahead of Xbox 360 sales. The Wii's success was linked to Nintendo's decision to focus the console and its games on novice or casual game players rather

A Nintendo Wii video-game console gets a workout from a member of a Wii bowling team at an assisted-living facility in Hopkinsville, Ky.

Kentucky New Era—Emily Parrino/AP

John Macdougall—AFP/Getty Images

Among the handheld electronic reading devices that were shown at the 2008 Frankfurt (Ger.) Book Fair were two iRex Digital Readers (at left and right) and a Bookeen Cybook (centre).

than so-called hard-core gamers. The video-game industry's traditional audience, hard-core gamers demanded sophisticated and increasingly difficult-to-master games, including online games in which thousands of consumers participated.

New Technology. Microsoft's Windows Vista was greeted by consumers and businesses with little enthusiasm—the operating system (OS) was blamed for software crashes and slowing down PCs, and some businesses decided to skip upgrading to it. Microsoft sought to repair both the technical and public-relations damage. Much of the technical problem was related to the need for new drivers, the computer software that made equipment work with Vista. Battered by a successful Apple advertising campaign based largely on Vista's alleged unpopularity, Microsoft began talking about future versions of Windows less than two years after Vista's introduction. Details remained sketchy, but a successor OS tentatively called Windows 7 was expected to be commercially released in 2009 or 2010. Another new version of Windows, which was rumoured to be called Windows Strata, was expected to emphasize cloud computing.

Google introduced its first Web browser, Chrome, to compete with Microsoft's Internet Explorer and Mozilla's Firefox. The introduction of Chrome brought Google into another level of competition with Microsoft; the two companies already clashed in the areas of Web search, Internet advertising, cell-phone operating systems, productivity software (such as spreadsheets), and Web-based e-mail. The Google browser also was seen as another step in Google's transition to Web-based applications software.

The netbook, or nettop—a tiny no-frills computer for Web browsing and light computing—gained popularity with prices as low as $300. It was a commercialized version of the low-cost PC that the nonprofit organization One Laptop per Child developed for use in less-developed countries, and more than 20 models had become available. Netbooks were not suited to tasks such as editing photos or watching high-definition video and had limited storage space because they used small disk drives or relied on small quantities of flash memory. Advocates said that they were less expensive and lighter than laptops; critics said that they were overpriced for their limitations and ran too slowly. Research firm Gartner predicted that as netbooks became more advanced, they would begin to take some sales away from laptops; it said that netbook shipments could climb from 5.2 million in 2008 to as many as 50 million by 2012.

The ongoing battle between Sony's Blu-ray and Toshiba's HD DVD formats for high-definition discs appeared to come to an end in February when Toshiba announced that it was abandoning the format that it had developed. In January Warner Brothers—the last major studio to support both formats—had announced that it would be using only the Blu-ray format, and major retailers had said that they would stop selling HD DVD players and movies. By year's end streaming video over the Internet and other online delivery methods were hindering Blu-ray DVD sales, which still lagged far behind those of standard DVD movies.

Apple's iPod continued to dominate the digital music player market. Although there were many alternative players with much smaller market shares, Microsoft's Zune was seen as the only competitor trying to add new features at the same rate as Apple. By late 2008 Apple had added to various iPod models a feature that readjusted the picture on an iPod's screen for vertical or horizontal viewing, depending on which way the player was held. The feature made use of an accelerometer, and on a new iPod Nano model, the device also allowed the user to shake the device to change songs. The Zune had Wi-Fi capabilities that allowed a user to listen to songs streamed from its online site or to purchase songs and download them. The Zune also had a built-in FM radio, and a user could tag a song heard on the radio for later purchase.

Another way to purchase music was introduced during the year, but it was unclear whether it would be a hit. SanDisk, which made computer-chip-based flash memory for computers, cellular telephones, cameras, music players, and keychain-sized flash drives, said that it would issue music albums on a microSD flash memory card that was designed to fit into a cellular telephone or digital music player. The card then provided the music-player software in the device with prerecorded songs. The initiative, called slotMusic, would provide a USB-port adapter so that the card could also be read by a computer.

Seagate Technology, one of the world's largest manufacturers of disk-drive data-storage devices, said that it would develop products using flash memory, a competing technology that had the advantage of having no moving parts to break or wear out but the disadvantage of being more expensive. The worldwide demand for disk drives continued to grow, however, and Seagate predicted that the drives would be vitally important for years to come.

The search continued for a handheld electronic reading device, or e-reader, that could take the place of printed books or printed newspapers. Because newspapers were increasingly being viewed online, several e-readers that sought to make reading Internet news easier gained attention in 2008. Among them were the iRex Digital Reader 1000, the Amazon Kindle, and the Sony Reader, all costing several hundred dollars. Key considerations for the wireless devices were weight, battery life, screen size, and the ability to read the screen even in bright light (a difficult task with most portable computer screens).

According to research firm Gartner, there were more than one billion personal computers in use in the world in 2008. Given the current growth rate, it was estimated that there would be two billion PCs in use by 2014, the firm said. About 58% of the world's PCs were located in mature PC markets such as the U.S., Western Europe, and Japan, even though those areas had only 15% of the world's population.

(STEVE ALEXANDER)

Earth Sciences

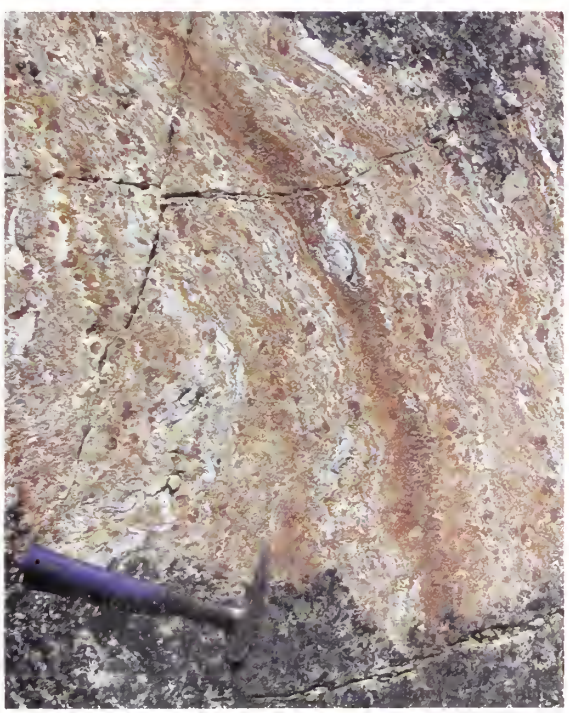
Studies of SEDIMENTS revealed a new history for the GRAND CANYON and helped pinpoint CLIMATE CHANGE. A rapid EARTHQUAKE-WARNING SYSTEM was in use in Japan, and a new STRAIN-MEASURING INSTRUMENT showed promise in DETECTING EARTHQUAKES hours beforehand. The U.S. projected the effect of global warming on WEATHER EXTREMES in North America.

GEOLOGY AND GEOCHEMISTRY

The theme of the 33rd International Geological Congress, which was held in Norway in August 2008, was "Earth System Science: Foundation for Sustainable Development." It was attended by nearly 6,000 scientists from 113 countries. In addition to the standard symposia, there were seven sessions—on such topics as geohazards, resources (water, minerals, and energy), and climate change—that highlighted the relevance of geology to society. The OneGeology global project was officially launched during the meeting. The project was a breakthrough in international scientific cooperation, with more than 90 countries participating to create a global database of geologic map data that could be accessed on the World Wide Web.

Not only was human society dependent upon geology, but humans had become a significant force in geologic processes. Members of the stratigraphy commission of the Geological Society of London published a paper that explored the idea that the Earth had entered a new geologic epoch—the Anthropocene—characterized by a global environment dominated by human activity. With the beginning of the Industrial Revolution, as global population exploded, agricultural and industrial activities began to leave distinctive stratigraphic signatures that included novel sedimentary, geochemical, biotic, and climatic changes. One such change was the dramatic increase in erosion and denudation of the continents that by the 21st century had exceeded the natural production of sediments by an order of magnitude. Population growth with industrialization had disrupted the biogeochemical carbon cycle by leading to the burning, within a few hundred years, of fossil carbon fuels that had accumulated within rocks through hundreds of millions of years. The resultant carbon emissions were causing significant changes in global temperature, ocean acidity, and the geochemistry of the biosphere.

This bedrock from northern Quebec was dated to 4.28 billion years ago.



Jonathan O'Neil

Going back in geologic time, Jonathan O'Neil of McGill University, Montreal, and coauthors published the geochemistry of geologically complex rocks from a portion of bedrock in northern Quebec. Their analysis of the rocks' content of neodymium and samarium, two rare-earth elements, indicated that the rocks were 4.28 billion years old and suggested that they might represent the oldest preserved crustal rocks on Earth. The most ancient rocks known previously were about 4.03 billion years old. (4.36-billion-year-old zircon crystals had also been identified but only as tiny mineral grains embedded in younger rock.)

Despite society's influence (and dependence) on geology and geochemistry, humans remained vulnerable to the power of geologic processes, as demonstrated by the earthquake of moment magnitude 7.9 that devastated Sichuan province, China, on May 12, 2008. (See *Geophysics*, below.) This earthquake had not been expected on the basis of standard geophysical criteria. In a report published in July, Eric Kirby of Pennsylvania State University and coauthors described how their geomorphic analysis of these mountains had identified locations of active rock uplift indicating seismic risk. Tectonic signatures for active displacements included dramatic changes in the steepness of river profiles in the rugged margins of the mountain ranges that coincided precisely with faults. They concluded that the Sichuan earthquake provided compelling evidence that the landscape contained much information about rates of tectonic activity. Quantitative geologic analyses of similar information in other locations could become a useful tool for refinement of potential earthquake risk that was not recorded by satellite measurements of displacement rates.

Rebecca Flowers and colleagues at the California Institute of Technology changed the widely accepted interpretation for the uplift history of the Colorado Plateau and its incision by the Colorado River to form the Grand

Canyon. The accepted interpretation had been that the plateau began to rise to its present elevation of about 2,100 m (7,000 ft) some 6 million years ago, with the river cutting downward as the land rose. The new results demonstrated that the uplift process began more than 55 million years ago. Between about 550 million and 250 million years ago, the layers of sediments forming the Colorado Plateau accumulated beneath a sea. The sediments increased in temperature as they became deeply buried but then cooled as they later were uplifted slowly while erosion stripped away the overlying rocks. The researchers used a new geochemical technique to analyze and date the mineral apatite that existed in trace amounts within the sediments. The helium-uranium-thorium dating procedure determined when the apatite crystal in the heated rock cooled to about 70 °C (160 °F). The crystal typically reached that temperature when the buried rock had risen to about 1.6 km (1 mi) beneath the eroded surface. By dating the apatite minerals from within canyons and across the plateau surface, the researchers were able to correlate through time the elevations of sediments in different locations. For example, they found that sediments at the bottom of an eastern part of the canyon had the same apatite-derived age—55 million years ago—as the sediments on the plateau above. This demonstrated that a canyon had already been carved through a plateau that existed at that time. The study revealed many historical complexities, including the unexpected result that while the canyon was being cut deeper (through 1,500 m [5,000 ft] of rock), the adjacent plateau sediments were also being eroded away.

Geologic and geochemical studies of sediments could yield many historical records, including temperature change through time. Jean-Noel Proust and other members of a France–New Zealand research program presented some initial results from 31 sediment cores recovered from the Tasman Sea near New Zealand. The objective was "to disentangle the impact of tectonics and climate on the landscape evolution of New Zealand over the past million years. . .relating to events such as earthquakes, tsunamis, and cyclones." New Zealand is associated with active tectonic plate boundaries, mountain building, and earthquakes. It occupies a unique position in the system of global ocean currents and in the westerly atmospheric wind belt. During the past one million years, it experienced drastic glacial-interglacial climatic changes. Large amounts of sediment were deposited into the adjacent seas because of this confluence of tectonic and climatic conditions, and these sediments reflected the conditions of erosion, transportation, and submarine deposition. The high sedimentation rates permitted high-resolution chronological studies in steps as small as 100 years, and preliminary results confirmed complex interactions between tectonics and climate.

Achim Brauer of the German Research Centre for Geosciences and coauthors provided the precise date for a sudden episode of cooling, called the Younger Dryas, that occurred about 12,700 years ago. From their analyses of annually laminated sediments below a deep volcanic lake in Germany, they defined and dated (using carbon isotopes) thin layers that spanned a 230-year period around the start of the episode. Their microscopic and geochemical studies of minerals and fossils carried out to a resolution of 50 microns permitted interpretation of lake level and wind speed from year to year and even between seasons. Following a series of annual and decadal oscillations, a final abrupt increase in winter storminess occurred in 12,679 BP. The researchers suggested that the event marked a shift in the North Atlantic westerly winds, which caused the climate to topple within one year into a completely different mode—one of extreme cooling.

Mark Schaefer and six other former officials from a variety of U.S. federal agencies proposed that the U.S. Geological Survey (USGS) and the National Oceanic and Atmospheric Administration (NOAA) be merged to form a new Earth Systems Science Agency (ESSA). The sciences of geology and geochemistry extend from solid rock through the hydrosphere and into the atmosphere and thereby overlapped the domains of the USGS and NOAA. Under the proposal, ESSA would build a strong collaboration with the Earth Science programs of NASA, especially its space-based Earth Observing Systems. The authors made the case that this reorganization would be more efficient and effective in meeting the future threats to the economic security of the United States and other countries. The threats were represented by risks concerning geologic resources (such as minerals, fossil fuels, and water supply) and the environment (such as natural disasters and climate change).

(PETER J. WYLLIE)

GEOPHYSICS

A devastating earthquake occurred on May 12, 2008, near the town of Wenchuan in Sichuan province, China. The earthquake, which had a moment magnitude of 7.9, involved a 280-km (174-mi) rupture along the Longmenshan fault and a relative motion of as much as 10 m (33 ft) between the two sides of the fault. More than 87,000 people were killed and 300,000 were injured, with about 5,000,000 left homeless. Shaking from the earthquake triggered many landslides in the mountainous area, and 34 temporary lakes were created by debris that clogged rivers and streams. The economic loss associated with the earthquake was estimated at $86 billion. Although the Wenchuan earthquake occurred in the interior of the Eurasian tectonic plate, it was directly related to the ongoing collision between the Indian and Eurasian tectonic plates. The northward motion of India had strongly deformed Eurasia and created the Himalayan mountains and Tibetan Plateau. This region, however, had reached its upper topographic limit in terms of gravitational stability, and the continuing northward motion of the Indian plate was being accommodated by the east-west extension and extrusion of the Eurasian lithosphere. This process, known as escape tectonics, had caused the compression that led to the Wenchuan earthquake.

In February 2008 seismologists from the Japan Meteorological Agency reported on the initial results of an earthquake early warning (EEW) system that had became fully operational in October 2007 after several years of preliminary work. The system was designed to locate and estimate the size of a local earthquake very quickly. Although damaging seismic waves from an earthquake travel at a speed of several kilometres per second, alerts sent immediately by electronic communication (such as radio or television) to neighbouring regions that were expected to have strong shaking could provide a warning up to tens of seconds in advance of the seismic waves. This short warning time could greatly reduce damage and injuries associated with an earthquake. For example, it was enough time for people to take shelter under a desk away from windows, for elevators to stop at the nearest floor and open its doors, or for doctors to halt surgical procedures. During a two-year trial run, the EEW system issued 855 alerts, and of these only 26 were false alarms. The Japanese EEW system relied on data

Zhu Wei—Xinhua/AP

One of the many major landslides that was triggered by the Wenchuan (China) earthquake on May 12 blocked this river in the mountainous area near Beichuan. Engineers dug channels to drain water from the lake that rose behind the debris.

taken by over 1,000 seismometers that were spaced at intervals of about 20 km (12 mi) and continuously recorded the movement of the ground across Japan.

Measuring the state of stress in the Earth's crust is an important goal of geophysicists, primarily because earthquakes occur when the stress along a fault zone crosses some critical threshold. Traditionally, instruments called strainmeters have been used to measure the deformation near the Earth's surface and to infer details about the stress regime. Fenglin Niu of Rice University, Houston, and colleagues announced the development of a new, indirect type of strainmeter that was potentially more precise than previous instruments. Using two holes that had been drilled into the San Andreas Fault Zone to depths of about 1 km (about 0.62 mi), the researchers placed a seismometer in one hole and a piezoelectric sound emitter in the other. Over the course of two months, the seismologists repeatedly measured the time it took for the seismic waves produced by the emitter to travel to the seismometer with a precision of about one ten-millionth of a second. The travel time was not constant but varied according to changing geologic conditions. The variation was directly related to the opening and closing of minuscule cracks (called microcracks) in the rock between the two holes, which in turn was related to changes in the ambient stress level in the rock. The scientists found that most of the variation was caused by daily temperature changes, but two large excursions from the normal measurements occurred at the time of the two small nearby earthquakes. Remarkably, the stress anomalies began hours before the earthquakes took place. If these results could be verified and expanded to other regions where earthquakes occur, seismologists would possess a powerful new tool for forecasting earthquake hazard.

It was well known that small earthquakes occur in association with the flow of magma in volcanic areas. Although the precise mechanism by which such quakes are produced was controversial, it had generally been assumed that they occur in the rock that surrounds the underground conduits of magma. In two papers on the phenomenon published in May, Yan Lavallée of Ludwig-Maximilians University (Munich), Hugh Tuffen of Lancaster (Eng.) University, and their colleagues presented some surprising results. The two research groups found that when silicic magmas were heated and deformed according to real-world conditions, the magmas produced acoustic emissions. In other words, the fluid magma deformed in a brittle manner that was similar to the way in which normal rock fails during a tectonic earthquake. The magma behaved in this way because it had high viscosity, and the rapid changes in strain expected to occur in volcanic systems caused it to act as a solid. The pattern of acoustic emissions, also known as microseismicity, changed markedly as strain rate was increased, so these results may help volcanologists better understand eruptive processes. In particular, the results may change how the material failure forecast method was being applied to dome-building eruptions.

Understanding the origin of the Earth's magnetic field continued to be one of the most difficult problems in geophysics. Because of the great complexity of the geomagnetic dynamo (the magnetohydrodynamic system that generates the Earth's magnetic field), computer simulations of the process had to use stringent approximations of some of the governing parameters. A breakthrough in this area was reported in August by Akira Kageyama and co-workers at the Japan Agency for Marine-Earth Science and Technology (Yokohama). They used a supercomputer known as the Earth Simulator to model the geomagnetic dynamo for a period of 2,000 simulated years. The calculation used 4,096 microprocessors and took several months to run. By using such tremendous computing power, the researchers achieved the most realistic simulation of the geomagnetic dynamo to date. Interestingly, they found that the shape of the flow of molten material in the Earth's liquid outer core took the form of elongated sheets that emanated outward from the Earth's rotation axis. This structure was very different from the classical model of columnar flow parallel to the rotation axis. Nevertheless, the sheetlike flow was able to generate a magnetic field. (KEITH D. KOPER)

METEOROLOGY AND CLIMATE

In 2008, the year after the United Nations panel of experts on global change completed its Fourth Assessment Report, the U.S. government issued a report—"Weather and Climate Extremes in a Changing Climate"—that focused on climate change in North America. The report, which was released by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research, provided the first comprehensive study of observed and projected changes in North American weather and climate extremes. Citing human activity as the primary cause of global warming over the past 50 years, the U.S. study indicated that weather and climate extremes were likely to become more commonplace as human-induced increases in the concentration of carbon dioxide and other greenhouse gases in the atmosphere continued. More specifically, the report stated

Smiley N. Pool/AP

On September 14 a single home stands after a storm surge from Hurricane Ike swept away most of the seaside town of Gilchrist, Texas.

that it was "very likely" that in the 21st century most areas of North America would see more frequent hot days and nights and heat waves and that many areas would see more frequent and intense heavy downpours. Although there had been no overall average change in the area affected by drought in North America during the past 50 years, in the southwestern United States and parts of Mexico and the Caribbean, the area affected by drought was likely to increase. Regarding the issue of hurricane intensity, the report indicated that more intense hurricanes were likely but that the linkage of human activity to observed changes in hurricanes required further study in order to make a confident assessment.

Another report from the Climate Change Science Program examined the impacts of climate change on agriculture and land resources in the U.S. The growing season—the period between the last spring freeze and first autumn freeze—had increased by 10 to 14 days over the previous 19 years across temperate latitudes. The study also found that elevated CO_2 concentrations would spur the growth of weeds and that young forests on fertile soils would achieve higher productivity. Rising temperatures would also increase the risk of crop failures, particularly if precipitation decreased or became more variable.

The debate on the link between global warming and tropical-cyclone intensity and frequency was accentuated by the billions of dollars of damage in the United States and the hundreds of deaths in the Caribbean that hurricanes caused in 2008. A report published in *Natural Hazards Review* by Roger Pielke, Jr., of the Center for Science and Technology Policy Research (Boulder, Colo.) and colleagues found that hurricane damage in the United States had been increasing because of growing population, infrastructure, and wealth along coastlines and not as the result of any spike in the number or intensity of hurricanes. The study showed that damage caused by hurricanes in the U.S. had been doubling every 10 to 15 years and that future economic losses might be far greater than previously thought if people continued to move to coastal areas. Research by Chunzai Wang and Sang-Ki Lee of the National Oceanic and Atmospheric Administration (NOAA) challenged the idea that warming oceans might lead to more tropical cyclones. They showed that in the primary region in the Atlantic where tropical cyclones develop, the warming of the oceans was associated with a long-term increase of vertical wind shear (changes in wind speed or direction with altitude). Wind shear is the enemy of cyclone development, since it suppresses the concentration of the heat energy that fuels the storms, and the increased shear coincided with a decrease in the number of hurricanes that made landfall in the United States. Another study, however, indicated that the strongest tropical cyclones were increasing in intensity. James Elsner of Florida State University and colleagues used wind-speed data derived from an archive of satellite records to examine global trends in the intensity of tropical cyclones for the years 1981–2006. All areas where hurricanes develop, with the exception of the South Pacific Ocean, showed increases in the highest maximum wind speeds attained by the strongest storms. The greatest increases occurred for storms over the North Atlantic and northern Indian Ocean.

During the 2008 hurricane season, NOAA scientists made abundant use of a variety of observing technologies to collect data that might be of use in predicting the intensity of tropical cyclones. As part of the NOAA Intensity Forecast Experiment, three aircraft flew a total of 65 missions and logged 605 hours to gather data in a number of such storms, including Hurricanes Dolly, Gustav, and Ike. The aircraft deployed a total of 453 airborne expendable bathythermographs to obtain ocean temperatures from the surface down to a depth of 200 m (656 ft), and the data were used to initialize and verify ocean models for studying hurricane development. During Hurricanes Gustav and Ike, aircraft transmitted three-dimensional analyses of Doppler-radar data for use by forecasters.

The El Niño/Southern Oscillation (ENSO) phenomenon, which is associated with the warming and cooling of the equatorial Pacific Ocean, plays a major role in climate variability. The ENSO influences temperature patterns and the occurrence of drought and floods in many parts of the world, but changes in the ENSO over very long time scales were not well understood. Geli Wang of the Chinese Academy of Sciences (Beijing) and Anastasios Tsonis of the University of Wisconsin at Milwaukee studied the record from a sediment core retrieved from Laguna Pallcacocha, a lake in southern Ecuador. From variations in the sedimentation, the scientists were able to create a time series of El Niño and La Niña events that spanned the past 11,000 years. They found that El Niño events had been more frequent and stronger during the past 5,000 years than in the previous 6,000 years, when La Niña was dominant, and they suggested that these long-lasting extremes may have had serious consequences for many cultures in the past. For example, drought associated with persisting El Niño events 3,500–3,000 years ago may have contributed to the demise of the Minoan civilization on the island of Crete. (DOUGLAS LE COMTE)

Education

Noteworthy INTERNATIONAL news in education in 2008 included an IMPROVEMENT in primary-school enrollment; positive moves toward GIRL-BOY PARITY; official acknowledgment of DISCRIMINATION against minorities and the poor; continuing conflicts between RELIGIOUS PRACTICE and secular schooling; the rapid growth of U.S. BRANCH CAMPUSES in the Middle East; and the expansion of STANDARDIZATION in higher education.

PRIMARY AND SECONDARY EDUCATION

The Global Monitoring Report issued by UNESCO in 2008 reported progress toward the worldwide goal, adopted in 2000, of universal free and compulsory primary education by 2015. The agency found that more children were starting primary school than ever before and that the number of out-of-school children dropped sharply from 96 million in 1999 to 72 million in 2005. "At this midway point, our assessment leans towards the positive but much more remains to be done if the goals are to be met by their target date," said Nicholas Burnett, UNESCO assistant director general for education.

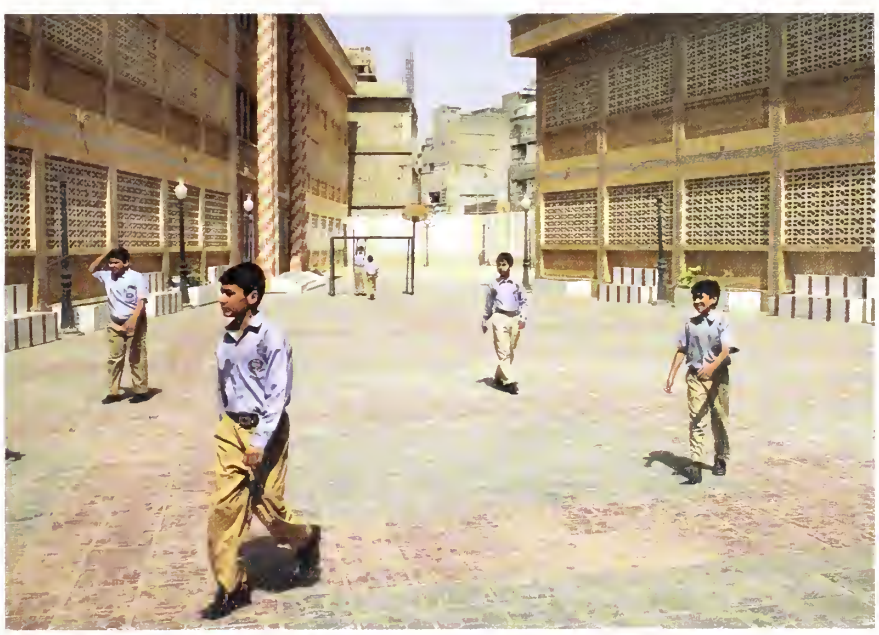
Even regions that had the smallest proportions of their children in school—sub-Saharan Africa, South Asia, and West Asia—made progress. From 1999 to 2005 countries in sub-Saharan Africa increased their primary-school enrollment by 36%, and countries in South and West Asia enrolled an additional 22% of their children in school. Unfortunately, sub-Saharan enrollment declined when in October 2008 the government of Zimbabwe announced that it had closed its schools to 4.5 million students.

Achieving gender parity in education was another of the goals of UNESCO. The 2008 report established that 63% of the world's countries enrolled equal numbers of boys and girls at the primary level, including Ghana, Senegal, Malawi, Mauritania, and Uganda. At the secondary level, 37% of the countries enrolled equal numbers of boys and girls; Bolivia, Peru, and Vietnam made the list for the first time. Although UNESCO projected that roughly half of countries would miss the target of gender parity by 2015, the agency noted that in parts of the Americas and Western Europe, fewer boys than girls were enrolled in secondary schools.

The education of girls remained problematic in parts of the Islamic world. According to the UNESCO report, girls made up 60% of the out-of-school group in the Arab states, and they accounted for 66% of those who were not enrolled in South and West Asia. Coincidentally, after the report was issued, attacks were mounted against schools in Pakistan and Afghanistan, particularly those in which girls were enrolled; the aggression appeared to be the work of radical Islamists who vehemently opposed the education of girls. In the same region, support for the education of girls was demonstrated in several efforts that were publicized during 2008. The much-translated worldwide best-selling book *Three Cups of Tea*, by Greg Mortenson and David Relin, told the story of Mortenson, a mountaineer whose life was saved by impoverished Pakistani tribesmen. In gratitude he began building schools, eventually establishing dozens. Another effort to educate poor Pakistani boys and girls in a number of schools was reported in a *New York Times* story about a Turkish foundation that aimed to demonstrate that schooling could preserve Islamic values while embracing Western science.

Questions of how to expand access to education and to what extent to accommodate cultural differences in government schools continued to challenge a number of countries. In southern Wales in July, for example, the British High Court ruled in favour of a Sikh teenager who had been suspended from

Students in Karachi in April cross the courtyard of a PakTurk school, part of a network of schools in Pakistan that promote a vision of a moderate and flexible Islam that does not oppose the West.



Carolyn Drake—The New York Times/Redux

school for wearing a *kara*, an arm bangle required of adherents to the faith, in violation of the school's policy against jewelry.

In May the Slovak legislature passed a law expressly prohibiting discrimination and segregation in education. Shortly thereafter, however, Amnesty International (AI) reported that Roma (Gypsy) children continued to be separated from other children, primarily by being placed in schools that offered a simplified curriculum for children with cognitive disabilities. (An estimated 80% of the country's special-school population was Roma, although the group made up only about 10% of the entire population.) AI, in reporting that many of the Roma students were not assessed for disabilities nor had their parents given informed consent for the school placement, called on the Slovak government to end its discrimination against Roma children. Other European countries had smaller Roma minorities than Slovakia, but they also discriminated against the Roma in schools.

In February the Australian government apologized to its Aboriginal population for having continued the practice through much of the 20th century of taking children from their own families and sending them to live with white families. Taking a cue from Australia, the Canadian government formally apologized in June for having segregated—in the interest of assimilation—about 150,000 native children in church-operated residential schools far from their homes; the policy was perpetuated from the late 19th century until, in a few cases, the 1990s. Canada began financial reparations and instituted a formal truth and reconciliation commission to evaluate past abusive treatment of the children.

In India the issue of access to schooling was hotly debated as the legislature considered a right to education bill that would, among other measures, require all private and independent schools to reserve 25% of their seats for poor children from their neighbourhoods. That mandate was opposed by the private school lobby. Another issue addressed by the Indian bill was the quality of teaching, particularly as it related to the use of low-paid and often unqualified contract teachers who made up a large part of the teaching force. The bill required that all teachers be qualified and salaried. The bill appeared set for passage after gaining the approval of a group of ministers charged with reviewing it and after being cleared in late October by the Indian cabinet.

Mahesh Kumar A/AP

Impoverished children study in July at a roadside school in Hyderabad, India. Rudimentary education may help them avoid being exploited as child labour.

The UNESCO report (*see above*) found that upwards of 50% of the teaching force in sub-Saharan Africa consisted of such contract teachers. UNESCO also reported that 18 million new primary-school teachers would be needed by 2015. Governments around the world were paying more attention to the quality of instruction—not only teaching but also curriculum, materials, and governance.

In December 2007 the results of the 2006 PISA (Program for International Student Assessment), given to 400,000 15-year-olds in 57 jurisdictions, were released. The literacy tests for reading, mathematics, and science, as well as more general competencies, were administered every three years beginning in 2000 by the Paris-based Organisation for Economic Co-operation and Development. As in earlier administrations, students in Finland ranked first in 2006 in using information to solve problems. As a result, delegations from 50 countries headed to Finnish schools to study their methods. According to one principal interviewed by *The Wall Street Journal*, "We don't have oil or other riches. Knowledge is the thing Finnish people have."

PISA's report also described the ways in which participating countries' education systems differed. Educators worldwide debated whether Finland's success was derived from applying national standards to all students, from maintaining a high-quality corps of teachers, or from granting principals autonomous control of school budgets. In addition, the PISA report noted that countries that separated students into different academic tracks before age 15 tended to have greater disparities of achievement between students from different socioeconomic groups while faring no better overall on the exams. Prompted by that finding, which had been noted in earlier PISA reports as well, Poland raised by a year (between the 2000 and 2003 PISA test administrations) the age at which academic segregation took place. National average test scores rose, and much of the improvement came among lower-performing students.

Because of the improvement, Poland outperformed the United States for the first time. The relative position of the United States was one of the concerns Americans expressed in the national debate on how to improve schools. The matter became more urgent as the federal government began requiring high schools to report graduation data in a new way—i.e., based on how many of the students who began high school finished four years later. According to the new calculations, U.S. schools graduated only 70% of their students in the standard number of years; by previous methods, estimates had been greater than 85%. Because graduation rates in other countries increased, the new figures meant that the United States had dropped in yet another international ranking: percentage of population completing secondary education.

U.S. federal education policy continued to spark controversy—particularly the effort to hold primary and secondary schools accountable for their re-

Distance Learning—Education Beyond Buildings

By 2008 distance learning was an established part of the educational world. In U.S. higher education alone, by 2006 more than 20% of total enrollment was online. More than 3.5 million college students enrolled in at least one online course in the autumn of 2006, up from 1.6 million in 2002. In the 2005–06 school year, approximately 700,000 primary- and secondary-school students took at least one online or blended course. Higher education administrators reported in 2007 that the demand for online course work would continue to grow.

Students and institutions embraced distance education with good reason. Universities benefited by adding students without having to construct classrooms and housing, and students reaped the advantages of being able to work where and when they chose. Public-school systems offered specialty courses such as small-enrollment languages and Advanced Placement classes without having to set up multiple classrooms. In addition, home-schooled children gained access to centralized instruction.

Various terms have been used to describe the phenomenon. Strictly speaking, distance learning (the student's activity) and distance teaching (the teacher's activity) together make up distance education. Common variations include e-learning or online learning, used when the Internet is the medium; virtual learning, which usually refers to courses taken outside a classroom by primary- or secondary-school pupils (and also typically using the Internet); correspondence education, the long-standing method in which individual instruction is conducted by mail; and open learning, the system common in Europe for learning through the "open" university.

Many U.S. states committed resources to the facilitation of distance learning. For example, Iowa built an extensive fibre-optic network, called the Iowa Communications Network (ICN), to connect more than 700 classrooms at every level, from kindergarten through university. The ICN facilitated live video for instruction, allowed for extensive Internet-based courses, and served as a high-speed link to the Web. Similarly, South Dakota created the Digital Dakota Network (DDN), which connected more than 400 schools and colleges and enabled the delivery of thousands of courses and events each year. Network Nebraska was established to serve distance learning in the state's schools, colleges, and universities.

An increasing number of colleges provided distance-learning opportunities. A pioneer in the field was the University of Phoenix, which by 2008 had more than 300,000 students. Capella University (owned by Capella Education Co. and headquartered in Minneapolis, Minn.) offered many graduate programs at a distance; Nova Southeastern University's Fischler School of Education and Human Services (its campus was located in North Miami Beach, Fla.) enrolled more than 14,000 masters and doctoral students; and Western Governors University (a nonprofit online university founded by the governors of 19 states) served thousands of students.

Four characteristics distinguished distance education. First, distance education was by definition carried out through institutions; it was not self-study or a nonacademic learning environment. The institutions might or might not offer traditional classroom-based instruction as well, but they were eligible for accreditation by the same agencies as those employing traditional methods.

Second, geographic separation was inherent in distance learning, and time might also separate students and teachers. Accessibility and convenience were important advantages of this mode of education. Well-designed programs could also bridge intellectual, cultural, and social differences between students.

Third, interactive telecommunications connected the learning group with each other and with the teacher. Most often, electronic communications, such as e-mail, were used, but traditional forms of communication, such as the postal system, might also play a role. Whatever the medium, interaction was essential to distance education, as it was to any education. The connections of learners, teachers, and instructional resources became less dependent on physical proximity as communications systems became more sophisticated and widely available; consequently, the Internet, cell phones, and e-mail had contributed to the rapid growth in distance education.

Finally, distance education, like any education, established a learning group, sometimes called a learning community, which was composed of students, a teacher, and instructional resources—i.e., the books, sound, video, and graphic displays that allowed the student to access the content of instruction. Social networking on the Internet promoted the idea of community building. On sites such as MySpace, Facebook, and YouTube, users constructed profiles, identified members ("friends") with whom they shared a connection, and built new communities of like-minded persons. In the distance-education setting, such networking could enable students' connections with each other and thereby reduce their sense of isolation.

The most commonly expressed concern about distance learning and teaching was whether the process was as effective as traditional education. Research into the question produced clear results: if all factors were taken into account, the learning outcomes were equivalent. Factors such as course organization, teacher involvement, class interaction, and feedback were critical to the effectiveness of instruction, whether in a classroom or at a distance.

(MICHAEL SIMONSON)

sults on achievement tests, as called for in the Elementary and Secondary Education Act (which was first passed in 1965 and was revised and reauthorized as the No Child Left Behind Act [NCLB] of 2001). The nonpartisan Center for Educational Progress reported that since the passage of NCLB, aggregate reading and mathematics achievement scores had increased modestly and the enduring difference in scores between middle-class white students and low-income and African American students had narrowed somewhat. Although the act's Democratic cosponsors, Rep. George Miller of California and Sen. Edward Kennedy of Massachusetts, had vowed to renew the bill in 2008, the likelihood of further action diminished as the U.S. presidential campaign took the stage and as it was discovered that Senator Kennedy had a brain tumour. A group that called itself Ed in '08 (and was funded in part by the Bill and Melinda Gates Foundation and the Eli and Edythe Broad Foundation) paid for public-service announcements

to publicize the country's loss of position internationally, hoping to keep education in the forefront as an issue in the election season, but other matters captured voters' attention.

HIGHER EDUCATION

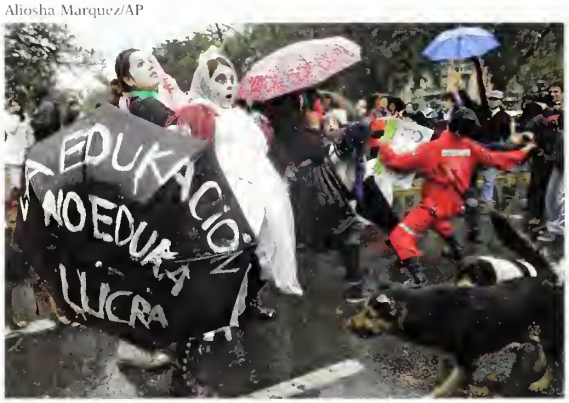
Higher education in the United States continued to thrive and to garner enormous respect internationally. The endowments in early 2008 of 136 institutions totaled $1 billion or more, and tuitions continued to rise faster than the rate of inflation. The U.S. Congress took notice of the disparity between some universities' vast resources and the difficulty families had in keeping up with tuition costs.

U.S. students borrowed from private lenders even when lower-cost federal loans were available, a situation that led to investigations by the U.S. Congress and the attorney general of New York state. In some cases it appeared that lenders provided payments or other benefits to the colleges or college administrators in exchange for steering students their way. In its reauthorization of the Higher Education Act, Congress incorporated a strict code of conduct for institutions, as well as a requirement for more transparency in the student-loan process. The law also increased federal tuition aid to low-income students.

According to the Institute of International Education, enrollment by international students in U.S. colleges and universities finally rose after a sharp decline following the Sept. 11, 2001, attacks on the World Trade Center. In a report issued in late 2007, the institute said that international enrollment had expanded by 3% in the 2006–07 school year, to a total of 582,984. The largest number of international students were enrolled at the University of Southern California, with 7,115, and Columbia University (New York City), with 5,937. India and China sent the most students to the United States—almost 84,000 and 68,000, respectively. Enrollment from the Middle East grew by 25%, driven in part by a large increase to 7,886 students from Saudi Arabia, which in 2005 had launched a government scholarship program to help students study abroad.

The Saudi government announced additional partnerships with three major U.S. universities to help staff the King Abdullah University of Science and Technology (Kaust), a graduate-level research university set to open in 2009 with a $10 billion endowment. The mechanical engineering department at the University of California, Berkeley, the Institute for Computational and Mathematical Engineering at Stanford University, and the Institute for Computational Engineering and Sciences at the University of Texas at Austin announced that they would develop curriculum and choose faculty for Kaust. Each of the American universities would receive $10 million for research at its home campus, $5 million for research at Kaust, and another $10 million in unrestricted funds. Albert Pisano, the chair of Berkeley's mechanical engineering department, told the *New York Times*, "We're going to work on projects that are good for the Middle East and for California, like energy sources beyond petroleum, improved water desalination, and solar energy in the desert."

Aliosha Marquez/AP



Students on June 4 demonstrate at one of a series of protests in Santiago against a proposed national education bill. Opponents argued that the bill encouraged private education at the expense of the poor.

Kaust, a self-styled "new paradigm" in education, brought together prominent scientists from major institutions around the world to produce research and train the next generation of scientists, not only from Saudi Arabia but also worldwide. It remained unclear whether women and Jews would feel comfortable working and studying in Saudi Arabia, although the country's restrictions, especially those pertaining to the movements of women, were not expected to apply in the new campus city being built by the Red Sea.

Other Middle Eastern countries also reached out to U.S. and other universities, partly in response to a 2003 report by the United Nations Development Programme, *Building a Knowledge Society*, which identified the region's "knowledge deficit" as a barrier to progress. Cornell University (based in Ithaca, N.Y.) graduated its first Qatar-trained physicians in 2008, and Virginia Commonwealth University's satellite campus in Qatar, which had been open only to women, admitted its first men. Both branches, along with outposts of Georgetown University (Washington, D.C.), Carnegie Mellon University (Pittsburgh), and Texas A&M University (College Station), were part of Education City, a 1,012-ha (2,500-ac) campus near Doha that was entirely supported by the Qatari government. (In addition, Northwestern University, Evanston, Ill., announced plans to begin a journalism program there.) In Dubai, Michigan State University and Rochester (N.Y.) Institute of Technology opened campuses in the fall of 2008.

Turkey was in turmoil for much of the year as the officially secular country and newly powerful Islamist political parties struggled over church-state issues. In February the ruling Justice and Development Party (AKP) passed legislation that overturned a ban on the wearing of head scarves on public university campuses; the law was later reversed by the Constitutional Court. In March the state prosecutor indicted the AKP for violating the country's commitment to secularism. Turkey's Constitutional Court declined to ban the AKP, but it did affirm the principles of secularism. The ruling permitted all sides to claim some piece of victory. (*See* Special Report on page 190.)

International efforts toward standardization in postsecondary education expanded in 2008. Originally, an initiative of the European Union known as the Bologna Process was intended to make credentials interchangeable among European countries. Asian countries joined in 2008, and comparable projects were undertaken in Canada, Australia, Latin America, and Africa. Vocational education and training were the next area to be addressed in the EU, and in 2008 the EU proposed a credit system that would recognize Europeans' knowledge and skills in a standard way. Other work in the EU focused on setting standards for transferable credits in universities so that students and scholars could gain more freedom to move. (KARIN CHENOWETH)

The Environment

The COMPLIANCE PERIOD for the Kyoto Protocol began as the world's major GREENHOUSE-GAS-EMITTING COUNTRIES debated a new agreement and doubts concerning the benefits of BIOFUELS increased. Surveys of GREAT APES both raised new CONCERNS and brought welcome SURPRISES.

INTERNATIONAL ACTIVITIES

On Jan. 23, 2008, the European Commission (EC) proposed measures aimed at asserting EU global leadership in climate policy. The EC proposed 2020 renewable-energy targets, which ranged from 10% for Malta to 49% for Sweden. It also suggested that transport fuels should contain 10% biofuels. (EU ministers later said that the 10% figure included all renewable energy sources.) Within two years new power stations could be routinely fitted with technologies for carbon capture and storage. By 2020 these measures would reduce EU greenhouse-gas emissions to 20% below 1990 levels. Ahead of the announcement, the European Trade Union Confederation said that it feared that up to 50,000 steel workers might lose their jobs if EU plans drove away the steel industry to countries that had less-stringent regulations, and BusinessEurope said that companies would lose competitiveness if they were forced to buy all their rights to emit carbon dioxide. In response, certain industrial sectors, including steel and papermaking, were withdrawn from the emissions-trading scheme.

The UN Environment Programme published its fourth global environment outlook assessment in late 2007. It warned that climate change, the loss of biodiversity, and land degradation were among the greatest challenges facing the world. UNEP director Achim Steiner said in a statement that "the systematic destruction of the Earth's natural and nature-based resources has reached a point where the economic viability of economies is being challenged—and where the bill we hand on to our children may prove impossible to pay."

NATIONAL DEVELOPMENTS

Australia. The country's first facility for storing carbon underground opened in early April in Victoria. The facility, which was 2 km (1.2 mi) belowground in an old natural-gas field near Warrnambool, had a capacity of 100,000 metric tons (1 metric ton = about 2,205 lb) of carbon dioxide.

United Kingdom. On January 10 the government released a White Paper that endorsed the construction of nuclear power plants to help reduce greenhouse-gas emissions and enhance energy security. The paper said that licensing procedures would be streamlined.

After an eight-day trial in September, a group of six Greenpeace activists were found not guilty of having caused more than $50,000 of criminal damage in 2007 when they painted the word "Gordon" on the chimney of a coal-fired power plant under construction at Kingsnorth, Eng. They had intended to paint "Gordon bin it," which they meant as a critical message to Prime Minister Gordon Brown, but they were arrested before they could complete it. The energy company E.ON, owner of the plant, brought the case against the activists, who argued that they had damaged property in order to prevent damage to the planet.

China. Beginning June 1, shops throughout China were forbidden to supply free plastic shopping bags, and the production and sale of very thin plastic bags—those that were less than 0.025 mm (0.001 in) thick—were banned. The aim was to reduce pollution.

It was reported in January that in response to public pressure, Deputy Environment Minister Pan Yue had ordered

To help gauge the visual impact of offshore wind turbines, this seashore view was prepared with images of a typical wind turbine modified to show its appearance at various distances from the shoreline.

Deepwater Wind Holdings, LLC

the relocation of a planned chemical plant away from the seaport of Xiamen, in southeastern China. Construction of the plant, owned by Dragon Aromatics, had begun in November 2006, and the plant was to produce 800,000 metric tons of paraxylene annually for making plastics and polyester. Widespread protests led Pan Yue to call for an independent environmental-impact assessment of both the plant and the Xiamen urban-development plans. The resulting report criticized the company for repeatedly breaching emissions limits and for disregarding requests to remedy the problem.

The Netherlands Environmental Assessment Agency reported in June that China's carbon dioxide emissions increased by 8% in 2007 and amounted to 24% of the world total. This made China the world's largest emitter, ahead of the U.S. with 21%.

Kenya. In early March people living in Kipevu, near Mombasa, complained of feeling ill because of chemicals leaking from dumped containers of nitric acid that belonged to Kasese Cobalt Co. Ltd., a Ugandan mining company. Phillip Mwabe of Environmental and Combustion Consultants, who was contracted to clean up the site, said that the containers had probably been leaking for a month. When Uwitije Venna, a director of Southern Enterprise, the Ugandan shipping company that transported the containers, failed to appear in court, Mombasa magistrates issued a warrant for his arrest.

United States. In October 2007 greenhouse-gas detection systems began to be installed in metropolitan areas of California. The first sensors, which measured gas concentrations in the atmosphere twice a day, were placed on Sutro Tower in San Francisco and Richland Tower in Sacramento. The detection systems formed part of the California Greenhouse Gas Emissions Project, a collaboration between federal and state agencies and universities. Under the plan, sensors would eventually be installed in 10 locations. The data would help officials determine whether the state was achieving its goal of reducing greenhouse-gas emissions into the atmosphere.

In June 2008 a bill that was aimed at capping greenhouse-gas emissions and introducing a carbon-trading scheme to the United States failed in the U.S. Senate. The climate-change bill was introduced by Sen. Barbara Boxer and sponsored by Senators John Warner and Joseph Lieberman. After three and a half days of debate, however, a motion to bring the bill to a final vote failed, and the bill was shelved.

AFP/Getty Images

Workers in protective gear inspect a cloud of toxic acid that was leaking from its container near Mombasa, Kenya, in March.

When Hurricane Ike struck the Texas and Louisiana coasts in September, its winds and waves damaged oil platforms, pipelines, and storage tanks, which released at least 1.9 million litres (500,000 gal) of crude oil into the Gulf of Mexico and coastal marshes. The Coast Guard, the U.S. Environmental Protection Agency (EPA), and state organizations dealt with more than 3,000 pollution reports. None of the spills caused major damage, but in the aftermath of the storm, about 1,500 sites required cleaning.

In December, Florida water-district officials approved a $1.34 billion deal to buy from U.S. Sugar, the country's largest sugar producer, most of its extensive land holdings to the south of Lake Okeechobee. The area, about 730 sq km (280 sq mi), would be taken out of production and used to help restore the Everglades. Although the deal had been scaled back from an initial $1.75 billion agreement spearheaded by Florida Gov. Charlie Crist in June, completion of the sale remained uncertain given the cost and other concerns.

ENVIRONMENTAL ISSUES

Climate Change. The five-year compliance period stipulated in the Kyoto Protocol commenced on Jan. 1, 2008. During this period participating countries needed to meet targeted reductions in greenhouse-gas emissions but could also trade emissions credits with each other. Countries were expected to make most of their emission reductions within their own borders, but they could buy leftover credits from other countries and earn supplemental credits through projects to reduce emissions in other developed countries and in less-developed countries (LDCs). In October UN officials announced that the infrastructure and interconnectivity required for trading in these flexible mechanisms on a global scale had been completed. Any country that by the end of the period exceeded its agreed-upon emission target would be required to reduce its emissions to 30% below the target level during a nominal second commitment period that would begin in 2013, and all noncompliant countries would be suspended from emissions trading.

A meeting of the UN Framework Convention on Climate Change (UNFCC), held in Bali, Indon., in December 2007, ended with an agreement that set the stage for negotiations aimed at forming a new global climate policy to be accepted at a meeting in Copenhagen in 2009. Delegates agreed that the UNFCC should be the body responsible for approving projects to be funded by the adaptation fund, which was generated by a 2% levy on all transactions between parties engaging in carbon trading and was to be used to help the

Seed Banks—Preserving Crop Diversity

On Feb. 26, 2008, the most ambitious seed-bank facility ever constructed was inaugurated in Svalbard, a Norwegian archipelago in the Arctic Ocean only about 1,000 km (620 mi) from the North Pole. The Svalbard Global Seed Vault (SGSV), built by the Norwegian government into the side of a permafrost-covered mountain on the island of Spitsbergen, is designed to store in deep freeze the seeds of hundreds of thousands of plant varieties from crops grown on every part of the globe. This high-security "doomsday" conservancy, built far from unrest and civil war, seeks to protect the world's agricultural inheritance against disaster, be it from rising sea levels, an asteroid strike, pestilence, or even the unforeseen consequences of an excessive reliance on crops with single-source genetic modifications. (*See* photograph on page 15.)

Established as a backup facility, the SGSV accepts only seed samples that are already held by other seed banks. The deposits are managed by the Global Crop Diversity Trust, an independent international organization that was established in 2004 by the UN Food and Agriculture Organization and the Consultative Group on International Agricultural Research, which operates international seed banks for the most important staple food crops. Seed samples for the SGSV are delivered and stored in sealed boxes and remain the property of the country or organization that deposits them. By late 2008 about 320,000 distinct seed samples, consisting of about 220 million seeds from about 2,900 plant species in more than 200 countries, had been placed in storage. The vault's storage chambers are able to hold 4.5 million seed samples, for a total of 2.25 billion seeds.

Since the SGSV safeguards duplicate seed collections, it is not intended to replace any of the roughly 1,400 seed banks that exist worldwide. They include national and international institutions, organizations focused on particular types of crops, and regional facilities. In general, these seed banks are intended to preserve the genetic variety of plants, and for this reason they are also referred to as gene banks. Conserving crop varieties and related wild species provides genetic variations that can be useful for developing new varieties with essential traits, such as tolerating new pests or climate conditions.

Among the most important global seed banks is the Millennium Seed Bank (West Sussex, Eng.), which is managed by the Royal Botanic Gardens, Kew. Opened in 2000, the Millennium Seed Bank has succeeded in preserving virtually all of Britain's 1,400 native plants and, in collaboration with seed banks in various other parts of the world, seeks to conserve a total of more than 24,000 plant species.

Seed banks that specialize in particular crops include the International Rice Genebank at the International Rice Research Institute (IRRI), based in Los Baños, Phil., and the International Potato Centre (IPC), based in Lima. The IRRI, which was established in 1960, estimates that it has conserved about 100,000 varieties of rice. The IPC, which was established in 1971 and subsequently expanded to include other tubers of Andean origin, counts in its collections about 150 wild potato species.

An example of a regional seed bank is Native Seeds, which was founded in 1983 in the southwestern United States to help Native Americans locate seeds for growing traditional crops. One of the oldest crop conservancies in North America, it aims in part to make poor communities nutritionally self-sufficient. The organization's seed collectors, often traveling to isolated areas by foot or muleback, have recovered seeds for some 2,000 varieties of plants, including amaranth, once widely used for food and fibre in Mexico; tepary beans, a favourite food of the desert peoples of the Southwest; orach, or "mountain spinach," grown in the Rio Grande uplands of New Mexico; panic grass, once a rich source of grain and protein for the Indian peoples of southern California and northern Mexico; and a sunflower grown in the Grand Canyon by the Havasupai Indians—one that is completely resistant to a rust disease that has ravaged commercial sunflower crops.

By selecting single hybrids, industrial agriculture (the source of the stock advertised in most commercial seed catalogs) has diminished the number of varieties of food plants available in the United States and other countries to all but a devoted handful of farmers and experimental gardeners. In the early 1900s, for example, more than 7,000 varieties of apples were grown commercially in the United States; today only a couple of dozen varieties are available to most consumers. The planting of monoculture crops, which increase standardization and efficiency, has replaced traditional crops in plots where they had been grown and bred for centuries. As a consequence, traditional crops, which had acquired the traits that are most suitable for the soils and climate of a given location, have been steadily lost. The preservation of this diversity of crops will help safeguard the future of the food plants upon which humans depend. Seed banks can directly address the concerns raised by a diminishment of genetic diversity among common food crops, and as plant scientists recover varieties of native food plants across the world, they add colour to a sadly washed-out genetic palette.

(GREGORY MCNAMEE)

poorest countries adapt to climate change. During the conference, 100 prominent scientists from 18 countries issued an open letter to UN Secretary-General Ban Ki-moon to argue that the conference should focus on measures to help countries adapt to climate change rather than on efforts to prevent global climate change, because in their opinion such efforts would ultimately fail. Signatories to the letter included more than 40 university professors and emeritus professors, as well as three IPCC reviewers. In 2008 additional UNFCC meetings were held in Bangkok, Bonn (Ger.), Accra (Ghana), and Poznan (Pol.) in preparation for the Copenhagen meeting.

In January, at the invitation of U.S. Pres. George W. Bush, representatives from 16 of the world's largest economies (Australia, Brazil, Britain, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, South Africa, South Korea, and the U.S.), together with officials from the EU and UN, held a Major Economies Meeting in Honolulu to discuss climate policy. No commitment was made on emission restrictions, but

delegates welcomed a new sense of openness in discussing climate. At a subsequent meeting held in Paris for two days in April, delegates failed to agree on an approach to cutting emissions, and both Japan and the U.S. stated that it was too early to set numbers for future emission curbs.

At a three-day meeting of the Group of Twenty (G20) held in Chiba, Japan, in March, Japan won little support for its call for LDCs to formulate national goals based on improving industrial energy efficiency as a means of reducing greenhouse-gas emissions. LDCs urged developed countries during the meeting to transfer wealth and technology to them to help them meet the challenge. The meeting ended with no sign of a consensus.

At a Group of Eight summit held in Toyako, Japan, in July, the G8 countries pledged that by 2050 they would cut greenhouse-gas emissions by one-half, but they did so without specifying dates or amounts of intermediate emission reductions. They also agreed that any meaningful program needed to involve the industrializing LDCs such as China and India, that real progress would depend on technological advances, and that the benefits of action had to justify the consequent slowing of economic growth. The agreement brought the G8 into line with the position of the U.S. administration, but China and India—together with Brazil, Mexico, and South Africa—categorically rejected any measures that would undermine their economic growth.

The Heartland Institute, a Chicago-based organization that championed free-market solutions to social and economic problems, and more than 50 cosponsoring groups hosted the International Conference on Climate Change in New York City on March 2–4. The conference issued the Manhattan Declaration on Climate Change, which stated that global warming did not constitute a crisis and asserted that "there is no convincing evidence that carbon-dioxide emissions from modern industrial activity has in the past, is now, or will in the future cause catastrophic climate change."

Biofuels. A study published by the Nature Conservancy in February found that biofuel production, which was seen as a way of reducing the accumulation of carbon dioxide in the atmosphere, was likely to have the opposite effect when biofuel crops were grown on land converted from other uses. According to the study, the conversion of rainforest, peatland, savanna, or other grassland to biofuel production in Brazil, Southeast Asia, and the United States released up to 420 times more carbon dioxide than the reduction in emissions achieved by using biofuels instead of fossil fuels. Another study, by the German Marshall Fund of the United States, found that when land-use change was taken into account, the development of corn-based ethanol production would double greenhouse-gas emissions over 30 years.

On July 5, at the end of a three-day informal meeting in Paris, EU environment and energy ministers said that an earlier EC proposal on biofuels that would have required an increase in the share of biofuel usage to 10% by 2020 had been misinterpreted. They explained that the 10% requirement also included hydrogen and renewable power sources and that there would be no plans to increase the share of biofuels in road transport to 10%.

Air Pollution. China made great progress in 2008 in improving urban air quality. An air-pollution target of 245 "blue sky days" that had been set for Beijing for 2007 was achieved on Dec. 28, 2007, according to the Beijing Municipal Bureau of Environmental Protection. The authorities then set a target of 256 such days for 2008. On March 1, 2008, new car-emission standards, which were in line with those in the EU, came into force in Beijing, the city of Tianjin, Shandong province, and Inner Mongolia. In addition, beginning in July the use of private cars in Beijing and Tianjin was restricted so that cars with odd or even license-plate numbers were allowed on the streets only on alternate days. During the Olympic Games one-third of Beijing's cars were taken off the streets and industrial activity was curtailed in order to satisfy the air-quality requirements of the International Olympic Committee. The dramatic improvement in air quality—a 50% reduction in air pollution—proved so popular with the citizens of Beijing that when the regulations ended September 20, the authorities introduced a set of milder restrictions for a trial period through April 2009. Under the new rules the number of government vehicles on the streets at any one time would be reduced by 30%, and beginning in late October every car would be banned from the streets on one day each week, which was designated on the license plate. Employers were also asked to stagger working hours to reduce peak traffic flows.

On January 1 the German cities of Berlin, Cologne, and Hanover introduced environmental zones within which every vehicle had to display a green, yellow, or red sticker. The colour indicated the kind of the pollutants it emitted, and drivers of vehicles that entered one of the zones without a sticker would be fined €40 (about $60). The stickers were issued by the vehicle registration authority for a one-time charge of €5–€15, and the requirement applied to all vehicles, including those of foreigners.

In September the EPA finalized a program to reduce air pollution from small land-based spark-ignition engines that delivered less than 25 hp (19 kW) and from marine spark-ignition engines. The program included lawn-mower engines, small generators, and outboard and other marine engines. The emission limits would come into force between 2010 and 2012, depending on engine size, and they were intended to reduce emissions by about 600,000 tons of hydrocarbons, 130,000 tons of nitrogen oxides, and 1.5 million tons of carbon monoxide, which amounted to a 35% or 70% reduction overall, depending on the type of engine. Manufacturers planned to use catalytic converters to meet the new emissions requirements.

Toxic Waste. In late June government ministers from about 170 countries attended a five-day meeting in Bali on waste management. The meeting of signatories to the Basel Convention focused on the impacts of the large-scale exportation—primarily to LDCs—of hazardous waste, particularly in discarded mobile telephones, computer components, and other forms of "e-waste." The attendees agreed to promote further cooperation and planning and to share technologies for the sound management of hazardous wastes.

It was reported in early July that Able UK, based in Billingham, Eng., had overcome environmental concerns and was planning to start work later in the year recycling the 238-m (781-ft)- long former French aircraft carrier *Clemenceau* at its Hartlepool facility. The *Clemenceau* had originally been sent to India to be scrapped. It was refused entry, however, over concerns about the 700 metric tons of asbestos it contained, and in 2006 the ship returned to France.

Marine Pollution. On Nov. 15, 2007, at a meeting of HELCOM (the Baltic Marine Environmental Protection Commission) in Krakow, Pol., environment ministers from countries that bordered

the Baltic Sea adopted the final version of an action plan to reduce marine pollution and restore the sea to "good ecological status" by 2021. The plan covered four topics: eutrophication, toxic chemicals, shipping, and biodiversity. Coastal states agreed to develop targets to reduce discharges of nitrogen and phosphorus; restrictions were introduced on the use of nine organic substances and two heavy metals; and new recommendations were to be issued on maritime safety and limitations on pollution from ships. The Baltic Sea plan was widely seen as a pilot for the regional plans that would be required for all the seas around Europe as part of the forthcoming EU marine-protection strategy.

At a meeting in London in April, the marine environment committee of the International Maritime Organization (IMO) decided to reduce the sulfur-content cap of all marine fuels to 0.5% by 2020—down from the existing limit of 4.5%.

An international ban on the use of organotin antifouling paints came into force on September 17. The measure had been adopted by members of the IMO in 2001 and ratified in 2007. By the end of 2008, all organotin compounds on hulls needed to be removed or coated with a sealant.

Freshwater Pollution. The Spanish Nuclear Safety Council confirmed in January a Greenpeace claim that for six years potentially very harmful amounts of radioactive material had been leaking from a landfill into the River Tinto at Huelva, Spain. The landfill held approximately 6,000 metric tons of waste that contained cesium-137 that had been removed from the Acerinox steel plant following an accident in 1998 and subsequently buried in 2001.

Chernobyl. On Nov. 20, 2007, the UN General Assembly adopted a resolution stating that the "emergency phase" in the areas affected by the 1986 accident at the Chernobyl nuclear plant was over and that the next 10 years would be "a decade of recovery and sustainable development." It said that the recovery efforts in the region should focus on addressing the poverty, poor health, and fear that the accident and its aftermath had induced. The resolution followed a report by the World Health Organization that found that the health impact of the accident had been much less severe than was feared initially and that radiation levels in most of the affected areas were close to natural background levels. The General Assembly called on the secretary-general to report on recovery efforts in 2010.

AWARDS

The 2008 Tyler Prize for Environmental Achievement, administered by the University of Southern California, was awarded to James Galloway, professor of environmental sciences at the University of Virginia at Charlottesville, and Harold Mooney, professor of environmental biology at Stanford University. Galloway investigated the environmental effects of chemically reactive nitrogen compounds released into the atmosphere from fertilizer and other sources, and Mooney helped start many major environmental programs, including the Global Invasive Species Program, the Ecosystem Functioning of Biodiversity program, the Global Biodiversity Assessment, and the Millennium Ecosystem Assessment.

The 2008 Zayed Prize for the Environment had five recipients in three categories. Corecipients in the category of environmental action leading to positive change in society were Tierramérica (a Latin American information service concerned with the environment and development and produced by the Inter Press Service news agency) and the Environment Development Action in the Third World (a nongovernmental organization in Senegal). The recipient for global leadership in the environments was Gro Harlem Brundtland of Norway, UN special envoy for climate change and former director general of the World Health Organization. Jane Lubchenco of Oregon State University and V. Ramanathan, a climate researcher at the Scripps Institution of Oceanography at the University of California, San Diego, received the prize for scientific and technological achievement.

Claude Lorius and José Goldemberg won the 2008 Blue Planet Prize for lifetime contributions in addressing global environmental problems. Lorius, director emeritus of research at the French National Center for Scientific Research, was honoured for work dating from the 1950s on calculating ancient levels of atmospheric carbon dioxide from Antarctic ice cores. Goldemberg, of the University of São Paulo, helped launch Brazil's bioethanol program in the 1970s and pioneered the policy by which an LDC "leapfrogs" development based on conventional fuel sources by moving directly to the adoption of renewable-energy technologies.

(MICHAEL ALLABY)

WILDLIFE CONSERVATION

Primates—great apes in particular—featured widely in the news and in published research in 2008. In February the Democratic Republic of the Congo (DRC), Rwanda, and Uganda launched a 10-year initiative to conserve the mountain gorilla, *Gorilla beringei beringei*, of which only about 720 still

A Sumatran orangutan (top) and a lowland gorilla (bottom) gaze intently into the camera. These great apes were the focus of population assessments in 2008.

(Top) Binsar Bakkara/AP; (bottom) © Donald Gargano/Shutterstock.com

remained in the forested mountains that spanned the three countries. In September, however, renewed conflict was reported between rebel forces and the DRC army on the outskirts of Virunga National Park, where most of the gorillas were located. A report released in October, about a year after the killing of a number of mountain gorillas in the park, revealed that the gorilla population was stable. Although rebels had taken control of virtually all the Virunga gorilla habitat, wildlife guards had been able to resume monitoring the gorillas.

In June, in a move that could have a significant influence on future great-ape conservation, the environmental committee of the Spanish parliament approved resolutions that urged Spain to comply with the Great Ape Project. The initiative was conceived by a group of scientists and philosophers to promote the idea that great apes deserved rights that previously had been recognized only for humans, such as freedom from capture, torture, and unnecessary death.

The orangutans, the only great apes found in Asia, were the focus of a new comprehensive assessment published in July. The study found that there were about 6,600 *Pongo abelii* remaining on Sumatra and at least 54,000 *P. pygmaeus* on Borneo. Although the Sumatran orangutan was in rapid decline and could become extinct, there were more and larger populations of Bornean orangutans than had previously been known.

The first comprehensive review in five years of the world's 634 primate taxa, released in August at the International Primatological Society Congress in Edinburgh, reported that about one-half of the taxa were in danger of becoming extinct. The major threat to primates was the burning and clearing of tropical forests, followed by hunting and illegal trade. The review considered reclassifying the mountain gorilla from critically endangered to endangered but postponed doing so both because of the gorilla killings that occurred in 2007 and because of the continuing political turmoil in its habitat. A more positive note during the congress was the release of a census of the critically endangered western lowland gorilla, *G. gorilla gorilla*. It showed that populations were faring better than expected, with a total of 125,000 individuals in two northern areas of the Republic of the Congo. The census showed densities of up to 8 gorillas per square kilometre (about 21 per square mile), one of the highest ever recorded. Long-term management of the Republic of the Congo's protected areas, remoteness and inaccessibility of some of the locations where the gorillas were found, and a food-rich habitat accounted for the high numbers.

A global map of human impact on marine ecosystems published in February indicated that no marine area was unaffected by human influence and that 41% of marine areas were strongly affected by multiple factors such as coastal runoff and pollution, drilling for oil and gas, and fishing. Only 4% of marine areas were relatively pristine, but many of these areas were in polar regions, which were at risk from the effects of climate change.

Thousands of stray logs from logging operations washed up on African beaches, where they disrupted nesting attempts by endangered marine turtles.

In March it was reported that logging in central African rainforests posed an indirect threat to nesting marine turtles, especially the critically endangered leatherback turtle *Dermochelys coriacea*. Logs lost during transport downriver floated out to sea and then washed ashore, where they accumulated on beaches used by nesting turtles. About 11,000 lost logs were counted along the coastline of Gabon's beaches, with up to 250 logs per kilometre (400 per mile). The logs had a detrimental effect on the turtles; at one beach they caused 8–14% of nesting attempts by the turtles to be aborted or disrupted.

An interim report, entitled *The Economics of Ecosystems and Biodiversity*, was released in May at the 9th Conference of the Parties to the Convention on Biological Diversity. The report found that living standards among the poor might be severely lowered as ecosystems started to disintegrate and that existing rates of biodiversity loss might lead to a reduction in global GDP by about 7% within 45 years, largely because of deforestation. The effects of the loss would be felt disproportionately by the world's 1.5 billion who lived in poverty, since they were the major beneficiaries of intact ecosystems.

A separate study published in July confirmed that deforestation continued unabated and at the same rate as in the 1990s. The researchers analyzed satellite data for 2000–2005 and found that during this period 27.2 million ha (67 million ac) of tropical rainforest were cleared, which constituted 2.36% of the world's tropical rainforest cover. Most of the clearing occurred within localized areas, and Brazil accounted for most of the loss (47.8%), followed by Indonesia (12.8%).

In late July, Brazil launched the international Amazon Fund to raise $21 billion over 13 years to finance conservation and sustainable development in the Amazon rainforest. In September, Norway pledged $1 billion for the fund through 2015, with as much as $130 million beginning in 2009 if Brazil could show that deforestation had been reduced during the year.

(MARTIN FISHER)

Fashions

CHEAP became CHIC as the fashion-conscious in established markets looked to discount merchants in a time of ECONOMIC UNCERTAINTY, but some designers flourished, especially those whose creations incorporated a more international flavour. The HOLLYWOOD GLAMOUR "factory" shut down at a crucial time as a writers strike hobbled the awards season, and the styles adopted by women in the POLITICAL SPHERE were closely watched.

The faltering global economy determined the direction of fashion during 2008. Initially, the euro's significant appreciation against the dollar proved a boon to style-conscious travelers who, visiting the U.S. from abroad as the year commenced, took advantage of the favourable exchange rate and purchased luxury goods in copious quantities. In the autumn, as the banking industry went into free-fall, Anya Hindmarch, whose eponymous accessories label was valued at £20 million (about $32.2 million), predicted a "new era of austerity" and said that the "luxury fashion market is going to shrink."

In a special September edition devoted to the "business of style," *Fortune* magazine reported that summer sales had begun earlier than usual. Mickey Drexler, the CEO of J. Crew (formerly CEO at Gap), claimed that the depressed retail environment was the worst in his 40 years' experience. *Fortune* noted, however, that luxury groups "LVMH, Gucci, Tiffany, Coach, Burberry and Richemont . . . all showed solid revenue growth in the first half of the year," and "newly affluent customers in China, Russia, and other emerging markets would more than compensate for any softness in consumer spending." Christian Dior, for example, reported double-digit growth in China. At July's Paris couture shows, Karl Lagerfeld claimed that Chanel had Russian clients who each season acquired 30 to 35 pieces of the stratospherically priced handmade finery. Meanwhile, the August opening in New Delhi of Emporio—a nearly 30,000-sq-m (320,000-sq-ft) five-story luxury shopping mall complete with boutiques operated by Dior, Dolce e Gabbana, Fendi, Giorgio Armani, Versace, and Vuitton—heralded the cessation of India's restrictions on Western luxury goods and was regarded as another positive sign that the luxury sector would thrive, despite the economic downturn. By October, however, the largest luxury chains and retailers were announcing double-digit drops in sales. The November–December Christmas shopping season did not show improvement, despite steep price cuts. Deep discount stores such as Wal-Mart, however, posted small gains.

A model shows a Gucci creation from the fall-winter 2008–09 collection in February in Milan. Many designers courted Russian and East Asian customers by using luxurious ethnic touches in their lines.

Luca Bruno/AP

In an effort to attract customers in emerging markets, designers presented ready-to-wear directly inspired by the new business territories. At Hermès, Jean Paul Gaultier displayed an Indian-themed brightly hued collection complete with Nehru jackets, turbans, and sari-inspired toga dresses; Lakshmi Menon—the Bangalore-born 27-year-old Ford model—flaunted Gaultier's clothes in the Hermès advertising campaign. Similarly, Alexander McQueen's 2008 winter men's wear collection—featuring trousers and coordinating shoes both made from sheeshedar, the mirrored Indian fabric, paired with a shaggy poncho—was motivated by a trip he made through the Indian states of Kerala, Bihar, and Rajasthan. Frida Giannini (*see* BIOGRAPHIES) created for Gucci commercially successful autumn-winter '08 collections for men and women that were embellished with coins, velvet, fur trim, and "folk-art" prints redolent of the opulence of tsarist Russia.

Accessible sartorial trends proved popular and made the leap from designer runways to the street. Vibrant floral prints launched by Balenciaga's Nicolas Ghesquière, Prada, and Dries Van Noten for spring-summer, as well as the perky plaid separates presented for autumn-winter by Ralph Lauren, House of Holland, and D&G, became best sellers and were adapted by chain stores, which successfully sold inexpensive mass-market copies. The dramatic autumn-winter evening wear made by Prada from Swiss lace in gold and in black was classified by *T Magazine* as the "most photographed collection of the season."

Michael Kors's conservative-chic, retro-inspired autumn-winter collection included camel topcoats, suits with pencil skirts, romantic floral-print dresses, and cashmere sweaters. The

Joel Ryan—PA Photos/Landov

Model Agyness Deyn wears a plaid creation by House of Holland during London Fashion Week in February.

look was inspired by *Mad Men*, the critically acclaimed cable television series about the advertising world in the 1960s, and the show in turn contributed to the New York designer's continued success. Kors CEO John Idol predicted that the luxury label would reach a billion [dollars] in sales within three years, in part because Kors had raised his profile through weekly appearances as a judge on the reality television series *Project Runway*.

As a crisis mode dominated the economy, the fashionable set turned to comfortable clothes and accessories, including men's drawstring pajama pants designed by Miu Miu and Veronique Branquinho. The vest (or waistcoat) proved an alternative to a blazer for men and women. Young men on the street flaunted sloppy ski hats of the type actor Will Smith sported in the film *Hancock*. Meanwhile, music influenced the direction of footwear. Rightly anticipating demand, Nike, Converse, Lanvin, Dior, and Gucci produced metallic high-top sneakers similar to those worn by Jay-Z in the video for Rihanna's "Umbrella." "Jazz lace ups"—functional dance-inspired footwear preferred by top models Kate Moss, Natalia Vodianova, and Agyness Deyn—eclipsed ballet slippers. The platinum blonde boyish crop that hairstylist Sam McKnight conceived for Mancunian Deyn became a British beauty craze as it was emulated by young men and women.

Shorts suits were favoured in summer by men and women as an alternative to trouser suits. Highlighting the best looks, *Vogue* paired thigh-grazing shorts by Vivienne Westwood, Marc Jacobs, and Balenciaga, among others, with blouses and jackets in a photo shoot called "Keep It Short." In a newspaper article titled "Shorts Crack the Code," the *New York Times* featured photographs of male executives in New York City wearing Bermuda shorts and blazers; the article noted that "fashion-besotted" hockey star Sean Avery appeared in a shorts suit "that showcased his athletic calves" while fulfilling a summer internship at *Vogue*.

"Statement" jewelry—bold costume pieces such as cocktail rings, bejeweled necklaces, brooches, and swingy chandelier earrings—proliferated on the autumn-winter runways of Balenciaga, Burberry, Lanvin, Missoni, and Yves Saint Laurent and evolved to rival handbags for supremacy in the accessories category. Knockoffs of designer baubles were made widely available at innovative retailers such as Topshop in the United Kingdom and Forever 21 in the United States.

Inexpensive clothes acquired cachet, thanks to endorsements by trend-setting celebrities and canny retailers. Patrick Robinson, the California-raised designer who had worked for Anne Klein, Giorgio Armani, Perry Ellis, and Paco Rabanne, brought new gloss to the ailing Gap retail chain; his first collection as the retailer's head designer was introduced during the high-profile New York Fashion Week in February. Robinson's critically acclaimed and inventive bohemian autumn-winter casuals included flared chinos and high-heeled crepe-soled desert boots conceived for Gap by Paris shoe designer Pierre Hardy.

Opening Ceremony, the cutting-edge boutique operated in New York City and Los Angeles by Humberto Leon and Carol Lim, sold affordable hip garb alongside avant-garde ready-to-wear. In one month the boutique sold 6,000 pairs of $60 skinny jeans by the Swedish brand Cheap Monday. Barneys New York followed the example of Opening Ceremony (which in 2007 had sold a capsule collection that Proenza Schouler produced for Target) and peddled the spring-summer line that New York City designer Rogan Gregory had created for Target. The collection, which was priced from $15 to $45 and featured wrap dresses and tank tops, sold 1,000 pieces within two hours when it debuted in May at the Madison Avenue Barneys in New York City.

Just prior to the release of fashion blockbuster *Sex and the City: The Movie*, Sarah Jessica Parker appeared at a May film premiere in a strapless leaf-print Bitten sundress that had cost $8.98 at the "perpetually mobbed" sweeping Manhattan outlet of discount clothing chain Steve & Barry's. (Despite the firm's popularity, in July the retailer filed for bankruptcy, and it was subsequently rescued by investment firms Bay Harbour Management and York Capital Management.) *Sex and the City*'s costumer, Patricia Field, launched a 35-piece affordable women's fashion collection, including "disco dresses," for British retailer Marks & Spencer. As the firm's executive chairman, Sir Stuart Rose, explained: "We all need a bit of fun right now—something to lift us out of the gloom."

Designer Michael Kors drew inspiration from the 1960s for these ensembles from his fall-winter 2008–09 collection.

Brendan McDermid—Reuters/Landov

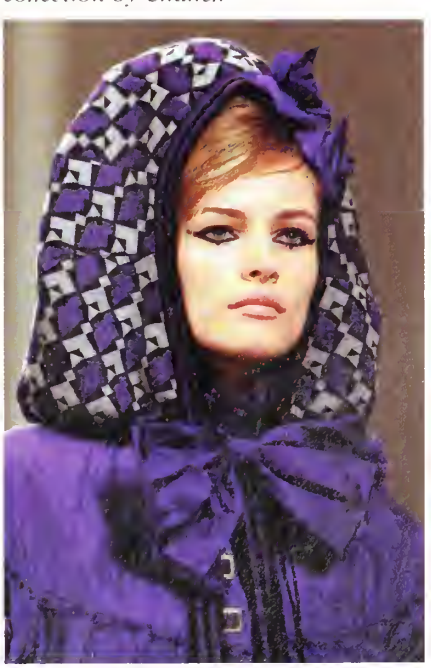
Mike Marsland—WireImage/Getty Images

Designer Patricia Field (centre), best known as the costumer for Sex and the City, *launches her affordable 35-piece women's collection at London's Marks & Spencer on October 15.*

Fashion's annual red-carpet season turned sombre when January's Golden Globe Awards were canceled. Because the Screen Actors Guild (SAG) was on strike, its members refused to attend the event, which traditionally inaugurated Hollywood's series of fashion-rich winter award shows. Though the SAG awards ceremony and the Academy Awards show went ahead as scheduled, the dress code at both affairs was decidedly muted. Julie Christie wore a tuxedo as she accepted the SAG best-actress award, and Tilda Swinton clutched her Oscar in a black velvet floor-length Lanvin gown. The shortage of traditional celebrity glamour thrust a range of eccentrically clad personalities into the spotlight, including Amy Winehouse (*see* BIOGRAPHIES), whose "sky high" beehive and black eye makeup adorned models who appeared in a London showing of Chanel's 2008 Métiers d'Art collection. Karl Lagerfeld, in summing up Chanel's expensive assortment of dark separates, christened the collection "sophisticated punk for the rich."

High-profile women in the political sphere became the most prominent fashion leaders. On her first official visit to England in March, Christian Dior-clad Carla Bruni-Sarkozy—the supermodel-turned-folk-singer wife of French Pres. Nicolas Sarkozy—made international headlines. In the mid-1990s Bruni-Sarkozy appeared on 250 magazine covers, was a regular on top designers' runways, and starred in the advertising campaigns of Dior, Chanel, and Gianni Versace. Applying her style know-how to her new role, Bruni-Sarkozy acquired a newly demure image. She opted for chic flat shoes so as not to tower over her diminutive husband, and on their London visit her Christian Dior couture wardrobe featured items such as a pillbox hat reminiscent of the iconic Halston hat associated with U.S. first lady (1961–63) Jacqueline Kennedy. Bruni-Sarkozy, posing with ease next to her husband—as well as solo for *Vanity Fair*'s prestigious September cover—boosted his international profile. American *Vogue* observed, "She is the most sparkling embodiment of fashion's transformative power since Princess Diana."

A model wearing a beehive hairdo and dark eye makeup (in the manner of singer Amy Winehouse) displays a creation from the 2008 Métiers d'Art collection by Chanel.



Toby Melville—Reuters/Landov

The nomination of Gov. Sarah Palin of Alaska (*see* BIOGRAPHIES) as the Republican (GOP) vice presidential candidate set off a huge demand for her preferred style of rimless eyewear, which were custom-made and based on a style by Japanese industrial designer Kazuo Kawasaki. Orthodox Jewish women in New York City had their wigs styled to copy Palin's signature hairdo. Near the end of the campaign, however, a makeover of Governor Palin backfired when the story surfaced that the Palin family's $150,000 luxury shopping spree had been financed by the GOP.

Michelle Obama, wife of Democratic President-elect Barack Obama (*see* BIOGRAPHIES), wore A-line dresses and a slick flipped hairstyle reminiscent of Jacqueline Kennedy's look. The clothing Obama wore on the campaign trail ranged from a Moschino floral shirtdress to a blue-and-white-plaid Gap sundress to perky J. Crew separates. Maria Pinto, the creator of many of Obama's campaign dresses (including the purple sleeveless shift she wore on the night her husband claimed the Democratic nomination), opened her first boutique in Chicago in August. The following month, during New York Fashion Week, *ES Magazine* reported that Thakoon Panichgul had become the "talk of the town" after Obama wore one of his designs—a black-and-red floral kimono dress—for the occasion of her husband's nomination speech.

In June the industry mourned the passing of designer Yves Saint Laurent, who modernized fashion by introducing trousers to the female wardrobe and by pioneering the concept of ready-to-wear. Other deaths include those of fashion designers Mila Schon, who made her mark in Italy, and Riitta Immonen of Finland; costume designer Kermit Love; models Katoucha Niane and Dorian Leigh; and Hollywood tastemaker Mr. Blackwell. (*See* OBITUARIES.) (BRONWYN COSGRAVE)

Health and Disease

Food and drug CONTAMINATION triggered public health emergencies. American HIV infection rates were revised upward, while worldwide MALARIA rates were revised downward. Experimental advances included a STEM-CELL TECHNIQUE for improved ORGAN TRANSPLANTATION and a heart-encircling mesh to treat HEART FAILURE.

Food and Drug Safety. In 2008 the contamination of infant formula and related dairy products with melamine in China led to widespread health problems in children, including urinary problems and possible renal-tube blockages and kidney stones. According to the World Health Organization (WHO), by late 2008 the contamination had led to four infant deaths and the hospitalization of more than 14,000 infants. Melamine, a chemical compound with many industrial uses, had no approved use in food, but according to health officials, it was sometimes added to foods illegally to inflate their apparent protein content as measured with standard tests. Following inspections conducted by China's national inspection agency, at least 22 dairy manufacturers across the country were found to have melamine in some of their products. The Chinese government responded to the public health crisis by announcing a major shake-up in the dairy industry to improve safety all along the supply chain for dairy products, and it said that it would establish a tracking system to record their flow and delivery.

Several countries reported finding melamine in exported Chinese dairy products, including liquid milk and frozen yogurt dessert. All of these products had likely been manufactured with ingredients made from melamine-contaminated milk, according to WHO. Although there had been no reports of illness from contaminated Chinese milk products in the United States, in November the U.S. Food and Drug Administration (FDA) ordered that imported Chinese milk products be held at the border until tests proved that they were not contaminated. Recalls of melamine-tainted products occurred in Australia, Britain, Hong Kong, New Zealand, Singapore, and Thailand. American consumers had become aware of the deadly effects of melamine contamination in 2007 when tainted pet food from China killed more than 4,000 dogs and cats in the U.S.

Contaminated lots of the blood-thinning drug heparin were blamed for having caused allergic-type reactions—such as a drop in blood pressure and shortness of breath—in hundreds of persons in the United States from late 2007 through early 2008. The adverse reactions were initially linked to heparin marketed by Baxter, which recalled its heparin products. The contaminant was subsequently identified as a heparin-like synthetic substance called oversulfated chondroitin sulfate (OSCS), and the FDA urged all American suppliers of heparin products to use sophisticated screening to determine whether their products were free of the contaminant. In April the agency said that OSCS-contaminated heparin had been found in 11 countries, including the U.S., and that it had been traced to a number of Chinese companies that were involved in heparin manufacture. The FDA tallied at least 81 death reports in the U.S. of persons who had been administered heparin of any kind and had experienced an adverse reaction. Many were patients who had been undergoing surgery or had underlying life-threatening conditions, and the specific cause of death was difficult to determine. A study published in *The New England Journal of Medicine* in late December showed conclusively that OSCS-contaminated heparin caused adverse reactions in patients but did not establish it as a cause of death.

HIV and AIDS. In late 2007 a campaign that had been launched by WHO four years earlier to bring antiretroviral therapy to HIV-positive people in less-developed countries reached its goal of treating three million individuals. Although the milestone was achieved two years after its targeted date, a report on the initiative noted that improved access to the therapy was expected to proceed at a greater pace.

Workers at a dairy in Wuhan, China, were watched as they disposed of melamine-contaminated milk in November.

Imaginechina/AP

Amr Dalsh—Reuters/Landov

A woman brings out a chicken to be vaccinated against bird flu in an area north of Cairo.

In the United States, researchers at the CDC reported that the number of Americans newly infected with HIV each year was, and had long been, higher than previously assumed. This conclusion was the result of an improved calculation method that distinguished recent HIV infections from older ones. Using the new formula, the CDC said that about 56,300 new HIV infections occurred in the United States in 2006, 40% more than the previous estimate of 40,000. In addition, the CDC reported that new diagnoses of HIV infection across 33 states increased by 12% annually between 2001 and 2006 among young gay and bisexual men. The report said that the rise was especially significant among young black men aged 13 to 24 who had sex with men. The annual rate of new HIV diagnoses for this group increased by 15% annually, compared with an increase of 9% and 8% annually among their white and Hispanic peers.

In another development, scientists found evidence that HIV arose decades earlier than previously believed. According to a study by Michael Worobey, an assistant professor of ecology and evolutionary biology at the University of Arizona in Tucson, and colleagues, HIV began spreading in sub-Saharan Africa between 1884 and 1924, about the time urban centres were established in west-central Africa. Scientists had believed that HIV originated in about 1930. Previous studies had shown that HIV spread to humans from chimpanzees in southeastern Cameroon. Worobey believed that the growth of cities and high-risk behaviours for HIV infection among city dwellers might have been a principal cause of the subsequent spread of the virus.

Polio. The Global Polio Eradication Initiative (GPEI) announced in March that Somalia was polio-free once again. Somalia, which had wiped out the disease in 2002, became reinfected in 2005 by poliovirus that originated in Nigeria. The new eradication effort in Somalia had been particularly challenging because of widespread armed conflict, shifting populations, and the lack of a functioning government infrastructure in the war-torn country. The effort involved more than 10,000 Somali volunteers and health workers, who vaccinated more than 1.8 million children under the age of five.

Although polio remained endemic in only four countries—Afghanistan, India, Nigeria, and Pakistan—through 2008 the GPEI reported confirmed cases of infection by wild poliovirus in 13 other countries, including 7 countries that had reported no cases in 2007. Health officials reported a resurgence of polio in Nigeria's northern states, where more than 20% of children remained unimmunized. From 2003 to 2006, poliovirus of Nigerian origin spread to 20 countries, with outbreaks that reached as far as Indonesia.

Avian Influenza. In April Egypt confirmed its 50th human case of bird flu—in a two-year-old boy. Bangladesh confirmed its first human case in May, and two new cases of human infection were reported in Indonesia in December. Out of a total of 139 human cases in Indonesia since 2004—the highest total reported by any country—113 had been fatal.

A study published in *The New England Journal of Medicine* said that scientists had developed a whole-virus bird-flu vaccine, Celvapan. It appeared to be safe and more effective than bird-flu vaccine that was currently approved for human use. The study was conducted by Baxter, Celvapan's manufacturer, and found that 75% of volunteers produced antibodies against the virus after having received a second dose of the vaccine, compared with only 45% in the currently approved vaccine. The study's author said that Celvapan provided protection from several bird-flu virus strains, that it could be produced in less than one-half the time of traditional methods, and that it did not require an additive to boost an immune response. Baxter was seeking approval of the vaccine for use in Europe and the United States.

Other Infectious Diseases. A report published in February found that the rate of incidence of multidrug-resistant tuberculosis (MDR-TB) was at its highest ever and that extensively drug-resistant tuberculosis, which was considered virtually untreatable, had been recorded in 45 countries. The report, entitled *Anti-tuberculosis Drug Resistance in the World*, represented the largest survey on the extent of drug resistance in cases of tuberculosis and was based on data collected from 90,000 TB patients in 81 countries from 2002 to 2006. The report also found a link between HIV infection and MDR-TB. Surveys in Latvia and Ukraine found about two times the level of MDR-TB among TB patients with HIV compared with patients who were free of HIV. On the basis of the survey data, WHO estimated that there were about 500,000 new cases of MDR-TB annually—about 5% of the total of 9,000,000 new cases of TB of all types. The highest rate was recorded in Baku, the capital of Azerbaijan, and about one-fourth of all new TB cases in Baku were multidrug-resistant. Although new vaccines could potentially prevent TB, the removal of one strain might allow a previously suppressed strain to succeed, according to research from the University of Bristol, Eng. A vaccination program could therefore result in the proliferation of strains more likely to be, or become, drug resistant.

As a consequence of using improved computational statistical techniques, WHO reported in September that there were many fewer cases of malaria in the world than had been thought. In its 2008 annual malaria report, WHO said that there were about 250 million cases of malaria in the world annually, with about 880,000 deaths in 2006. Previous official estimates had ranged from 350 million to 500 million cases and more than 1 million deaths. Nevertheless, WHO called for continued aggressive efforts to attack the disease. The number of estimated cases in Africa—where 91% of malaria deaths occurred—had

Jorge Adorno—Reuters/Landov

In Paraguay army medics immunized residents against yellow fever in the outskirts of Asunción.

remained relatively unchanged. The number of cases in Asia had been overestimated, however, because they were derived from population and vegetation maps that dated to the 1960s. Since that time, millions of Asians had migrated to cities, and large regions had been deforested, which, according to the report, reduced mosquito habitat. Moreover, countries such as India had grown wealthier and had improved health care and mosquito control.

In February Paraguay declared a public health emergency following an outbreak of yellow fever. In response, an initial one million yellow-fever vaccination doses were supplied by Brazil, Peru, and other Latin American countries, and an additional two million were supplied by UNICEF. Officials reported at least 66 suspected cases of yellow fever. Of those, 15 were confirmed and 7 people died. Of the suspected cases, 26 were located in urban centres close to Asunción. Meanwhile, Brazil also reported cases of yellow fever in six states.

The Ministry of Health of Guinea-Bissau battled to control a cholera epidemic that began in May and quickly spread across the country. As of November, 14,129 persons in the country had contracted cholera, and 221 had died. In addition to providing $750,000 in aid, UNICEF assisted with the disinfection of Bissau's water system and traditional wells and coordinated hygiene and public health initiatives. Elsewhere on the African continent, Zimbabwe declared a national emergency in early December in the wake of a cholera epidemic that had resulted in more than 560 deaths since August, according to the United Nations. By year's end, health officials in Zimbabwe had reported more than 1,500 deaths from a total of about 26,000 cases of cholera.

In May China reported a fast-spreading outbreak of hand, foot, and mouth disease (which was unrelated to the foot-and-mouth disease of livestock). The outbreak killed 22 children and sickened about 4,500 others in Anhui province. All of the fatalities were children younger than six years of age, and most were younger than two. The outbreak was caused by a strong intestinal virus known as enterovirus 71. Symptoms began with a fever and typically included mouth ulcers and blisters on the hands, feet, and buttocks. Most patients recovered in a week without treatment. In severe cases, however, brain swelling led to paralysis or death. There was no vaccine or known cure for the disease.

Cancer. Researchers for the first time sequenced the entire genome of a cancer patient—a woman who had acute myelogenous leukemia. In a paper published in November in *Nature,* the researchers reported that they had found 10 mutations in the woman's cancer-cell DNA compared with the DNA from her normal skin cells and that 8 of the mutations had not been previously linked to her disease. In April the International Cancer Genome Consortium was formed by research organizations from around the world to produce high-quality genomic data on up to 50 types of cancer. Each consortium member planned to conduct a comprehensive high-resolution analysis of the full range of genomic changes in at least one specific type or subtype of cancer, and each analysis was expected to involve specimens from at least 500 patients and to cost an estimated $20 million.

A study presented in September at the American Society of Clinical Oncology's 2008 Breast Cancer Symposium in Washington, D.C., highlighted progress in making diagnoses. An experimental screening technique known as molecular breast imaging, which used an injected radioactive tracer, detected three times as many breast cancers as conventional scanning techniques in women who had dense breasts and who were at a higher risk of developing the disease.

In a study published in August in *The New England Journal of Medicine,* Jane J. Kim and Sue J. Goldie of Harvard University analyzed the cost-effectiveness of vaccination programs for immunizing women against viruses that caused cervical cancer and evaluated the implications of their findings for vaccination guidelines. As the result of the success of clinic trials and subsequent national vaccination programs, within just a few years tens of millions of girls and women had received doses of Gardasil or Cervarix, vaccines that targeted two strains of the human papillomavirus that together caused an estimated 70% of cervical cancers. The authors concluded that the vaccines would be cost-effective if they proved to protect women for a lifetime and if current methods for screening for cervical cancer by means of Pap smears could be safely adjusted to reduce costs. In an accompanying editorial, Charlotte J. Haug, editor of *The Journal of the Norwegian Medical Association,* observed that

Children in Harare, Zimb., collect available water for their home. Amid water-supply breakdowns, a cholera epidemic swept Zimbabwe late in the year.

Tsvangirayi Mukwazhi/AP

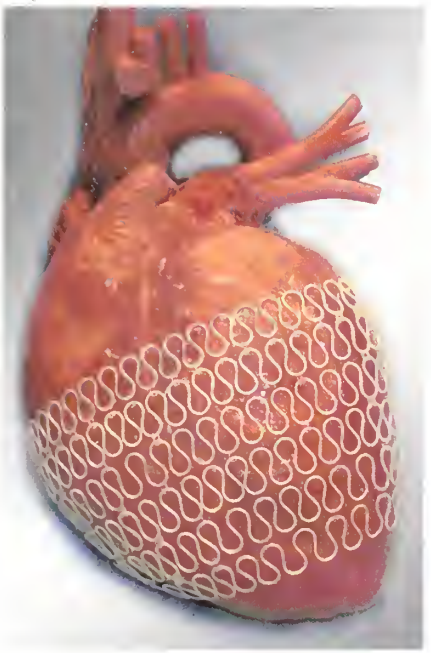
many uncertainties remained concerning the vaccines, such as how long the immunity would last or whether eliminating some strains of cancer-causing virus might decrease the body's natural immunity to other strains. She urged that clinical trials and follow-up studies be continued to test unproven assumptions about the two vaccines.

A study published in October in the *Journal of Clinical Oncology* found that persons with pancreatic cancer were more likely than those without the disease to have been previously infected with the hepatitis B virus. Lead author James L. Abbruzzese from the M.D. Anderson Cancer Center in Houston noted that although the study had shown an association between hepatitis B and pancreatic cancer, it did not prove a cause and effect. (Hepatitis B was known to cause liver cancer in some patients.) Though uncommon, pancreatic cancer was among the deadliest forms of cancer, and a vaccine existed to prevent hepatitis B.

Cardiovascular Disease. The American Academy of Pediatrics in July recommended that some children as young as eight years of age take cholesterol-fighting drugs to ward off potential future heart problems. The academy also recommended low-fat milk for one-year-olds, as well as more cholesterol testing. Stephen Daniels, of the academy's nutrition committee, said that the advice was based on mounting evidence that the cardiovascular damage that leads to heart disease begins early in life. He added that the recommendation for the cholesterol-fighting drugs stemmed from recent research that showed that they were generally safe for children. In general, the drug treatment would be targeted for children at least eight years old who had too much LDL, or "bad," cholesterol as well as risky conditions such as obesity and high blood pressure. The new recommendation prompted debate among pediatricians, with critics saying that there was no evidence that giving statins to children would prevent heart attacks later in life and that there were no data on the potential side effects of taking the drugs for decades.

More than 100 heart patients took part in clinical trials to test the effectiveness of the HeartNet Ventricular Support System to stop advanced heart failure. The system used an elastic metallic-alloy mesh that was wrapped around the heart through a minimally invasive implant procedure. According to HeartNet's developer, Paracor Medical, the mesh exerted a mild pressure on the heart and was designed to slow or stop the enlargement of the heart that was associated with heart failure. The HeartNet device was first implanted in 2006.

Image courtesy of Paracor Medical, Inc.



The HeartNet, a mesh that surrounds the heart, was undergoing clinical testing for the treatment of advanced heart failure.

Alzheimer Disease. Research to develop drugs that could cure or halt the progression of Alzheimer disease experienced setbacks during 2008. To date there were only medications to treat the symptoms of the disease, such as memory loss and confusion. During the year, Myriad Genetics announced that Flurizan, a drug that it had developed to treat Alzheimer disease, failed in a late-stage clinical trial. Flurizan was one of the first drugs to reach late-stage testing that worked by trying to prevent the buildup in the brain of toxic amyloid plaques, which had been thought to cause the disease. Moreover, a study published in July in *The Lancet* said that a once-promising experimental vaccine called AN1792 failed to prevent the progression of Alzheimer disease, even though it cleared amyloid plaques in the brain.

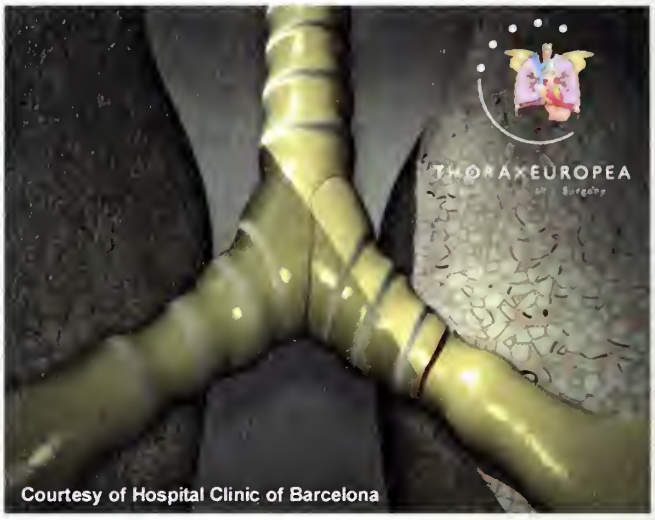
On the positive side, another study published in *The Lancet* in July reported that an older drug called dimebon significantly helped Alzheimer symptoms. Rachelle S. Doody, at Baylor College of Medicine in Houston, and colleagues studied the effects of dimebon on 183 patients in Russia with mild to moderate Alzheimer disease. The drug was not being marketed and had been previously used in Russia as an antihistamine. Doody's team found that patients on dimebon had a significant increase in cognitive ability, compared with those who received a placebo. Treated patients also showed improvement in thinking abilities, behavioral symptoms, and daily skills.

At the International Conference on Alzheimer disease in August, John Ronald, of the University of Western Ontario, and his colleagues reported that they had identified the brain plaques associated with the disease by using magnetic resonance imaging. Previously, Alzheimer disease could be distinguished with certainty from other dementias only by postmortem examination. The imaging advance was expected to make it easier to identify people with the disease and thus start treatment early.

Vaccines. Public health officials had expressed concern in recent years that some parents, fearful about vaccine safety, were declining to get their children vaccinated, which consequently made the children more likely to catch and spread preventable childhood diseases. In September, however, the CDC reported that in the preceding year record numbers of toddlers in the U.S. had received the vaccinations recommended by the CDC's Advisory Committee on Immunization Practices. According to the CDC, a record 77.4% of children aged 18 months to three years old received the full recommended series of vaccinations, and 90% of children got all but one of the six individual vaccines in the series (the exception was the four doses of the vaccine for diptheria, tetanus, and pertussis [whooping cough]). The report was issued one day before another study was released that concluded there was no link, as had been claimed by critics, between autism and the vaccine for measles, mumps, and rubella.

The CDC reported significant progress toward the introduction and use of *Haemophilus influenzae* type b (Hib) vaccine in less-developed countries. The CDC estimated that Hib disease annually caused three million cases of meningitis (swelling of the membranes surrounding the brain and spinal cord) and severe pneumonia and about 386,000 deaths worldwide in children five years of age and younger. Hib vaccines had been widely used in developed countries for almost 20 years but had been relatively unavailable in the world's poorest countries.

Hospital Clinic of Barcelona/AP



These images depict the damaged windpipe (left) that was repaired (right) in an operation in Barcelona with tissue grown from the patient's stem cells. The windpipe is shown where it branches to the two lungs, which appear in the background.

Pharmaceuticals. Prostate-cancer specialists reported that the drug finasteride could reduce men's risk of developing the disease by 30%. Finasteride already was used by millions of men to shrink the prostate. As many as 100,000 cases of prostate cancer could be prevented annually by taking the drug, according to Eric Klein of the Cleveland Clinic. The discovery arose from an analysis of a large American study of finasteride. Nevertheless, it was debated whether men should take the drug to prevent prostate cancer, which in a given individual might or might not be dangerous because the cancer was relatively slow-growing and often not lethal. On the one hand, doctors said many men diagnosed with prostate cancer chose to be treated, which could potentially leave them impotent or incontinent. On the other hand, men who considered taking finasteride would need to weigh the risk of unanticipated side effects that might emerge years later from taking the drug even if they avoided developing prostate problems.

Other Developments. For the first time, doctors performed a human trachea (windpipe) transplant by using tissue that was grown from the recipient's own stem cells—a procedure intended to prevent the immune system from rejecting the new organ. Doctors from four European universities performed the surgery in Barcelona on a 30-year-old woman who suffered from a severely collapsed lung owing to tuberculosis. In preparation for the transplant, a donor's trachea was first stripped of cells that would have been rejected when transplanted. Stem cells from the woman's bone marrow were then used to create cartilage and tissue cells to cover and line the trachea. Details of the procedure were published[a] in *The Lancet*, which reported that the woman did not require immune-suppressing drugs and was doing well months after the surgery. Although the surgery was considered an important advance in stem-cell technology, scientists said that the ability to grow entire organs with stem cells remained only a far-off possibility.

A newly passed U.S. law required insurance companies to provide equal coverage for mental and physical illnesses. As a result, more than one-third of all Americans were expected to receive better coverage for mental health treatments. Many insurers set higher co-payments and deductibles and stricter limits on treatment for addiction and mental illnesses. The new law would make it easier for people to obtain treatment for a wide range of conditions, including depression, autism, schizophrenia, eating disorders, and alcohol and drug abuse. Federal officials said that the law would improve coverage for 113 million persons, including 82 million in employer-sponsored health plans that were not subject to state regulation. The effective date for most of the plans would be Jan. 1, 2010.

Taiwanese researchers reported in June that the already high worldwide rate of chronic kidney disease (CKD) was increasing and that because it raised the risk of death, addressing the disease should be a public health priority. The study, which analyzed data from 462,293 persons, found that the 12% of people with CKD were 83% more likely to die from any cause and twice as likely to die from cardiovascular causes, compared with those without CKD. About 40% of deaths in the CKD group occurred before age 65. Of the deaths in the entire study group, 10.3% were attributable to CKD, but this figure increased to 17.5% among people with low socioeconomic status. The researchers also found that people who regularly used Chinese herbal medicines had a 20% increased risk of developing CKD. The study was published in *The Lancet*.

Rates of childhood obesity, which had been rising for more than two decades, appeared to have hit a plateau in 2006. The finding, based on data gathered from 1999 to 2006 by the CDC, was published in May in the *Journal of the American Medical Association*. The study said that it was unclear whether the slowdown in childhood weight gain was permanent or the short-term result of public antiobesity efforts such as curbing junk food and increasing physical activity in schools. Even if the trend held, 32% of American schoolchildren remained overweight or obese, doctors noted. The data came from thousands of children who had taken part in the National Health and Nutrition Examination Surveys, which had been compiled by the National Center for Health Statistics at the CDC since the 1960s. The plateau followed years of weight gain among American children. In 1980, 6.5% of children from ages 6 to 11 were obese, but by 1994 that number had climbed to 11.3%. The rate had jumped to 16.3% by 2002 and in 2006 had stabilized at about 17%. (KEVIN DAVIS)

Life Sciences

Scientists discovered moths and frogs that use ULTRASONIC communication, studied the effects of CLIMATE CHANGE on animals and plants, grew a date palm from a 2,000-YEAR-OLD SEED, described 14-million-year-old FREEZE-DRIED FOSSILS of moss in Antarctica, and sought to explain the widespread loss of HONEYBEE COLONIES.

ZOOLOGY

In 2008 several zoological studies provided new insights into how species' life-history traits (such as the timing of reproduction or the length of life of adult individuals) are derived in part as responses to environmental vagaries. The findings had implications for both short- and long-term evolutionary responses of animals to global climate change, harsh natural environments, and infectious disease. Anne Charmantier of the University of Oxford and colleagues reported on their examination of the behavioral adjustments of a wild-bird population of great tits (*Parus major*) that had been studied since 1961. The long-term data set included information on seasonal temperature changes, the timing of the emergence of a vital prey (larvae of the European winter moth, *Operophtera brumata*) for the birds' young, and the reproductive success of the bird population. By 2008 the average date on which the female birds laid eggs had shifted to about two weeks earlier than in the 1970s, a gradual change that tracked an increase in the environmental temperatures that preceded egg laying over the same time period. The timing of peak abundance of winter-moth larvae had also shifted in response to environmental temperatures. In order for the birds to capitalize on the availability of this key prey for their young, the females had to adjust when they laid eggs each year, since the optimal time changed annually in response to early spring temperatures. On the basis of analyses of the annual timing of the birds' egg laying and rearing of young in response to environmental temperature fluctuations, the investigators concluded that the population responded successfully to regional climate change by adaptive phenotypic plasticity of individual birds rather than by a genetically based response.

Curtis A. Deutsch, Joshua J. Tewksbury, and Raymond B. Huey of the University of Washington at Seattle and colleagues constructed thermal performance curves for terrestrial insects from around the world through the use of a global data set that related population growth rates of insects to environmental temperatures. The investigators then used the performance curves to predict the direct impact that rising environmental temperatures might have on insect fitness at different latitudes. Even though greater increases in temperatures were expected in temperate regions, the smaller warming in tropical regions was predicted to have greater impact on insects because tropical species lived at close to their optimal temperature and had limited capacity to adjust to change. Species living at temperate latitudes generally operated at conditions appreciably cooler than their optimal temperature, a situation in which an increase in temperatures might enhance fitness. One conclusion from the analyses was that the greatest risk of extinction from global warming would occur in species living in the world's regions of greatest biological diversity, the tropics.

Menna E. Jones of the University of Tasmania and colleagues investigated changes in the life-history traits of populations of the Tasmanian devil (*Sarcophilus harrisii*), a carnivorous marsupial endemic to Tasmania. Tasmanian devil populations were being devastated by a contagious cancer called devil facial tumour disease (DFTD). The disease produced large tumours around the head and mouth that interfered with eating and invariably led to death within a few months. Researchers first noted DFTD among Tasmanian devils in 1996. By 2007 it was present in at least one-half of the populations of the species, and some in-

The growths on the throat of this Tasmanian devil were caused by devil facial tumour disease. The fatal contagious disorder threatened the species with extinction.

Hannah Bender—University of Sydney/Landov

fected populations had declined by about 90%. Susceptibility to DFTD was believed to be a consequence of low diversity in the genes that facilitated the animal's immune responses to tumours, and the spread of the infection was promoted by the physically aggressive biting behaviour among individuals during the mating season. The investigators examined demographic data of Tasmanian devil populations from five locations before and after the appearance of the disorder, and they determined that the proportion of animals that were more than three years old in a given population was greater before than after the onset of the disease. Also, in most populations before the onset of the disease, a majority of females produced several litters between ages two and four, and no females bred before then. After DFTD became prevalent, the number of females that bred early increased by 16 times on average. Despite an unprecedented shift by most females in the population to begin breeding at significantly earlier ages, the spectre of extinction of Tasmanian devils continued to be a major conservation concern. Plans to save the species included developing a vaccine against DFTD, keeping healthy Tasmanian devils in zoos and breeding programs under quarantine, and building fences to protect healthy populations in the wild from infected animals.

Among living tetrapods—amphibians, reptiles, birds, and mammals—virtually all species live one year or more after they are hatched or born, and females typically reproduce several times in their lifetime. In a dry desert region of Madagascar, Kristopher B. Karsten of Oklahoma State University and colleagues discovered an unusual chameleon that lived most of its life in the egg stage and whose females reproduced only once in their lifetime. The investigators found that all individuals of the chameleon, *Furcifer labordi*, were the same age. The entire population hatched from eggs in November. They mated about two months later, and after the females laid their eggs, both sexes became senescent. The adults died within five months of hatching—the shortest postembryonic life span ever reported for a tetrapod. The entire species then persisted for at least six months each year solely in the egg stage. It was uncertain how such an unusual life-history pattern might have evolved, but presumably it was one strategy for a species that lived in an extremely harsh and unpredictable seasonal environment where high adult mortality led to the evolution of shorter life spans. The confirmation that some chameleons were naturally short-lived had important implications to conservation programs that held animals in captivity to form assurance colonies for later release into the wild.

Many animals communicate with others of their species for reproduction, and the challenges in such communication range from situations in which being too quiet is ineffective to situations in which being too loud can be dangerous. A study by Ryo Nakano of the University of Tokyo and Takuma Takanashi of the Forestry and Forest Products Research Institute, Tsukuba, Japan, and colleagues in Japan and Denmark reported on a moth that produced ultrasonic sounds during courtship. The male Asian corn borer moth, *Ostrinia furnacalis*, directed the low-intensity sounds toward a nearby female. Predators or other males that might compete for the same mate could not detect the quiet sound. Yet the nearby female could hear the courtship sounds, which enhanced the male's opportunity for mating. The investigators determined that the male produced the sound by rubbing specialized scales on the wings against the thorax. Further investigation revealed that production of low-intensity ultrasonic sounds during courtship was common among a variety of species in other families of moths.

Jun-Xian Shen of the Chinese Academy of Sciences, Beijing, and colleagues discovered another type of ultrasonic communication—in an amphibian. During ovulation female Chinese torrent frogs, *Odorrana tormota*, produced ultrasonic sounds that signaled when they were ready to mate. After ovulation, the females did not produce the call. The males gave advertisement calls during the mating season, but the female calls were distinctive in having a higher frequency and shorter duration. The call of the female informed males that she was ready to mate and indicated her location in a densely forested habitat. Male torrent frogs had a hyperacute ability to detect the call amid high ambient noise levels created by stream waters and to determine the female's location precisely. The production of high-frequency sounds by females and the males' ability to pinpoint their source were most likely adaptations for communicating in the noisy habitat of torrential streams.

One of the oddest vertebrates is the platypus (*Ornithorhynchus anatinus*), a type of mammal called a monotreme. Platypuses lay eggs like reptiles and birds but have fur and feed their young milk produced from lactate glands with no nipple. Other unusual features of the platypus include the presence of a bill with electrosensory pits, the absence of teeth in adults, and—in males—the production of venom, which they apply through spurs on the hind feet. Geneticist Wesley C. Warren of the Washington University School of Medicine, St. Louis, Mo., and an international consortium sequenced the entire genome of the species to assess the evolutionary relationships between platypuses, other mammals, birds, and reptiles. Comparative investigations of protein-coding and non-protein-coding genes and the reading of some 26.9 million DNA sequences revealed information on the genomic evolution of mammals. The findings showed that the venoms of reptiles and monotremes evolved independently as the result of convergent evolution and that the milk-producing genes were conserved from a mammalian ancestry. The study also confirmed that marsupials and placental mammals are more closely related to each other than either is to monotremes.

(J. WHITFIELD GIBBONS)

BOTANY

In 2008 progress was made in creating genetically modified (GM) plants to produce pharmaceutical drugs. The production of pharmaceuticals derived from GM plants had proved to be efficient on a large scale, but little research had been done in using GM plants for vaccines against cancer and other chronic diseases. In one report Alison McCormick of Touro University California's College of Pharmacy and colleagues described new plant-made vaccines that they had developed for treating non-Hodgkin lymphoma cancer. The researchers were able to use the GM plant technique to make vaccines tailored to individual patients, which was important because the molecular signature of the lymphoma tumour cells differed from patient to patient. The researchers created the vaccine by isolating the antibody to each patient's tumour and inserting the gene for that antibody into a modified version of the tobacco mosaic virus, which was then used to infect a to-

(continued on page 250)

Honeybees and Colony Collapse Disorder

In 2008 agricultural researchers sought to determine the cause of a mysterious disorder that was destroying colonies of *Apis mellifera* honeybees. The malady, called colony collapse disorder (CCD), was threatening honeybee populations across the United States, where they were essential for the pollination of many commercially important crops. The disorder had also been reported elsewhere, primarily in Europe. In CCD the sudden failure of a honeybee colony was characterized by the death of its adult bees, which would leave the hive and fail to return. During the few days or weeks over which the adults disappeared, the queen and several attendant workers bees usually remained in the hive, and the hive had plentiful food stores and showed evidence of normal brood rearing. Although sudden honeybee-colony die-offs were known to occur from time to time, an unusual feature of CCD was that honey-seeking neighbouring bees and common hive pests such as wax moths appeared to delay invading hives that had been affected by the disorder.

The unexplained loss of honeybee colonies that came to be known as CCD was first reported in the fall of 2006 by a commercial beekeeper from Pennsylvania who was overwintering his colonies in Florida. (Subsequent investigations suggested that beekeepers had experienced unexplained colony losses for at least the previous three years.) By February 2007 several large commercial migratory beekeeping operations had reported cases of CCD, with some operators suffering the loss of 50–90% of their colonies. Many of these larger operations were overwintering their colonies in California, Florida, Oklahoma, and Texas. By late February 2007, some nonmigratory operations located in the mid-Atlantic region and the Pacific Northwest also had reported the loss of more than 50% of their colonies. The absence of dead bees in the affected hives made initial investigations difficult and inconclusive.

Beekeeping is a critical component of modern agriculture, and CCD not only threatens the beekeeping operations that provide pollination service and honey production but also has the potential for crippling the production of many crops that are dependent on honeybees for pollination. In the United States, beekeepers provide pollination service for more than 90 commercially grown crops, including many fruits and vegetables. The economic value of U.S. crops that benefit from honeybee pollination has been estimated at $15 billion annually. In 2006 the California almond-export crop alone was valued at $1.9 billion and required more than one million bee colonies for pollination (out of a total of about 2.6 million colonies in the U.S.). With the number of available colonies for crop pollination in the country in decline, the beekeeping industry faces a tremendous challenge in meeting the demand for pollination services.

The Agricultural Research Service of the U.S. Department of Agriculture has organized efforts to address the CCD crisis through surveys and data collection, samples analysis, and mitigation and preventive measures. A variety of possible causes of CCD have been suggested. They include chemical contamination of colony food stores or beeswax; poisoning from pesticides, including newly introduced insecticides based on nicotine derivatives; the introduction of genetically modified crops; possible lack of genetic diversity in colonies; and infection of colonies by pathogens or parasites, including known honeybee parasites such as the single-celled *Nosema ceranae* and the invasive varroa mite (*Varroa jacobsoni*).

Some of these suggestions have been discounted, but a 2007 study stated that Israeli acute paralysis virus (IAPV) appeared to be strongly associated with the disorder. The virus—which was first identified in Israel—had not been previously reported in the U.S., but a subsequent genetic screening of preserved honeybee specimens showed that IAPV had been present in honeybees in the U.S. since at least 2002. A study of the virus in 2008 determined that there were three types and that two of them had infected honeybees in the U.S. Although the virus is a consistent marker of CCD, a cause-and-effect relationship has yet to be established, and many scientists suspect that CCD might be the result of a combination of two or more pathogens or stressors. Bee colonies are commonly found to be infested with pathogens and parasites, and the investigation of the interactions of all the possible causative agents has proved to be a challenge for bee scientists.

Colony stress could contribute to CCD by harming the bees' immune systems and making colonies more susceptible to disease. Possible sources of stress include poor nutrition caused by the lack of plants that are sources of nectar and pollen, the use of honeybees to pollinate crops with little nutritional value for bees, the overcrowding of honeybee colonies, and the repeated transport of colonies over long distances for pollination or honey production.

Steps to improve honeybee health are being taken that might reduce colony stress. The advent and utilization of improved nutritional supplements could boost honeybee health during periods of nectar or pollen dearth or inclement weather. Several large migratory operations are being periodically sampled for possible warning signs of colony-health issues that could trigger or lead to CCD. Some recommendations that have been made to beekeepers to improve honeybee health include feeding bees antibiotics to prevent nosema infections, using genetic stocks that show resistance to mites, and applying fumigants such as formic-acid- or thymol-based products only when necessary to control varroa-mite infestation. Another recommendation is to avoid reusing equipment that has been exposed to bee colonies that have died from CCD.

A new technological advance that could help in discovering the underlying cause of CCD in honeybees is the full sequencing of the honeybee genome, which was published in late 2006. It makes available new molecular approaches and honeybee genomics in the investigation of the impact of possible causal agents on specific genes and honeybee-colony health. Likewise, the advance might help identify new pathogens in honeybees and unravel the complex effects of multiple combinations of pathogens and environmental toxins.

(WILLIAM MICHAEL HOOD)

(continued from page 248)

bacco plant. The virus carried the gene into the plant's cells, where the antibody was produced, and after a few days the antibody was extracted and purified. Only a few plants were needed to make enough vaccine for each patient. The results of a phase I clinical trial showed that 70% of the patients developed an immune response to the plant-made vaccine.

In another study South Korean researchers showed that the tomato plant held promise as a suitable plant for producing a possible oral vaccine against Alzheimer disease. The researchers produced GM tomatoes engineered with the human gene for beta-amyloid, a peptide that was believed to be one of the major components of Alzheimer disease. The gene was introduced into the tomato plants by infecting them with a genetically engineered bacterium belonging to the genus Agrobacterium. When mice were fed soluble extracts from the plants, the beta-amyloid triggered an immune response. The researchers hoped that it would eventually be possible to reduce the accumulation of beta-amyloid in the human brain in this way and thereby inhibit the degeneration of neuron cells.

Scientists discovered how a gene known as *SUN* controlled the shape of fruit. The fruit of the wild ancestral tomato plant was small and round, but cultivated varieties came to have a wide range of shapes and sizes. After investigating the molecular basis of the *SUN* gene's effect on elongation, Esther van der Knaap and colleagues at Ohio State University and Michigan State University reported that a duplication of a DNA sequence in the *SUN* gene had increased the gene's expression and had led to the elongated shape of the fruit. The gene-duplication event might have been caused by a DNA element called a retrotransposon, which inserted itself within the plant's genome, or genetic code, and increased the expression of the gene. The authors said that their findings demonstrated that retrotransposons might be a major driving force in genome evolution, especially in plants. The discovery might also help unravel the mystery behind the huge differences in shape among fruits and vegetables and might provide new insights into the basic mechanisms of plant development.

More evidence came to light concerning the effects of climate change on plants. Researchers from AgroParisTech in France surveyed 171 species of forest plants across six Western European mountain ranges by reviewing about 8,000 plant surveys that had been collected between 1905 and 2005. The researchers found that more than two-thirds of the species had climbed in elevation over those 100 years and that the average increase in their optimum elevation was 29 m (95 ft) per decade. The shift to higher elevation was greater for plant species whose habitat was restricted to mountains. Average temperatures in Western Europe rose by nearly 1 °C (1.8 °F) during the 20th century, and these results added to the growing body of evidence that increasing temperatures were leading to the migration of plants in search of cooler climates. The study also showed that quick-breeding grasses had moved up mountains more quickly than slower-growing trees. This disparity raised concerns that communities of plants would disintegrate and possibly affect the animals that relied on them for food and shelter.

Flowers typically used scents to attract their pollinators, but a new study revealed that tobacco flowers used a mixture of both attractants and repellents to regulate their pollination and defend themselves. A team of botanists

Royal Botanic Gardens, Kew/John Dransfield

*The top half of this newly discovered species of palm (***Tahina spectabilis***) in Madagascar is an inflorescence covered with tiny flowers. Botanists identified the tree as a long-lived palm that used up its resources to reproduce and then died.*

led by Ian Baldwin at the Max Planck Institute for Chemical Ecology in Jena, Ger., found that tobacco flowers produced nectar with both benzyl acetone, which had a sweet smell, and nicotine, which had a bitter taste and was poisonous. The study selectively blocked the production of each scent to see how they affected the plant's pollination. The nicotine repelled predatory insects that tried to rob the nectar or eat the flowers. The nicotine also prevented pollinators from lingering too long at any one flower and thereby caused them to visit more flowers and increase the chances of cross-pollination. The proper dose of both attractant and repellent chemicals was needed to optimize pollination by enticing pollinators to the flower and then persuading them to leave shortly afterward. "This . . . shows just how sophisticated a plant can be in using chemistry to get what it wants," commented Baldwin.

A team led by Sarah Sallon of the Louis Borick Natural Medicine Research Center at Hadassah Hospital in Jerusalem managed to germinate a Judean date-palm seed that was thought to be at least 2,000 years old. It was the oldest seed to have been successfully germinated. The seed was found at Masada, the hill fortress overlooking the Dead Sea that was besieged by the Romans in AD 72–73. The scientists treated the seed with hormones, and after eight weeks it began to sprout. It grew over 26 months into a healthy sapling 1.5 m (4.9 ft) tall, which was comparable to modern date seedlings. Radiocarbon dating of fragments of the seed's shell that clung to the plant's roots when it was transferred to a larger pot pinpointed the age of the seed. "The exceptionally dry and hot climatic conditions at Masada may have prevented it from disintegrating and preserved its viability, but this still says a lot about the ability of seeds to survive," said Sallon. The study of the viability of such ancient seeds was important for understanding conservation techniques for seed banks, and it might also help in modern date-palm cultivation and breeding. (*See* ENVIRONMENT: Sidebar.) (PAUL SIMONS)

MOLECULAR BIOLOGY AND GENETICS

The Genetics of Stress Response. Physical traits often run in families. Tall parents tend to have tall children; short parents tend to have short children; blond-haired parents tend to have blond-haired children; and so forth. Emotional or behavioral traits also tend to run in families, although these traits can be more complex and difficult to quantify. Anxiety disorder (the tendency to experience excessive anxiety relative to a stimulus) is a behavioral trait that demonstrates 40–60% heritability. This level of heritability indicates that environmental factors, such as stressful conditions, and genetic factors, such as those that influence how stress is perceived and accommodated, are both very important in contributing to the etiology of the disorder. A study published in April 2008 by a team of researchers led by David Goldman of the U.S. National Institutes of Health was an important step toward dissecting the genetic factors that contribute to anxiety disorder. It provided insights into the basis not only of the disorder but also of the normal variations in responses to stress.

The study consisted of several components. One component explored the functional significance of normal genetic variation in the gene *NPY*, which encodes a 36-amino-acid peptide called neuropeptide Y. The peptide is expressed at high levels in regions of the brain that are associated with arousal and emotional response to a stress-inducing challenge. Previous studies had demonstrated that neuropeptide Y is released in the brain in response to stress and that its release helps to control characteristic fight-or-flight hormonal and metabolic responses to stress, such as an increase in heart rate. The researchers hypothesized that natural genetic variation in the *NPY* gene might lead to variation in the expression of neuropeptide Y, which in turn might correlate with variation in stress response from individual to individual (a characteristic called trait anxiety). To test their hypothesis, the researchers identified seven naturally occurring variations in the human *NPY* gene sequence. They then took DNA samples from a large number of study volunteers and characterized the samples with regard to these variations. The resulting data enabled them to classify the *NPY* alleles into haplotypes (groups of alleles defined by the presence and absence of specific DNA-sequence markers). Since humans carry two copies of most genes—one maternally inherited and one paternally inherited—the volunteers in the study could be further categorized by the diplotype (set of two *NPY* haplotypes) each person happened to carry.

The researchers then tested the possible impact of *NPY* diplotype on the expression of neuropeptide Y by measuring the level of neuropeptide-Y messenger RNA (mRNA) in lymphoblast cells from 47 volunteers whose *NPY* diplotype had been determined. The results demonstrated a threefold range in neuropeptide-Y mRNA levels and a clear correlation between *NPY* diplotype and the expression level of the *NPY* mRNA. A similar correlation between *NPY* diplotype and neuropeptide-Y mRNA levels was observed from studies of 28 postmortem brain samples and from an independent study of neuropeptide-Y levels in plasma samples derived from a separate study of 42 subjects.

Next, the researchers sought to test whether *NPY* diplotypes associated with low, medium, or high neuropeptide-Y expression levels might also correlate with brain responses to emotion and stress. They applied a technique called functional magnetic resonance imaging (fMRI) to detect amygdala and hippocampal activation in 71 study volunteers who were subjected to transient stress by showing them images of threatening facial expressions. The fMRI provided real-time and noninvasive measurement of small changes in the blood flow or oxygenation levels of tissues. Since the amygdala governs arousal, emotional response, and autonomous responses to fear and the hippocampus functions in establishing memory and is influenced by stress, small changes in the blood flow or oxygenation levels of these regions of the brain served as quantifiable markers for the emotional recognition of and response to stress.

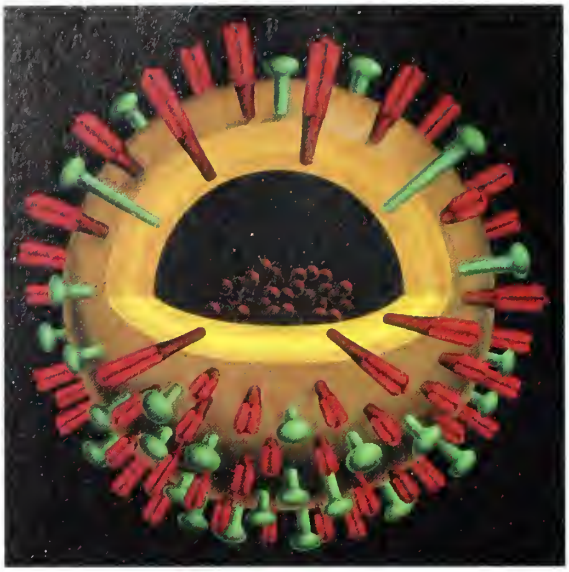
The results were striking. Amygdala activation in stressed study volunteers with a diplotype associated with low *NPY* expression was significantly higher than in study volunteers with a high *NPY*-expression diplotype. Indeed, *NPY* diplotype accounted for 9% of the variance observed in amygdala activation among the volunteers. Studies of task-related hippocampal activation also demonstrated a significant correlation with *NPY* diplotype.

To extend their work from imaging studies to trait anxiety, Goldman and colleagues used the Tridimensional Personality Questionnaire to characterize 137 study volunteers on various measures of harm avoidance. From these data the researchers found statistically significant, although modest, correlations between an individual's *NPY* diplotype and both fear of uncertainty

and anticipatory worry, but they found no correlation between *NPY* diplotype and either shyness with strangers or fatigability and asthenia (loss of strength). Considering the multitude of factors that influence emotional perception and response, it was remarkable that normal, naturally occurring sequence variations in one gene, *NPY*, could be demonstrated to have such an impact.

Seasonal Susceptibility to Influenza. Despite efforts to promote widespread immunization, every year in the United States and many other countries, 5–20% of the population becomes infected with influenza (flu) virus and experiences symptoms such as high fever, headache, fatigue, nasal discharge, sore throat, muscle aches, gastrointestinal upset, and general misery. In addition, many thousands of people die every year from influenza or its complications.

Francis Leroy, Biocosmos/Photo Researchers, Inc.



This drawing of the influenza virus shows an RNA core (at centre), the viral envelope (yellow), and proteins (red and green) that project from the virus.

Influenza is generally spread by aerosol transmission, particularly when an infected person coughs or sneezes in proximity to others. Influenza can also be transmitted when a person touches a surface contaminated with the virus from an infected person and then inadvertently touches the mucous membranes of the nose or mouth with the contaminated hand or finger.

A notable characteristic of influenza infection in the Northern Hemisphere is that it is seasonal. Influenza peaks in the winter, and the months from November to March are typically considered to constitute the flu season. Although the seasonal epidemiology of influenza infection was long recognized, it was poorly understood. In 2007, however, experiments were reported that convincingly demonstrated that temperature and humidity affect flu transmission, and in 2008 a study emerged that provided clear evidence of a mechanism to explain this effect.

This study, by Joshua Zimmerberg and colleagues from the U.S. National Institutes of Health, concerned the properties of substances, called phospholipids, that make up the influenza viral envelope. The researchers used a methodology called proton magic-angle spinning nuclear magnetic resonance to probe the ordered-versus-disordered arrangement of the phospholipids at different temperatures. At cool to cold temperatures (temperatures below 22 °C [72 °F]), the phospholipids formed an ordered gel phase, which the researchers believed would protect the virus from the elements and thereby extend its survival during transmission. At warmer temperatures, such as those common in the summer, the phospholipid envelope melted into a liquid phase, which the researchers believed would not protect the virus effectively against the environment. Thus, its survival and the range of its transmission would be limited.

The study not only offered a logical explanation for the seasonal nature of the epidemiology of influenza but also presented new approaches to preventing influenza transmission. For example, compounds might be designed to disrupt the organization of the phospholipids in the viral envelope at cool temperatures. The results of the study also suggested that other viruses that use a phospholipid envelope to shield themselves from the environment during transmission might demonstrate similar properties.

(JUDITH L. FRIDOVICH-KEIL)

PALEONTOLOGY

In 2008 scientists from The Netherlands, the United States, and Yemen published a report on the first dinosaur trackways discovered on the Arabian Peninsula, a region in which dinosaur finds were extremely rare. At a site in Yemen, more than 100 footprints were found in two sets of tracks. One was made by a single bipedal ornithopod and the other by a herd of 11 quadrupedal sauropods. A new dromaeosaur, *Mahakala omnogovae*, was reported from fossil remains discovered in Mongolia. The small size of the animal's body, together with its phylogenetic placement, indicated that extreme miniaturization was typical in ancestral members of the clade that contained Dromaeosauridae, Troodontidae, and Avialae (which included all birds). A report presented at the annual meeting of the Society of Vertebrate Paleontology in late 2007 reevaluated the status of four species of pachycephalosaurs—dinosaurs with distinctive thick skulls with bony spikes along their snouts. The paper argued that two of the species were actually juveniles of the largest species, *Pachycephalosaurus wyomingensis*, and that the skulls of juvenile pachycephalosaurs changed considerably as they matured.

The presence of collagen proteins in soft-tissue samples of *Tyrannosaurus rex* was reported in April 2007 by researchers who analyzed material that had been discovered inside a *Tyrannosaurus* femur (thighbone) two years earlier. A study published in January 2008 by a second group of researchers examined the collagen peptide sequences in the samples and determined that the reported *Tyrannosaurus* collagen peptide sequences were not valid. A response paper by the authors of the 2007 report claimed that the methods that were used in the second study were less accurate than mass spectrometry, the method that they had used. A third report, published in August 2008, claimed that the blood vessels and soft-tissue cells that had been described in the *Tyrannosaurus* were instead biofilms formed by bacteria that had invaded the fossils after death. At year's end the issues remained in dispute.

A newly studied fossil of a bat from the Early Eocene (about 50 million years ago) of Wyoming exhibited features that were more primitive than those of other known bat fossils. The fossil indicated that the bat was capable of flight, like other Eocene bats, but the ear structure showed that the bat would have lacked the ability to use echolocation. This research supported the hypothesis that flight evolved in bats before echolocation.

Whales were known to be related to artiodactyls (even-toed ungulates, such

as pigs and deer), but the first fossil of an early artiodactyl that was similar morphologically to early whales was not reported until late 2007. The report described a fossil of *Indohyus*, a small raoellid artiodactyl from the Eocene of southern Asia, and it showed that the animal was closely related to whales. Unlike other artiodactyls, *Indohyus* had an ear structure and premolars that were similar to those of early whales, and the limb-bone density and stable-oxygen-isotope composition of its teeth were also similar. The study concluded that the raoellids were aquatic waders and that an aquatic lifestyle developed in this lineage prior to the origin of whales.

The closest living relatives of the elephants were sea cows and hyraxes, but the three groups were highly divergent from their common ancestor. A study of fossil teeth from *Moeritherium*, a 37-million-year-old elephant from Egypt, suggested that these animals spent most of their time in the water and that their lifestyle was therefore more similar to that of sea cows than modern elephants. The study further found that the carbon and oxygen composition of the teeth of *Moeritherium* was more similar to that of modern aquatic mammals than terrestrial animals.

The earliest-known primitive ungulates had long been types of condylarths from the Early Paleocene of Montana. A recent report, however, documented an earlier condylarth specimen—from the late Cretaceous. An isolated molar from lake deposits of central India not only extended the fossil record of condylarths back into the Mesozoic Era but also showed that early condylarths had been more widely distributed than was previously thought.

The sparse fossil record of the monotreme duck-billed platypus was greatly extended back in time when a misidentified specimen was reidentified. A computer tomographic scan of fossil jaws that were found in Australia and were thought to belong to *Teinolophos trusleri* indicated that the enigmatic fossil was actually a fossil platypus. Dated to 112 million years ago, the fossil was by far the oldest monotreme specimen discovered to date. The next-oldest-known specimen was a 62-million-year-old fossil tooth from Patagonia. (Although the adult platypus lacks teeth, juveniles have distinctively shaped compressed teeth.)

A newly described specimen of the Permian xenacanthid shark *Triodus* had two larval temnospondyl amphibians and a small acanthodian fish preserved in its digestive track. This unusual find provided evidence of a three-level food chain. The acanthodian fish had been ingested by one of the temnospondyls, which in turn had been eaten by the shark.

A newly described fish from the Late Devonian Gogo Formation of Australia represented the oldest record of a live-bearing vertebrate in the fossil record. The new ptyctodontid placoderm, *Materpiscis attenboroughi*, preserved an intrauterine embryo connected by a permineralized umbilical cord. A second ptyctodont, *Austroptyctodus gardineri*, from the same formation showed three small embryos in the same position.

The origin of modern amphibians (frogs, salamanders, and caecilians) was controversial primarily because of the large gaps in the fossil record between modern forms and two possible ancestral groups, the Temnospondyli and Lepospondyli. A newly reported temnospondyl fossil, *Gerobatrachus hottoni*, from the Early Permian of Texas showed characters found in both frogs and salamanders and therefore partially bridged the gap between modern amphibians and their Paleozoic ancestors.

Antarctica had long been the coldest place on the Earth, but a team of scientists found fossil evidence that it was once warm enough for tundra plants and animals. The scientists reported finding 14-million-year-old fossil stems and leaves of a semiaquatic moss in deposits of an ancient alpine lake in one of Antarctica's Dry Valleys. The most unusual thing about the fossils was that they were freeze-dried; when rehydrated they resembled living specimens. The bodies of ostracods (seed shrimp) with intact soft parts were also collected.

The Paleozoic machaeridians were an enigmatic group of wormlike organisms known mainly from shell plates found in ocean-bottom assemblages. At various times over the past 150 years, they had been considered to be related to barnacles, echinoderms, mollusks, or annelid worms. A newly described machaeridian fossil from Morocco was found with rarely preserved soft parts, including parapodia and chaetae. The presence of these structures indicated that the machaeridians were clearly related to the annelids. Another example of an exceptionally preserved fossil was a jellyfish described from Middle Cambrian deposits of Utah. The specimen, found in the Marjum Formation, showed soft-tissue structures such as tentacles and subumbrellar and exumbrellar surfaces.

Carnivorous fungi from 100 million years ago were found preserved in Cretaceous amber from southwestern France. The fungi contained structures called hyphal rings that had trapped small nematode prey, which were also preserved. On the basis of the type of hyphal rings found in the fossils, the fungi did not belong to any group of living carnivorous fungi. The authors suggested that the hyphal structures for trapping prey developed independently in various lineages of fungi through geologic time.

(WILLIAM R. HAMMER)

The dinosaur that formed the bipedal prints preserved in this trackway found in Yemen was identified as an ornithopod.

Khaled Abdullah—Reuters/Landov

Literature

The PERSONAL outweighed the POLITICAL in much of the literary world in 2008 as individual concerns came to the fore in Arabic, Chinese, Latin American, Canadian English, and Russian works. In France AUTOFICTION described the mixture of autobiography and fiction that was common worldwide. COLONIAL HISTORIES and the displacement of native peoples occupied many writers. Meanwhile, LITERARY WEB SITES debuted in China and Russia. POETRY was DEFENDED in the U.S., became the subject of a REALITY-TV competition in Russia, and seemed in ECLIPSE in Arabic literature.

ENGLISH

United Kingdom. If one theme predominated in British literature in 2008, it was the experience of immigrants and the effects on their lives of globalization. Unsurprisingly, many novels bore witness to the U.K.'s changing demographics. *The Road Home* (2007) by Rose Tremain (winner of the 2008 Orange Broadband Prize for Fiction) tackled the recent wave of economic migrants from Poland. The novel's hero, Lev, a widower with a daughter and a mother to support, arrives in London hoping to find opportunities for economic advancement but soon finds himself sleeping on the streets. In depicting the British through the eyes of this likable character, Tremain intended to overcome prejudice. As Tremain said, "The moment we become engaged with an individual story, empathy arrives and our attitudes alter." Chris Cleave's widely lauded second novel was inspired by his experience working at an Immigration Removal Centre in Oxfordshire. *The Other Hand* builds up to an account of a horrific encounter between the English O'Rourke family, a Nigerian teenager named Little Bee, and men with machetes on a beach in Nigeria. The novel opens after the central event, in an Essex detention centre, where Little Bee has spent two years as an asylum seeker after having escaped Nigeria on a tea ship. When she is accidentally released and contacts the O'Rourkes, disaster and turmoil ensue. James Urquhart in *The Independent* pronounced the novel to be "a timely challenge to reinvigorate our notions of civilized decency." The book was short-listed for the 2008 Costa Novel Award.

Three of the four novelists short-listed for the 2007 Costa First Novel Award were themselves immigrants. Nikita Lalwani brought her experiences of conflicting values and cultures to her novel *Gifted* (2007), about a young math prodigy torn between the ambitions held for her by her father, traditional Indian expectations for girls, and the pressures typically faced by British adolescents. Bangladesh-born Tahmima Anam's *A Golden Age* (2007) dealt with the effects of civil war in 1971 Pakistan on a woman and her family. Sri Lanka-born Roma Tearne's *Mosquito* (2007) was about a 44-year-old novelist returning to his native Sri Lanka after the death of his wife in London. The widower falls for a 17-year-old Singhalese girl, but their love is disrupted by civil war and its attendant bestiality, torture, suicide bombers, and despair. Tearne followed this with *Bone China*. Part Sri Lankan family saga, part migrant's tale, it carried themes of displacement, loss, and the tragedy of violence back home.

British writer Rose Tremain won the Orange Broadband Prize for The Road Home, *a tale about the circumstances of immigrants.*

Ulf Andersen/Getty Images

Immigration enriched English literature in the realm of poetry as well. Daljit Nagra's debut collection, *Look We Have Coming to Dover* (2007), was short-listed for several major awards and won the 2008 Arts Council England Decibel Award. In much of his poetry, Nagra employed Punglish, a form of English spoken by Punjabi-speaking Indians living in the U.K. The winner of the Forward Prize for Poetry, Mick Imlah, by contrast, borrowed more from the Victorian era than from Britain's new lexicons. *The Lost Leader,* his collection of portraits of iconic figures and events from Scottish history, was compared to the works of Browning for its "acuteness and variousness—and poetic resonance."

The U.K.'s enduring fascination with the Indian subcontinent was reflected in the choice of winner for the 2008 Man Booker Prize. Aravind Adiga's epistolary novel *The White Tiger* gives the reader a glimpse into the mind and life of a tea-shop boy turned entrepreneur. In contrast to the recent spate of colourful books on middle-class India, *The White Tiger* made little mention of saffron and saris. Nor did it grapple with familiar themes of colonialism. As Andrew Holgate pointed out in *The Sunday Times,* the provocative novel was an "unadorned portrait of the country as seen from the bottom of the heap," showing poverty, corruption, and a merciless class system. Adiga, a first-

time novelist, beat the seasoned Indian novelist Amitav Ghosh, whose *Sea of Poppies* was also short-listed. Meanwhile, Salman Rushdie's classic about pre- and postpartition India, *Midnight's Children* (1980), was voted the Best of the Booker as the award celebrated its 40th anniversary.

The year 2008 was also one of attention-grabbing debuts. Ross Raisin astonished reviewers with his creation of a new fictional voice in *God's Own Country*. The novel's narrator, a teenage country misfit who becomes obsessed with a girl newly arrived from the city, elicited comparisons to the hero of J.D. Salinger's 1951 classic, *The Catcher in the Rye*. Equally talked about, but less successful, was Richard T. Kelly's state-of-the-nation novel *Crusaders*, about a cleric in Newcastle. Inspired by classic Russian writers, it received wide attention as an ambitious debut that ultimately failed. Reviewers noted that its 19th-century style and format were unsuitable for conveying the postmodern fragmentation suffered by its characters.

Predictably enough, given the rehearsal of arguments for and against the Orange Prize in recent years, debate about the women-only literary award intensified. Novelist Tim Lott argued that the award bolstered sales of women's novels in a market that already favoured female writers. A.S. Byatt told the *The Times* (London) that it was sexist and that she forbade her publishers to submit her novels to the award for consideration. The academic John Sutherland claimed that it ghettoized women's literature. Organizers of the prize responded by emphasizing its international scope and usefulness in seeking out and promoting good literature.

Strangely, the winner of the 2007 Costa Book of the Year award, A.L. Kennedy, was absent from the Orange Prize short list. The Scottish author's fifth novel, *Day* (2007), opens with the return of a Royal Air Force tailgunner to a German prisoner of war camp where he was interred in World War II. Only this time he is an extra in a war film. Using internal monologue and switching from first to second person, Kennedy explores both his troubled childhood and his decision to return to a fictional version of the war that has destroyed him. Like Kennedy's novel, Sadie Jones's *The Outcast* is set in the aftermath of World War II and features a young man damaged by an unloving father. Jones's well-received debut was short-listed for the Orange Prize. These were more successful examples of a prevalent trend in U.K. fiction, described by the chair of the Orange Prize as the "misery memoir" and typically featuring family secrets, child abuse, and psychosis.

As in fiction, in the genres of history and biography, World War II remained an enduring theme. Nicholas Rankin released *Churchill's Wizards: The British Genius for Deception 1914–1945*, and Ben Macintyre's *Agent Zigzag* (2007), about Britain's "most extraordinary wartime double agent," was short-listed for the 2007 Costa Biography Award. Less celebratory and certainly less colourful were the spate of books published to mark the 90th anniversary of the armistice that ended World War I. *We Will Not Fight: The Untold Story of the First World War's Conscientious Objectors* (2007) by Will Ellsworth-Jones gave a history of the abuse suffered by pacifists and the societal pressures that led many underage youths and unfit individuals to enlist. Brian MacArthur's *For King and Country* was an anthology of letters and diaries relating the stories of lives ruined by World War I. Michèle Barrett's *Casualty Figures: How Five Men Survived the First World War* (2007) similarly used original memoirs to relate the squalor of trenches, grotesque accounts of cadavers used as sandbags, and the unspeakable horror of witnessing mass slaughter.

The winner of the 2007 Costa Biography Award was Simon Sebag Montefiore's exhaustively researched portrait of *Young Stalin* (2007). A strong contender for the award was Julie Kavanagh's *Rudolf Nureyev* (2007), based on 10 years of research. Kavanagh's study of the defected Russian dancer revealed, as one reviewer attested, "a man who danced like a god, but behaved like a violent, voracious beast." A more likable subject was *The Bloomsbury Ballerina: Lydia Lopokova, Imperial Dancer and Mrs John Maynard Keynes*. In her biography of this earlier Russian dancer who enthralled the West, Judith Mackrell brings to life Lopokova's chilly reception among Bloomsbury intellectuals, her stint as a vaudevillian in the U.S., and her enigmatic and spirited form of ballet.

On the more popular front, best-selling writer Ian Rankin, having wrapped up his hugely popular Rebus series about a Scottish detective, produced his first post-Rebus novel, *Doors Open*. This galloping art-heist novel enjoyed universal acclaim. Kate Atkinson, a former Whitbread Book of the Year winner, likewise delighted reviewers with her shift away from playful yet acerbic domestic sagas to crime writing. Her third crime novel, *When Will There Be Good News?*, was described in *The Guardian* as "funny, bracingly intelligent and delightfully prickly." Writer Alexander McCall Smith, meanwhile, took a break from his well-known serial *44 Scotland Street* to publish his first online interactive novel, *Corduroy Mansion*, set in a large house in London. Publishing in installments each weekday over 20 weeks, McCall Smith invited readers to send him feedback on his odd characters and how the plot might develop. (*See* BIOGRAPHIES.)

With the global credit crunch, publishers rushed to bring out books on the financial market. One early offering was *The Ascent of Money: A Financial History of the World* by Niall Ferguson, a Scottish professor at Harvard University. Ferguson charted the history of money from ancient times, but his account of the 2008 financial meltdown was marred by its hasty last-minute analysis. Meanwhile, *The Gods That Failed: How Blind Faith in Markets Has Cost Us Our Future*, by Larry Elliot and Dan Atkinson, blamed deregulation and the philosophies of Friedrich Hayek and Milton Friedman for Britain's economic crisis. The financial crisis also gave rise to the publication of cookbooks aimed at the cash-strapped: U.K. cooking guru Delia Smith reissued her 1976 classic *Delia's Frugal Food;* Peter Higginbotham shocked food critics by declaring that *The Workhouse Cookbook* (a complete facsimile of the 1901 *Manual of Workhouse Cookery*) had topical relevance; and Fiona Beckett's timely contribution, *The Frugal Cook*, was voted one of the 10 best autumn cookbooks by *The Independent*.

A recent trend of science books designed to answer little questions was superseded by another thriving genre: the great sweeping panorama, linking scientific phenomena to history and human activity. Science writers showed themselves masters of the art of scientific storytelling, bringing difficult concepts within the range of ordinary readers. This was very much in evidence in the 2008 short list for the Royal Society Prizes for Science Books. In *Coral: A Pessimist in Paradise* (2007), Steve Jones took the reader on a journey into the history of coral via subjects as diverse as naturalist Charles Darwin, painter Paul Gauguin in Tahiti, atomic bomb testing, and Roman poet Ovid. The judges of the award described the work

(continued on page 258)

WORLD LITERARY PRIZES 2008

All prizes are annual and were awarded in 2008 unless otherwise stated. Currency equivalents as of July 1, 2008, were as follows: €1 = $1.578; £1 = $1.994; Can$1 = $0.989; ¥1 = $0.009; SKr 1 = $0.166; DKr 1 = $0.211; and 1 Russian ruble = $0.043.

Nobel Prize for Literature

Awarded since 1901; included in the behest of Alfred Nobel, who specified a prize for those who "shall have produced in the field of literature the most outstanding work in an ideal direction." The prizewinners are selected in October by the Swedish Academy and receive the award on December 10 in Stockholm. Prize: a gold medal and an award that varies from year to year; in 2008 the award was SKr 10 million.

Jean-Marie Gustave Le Clézio (France)

International IMPAC Dublin Literary Award

First awarded in 1996; this is the largest international literary prize and is open to books written in any language. The award is a joint initiative of Dublin City Council, the Municipal Government of Dublin City, and the productivity-improvement company IMPAC. It is administered by Dublin City Public Libraries. Prize: €100,000, of which 25% goes to the translator if the book was not written in English, and a Waterford crystal trophy. The awards are given at Dublin Castle in May or June.

De Niro's Game by Rawi Hage (Lebanon and Canada)

Neustadt International Prize for Literature

Established in 1969 and awarded biennially by the University of Oklahoma and *World Literature Today*. Novelists, poets, and dramatists are equally eligible. Prize: $50,000, a replica of an eagle feather cast in silver, and a certificate.

Patricia Grace (New Zealand), awarded in 2008

Man Booker International Prize

This prize is awarded every other year (beginning in 2005) to a living author of fiction of any nationality who writes in English or whose work is widely translated into English for the body of his work. The prize is supported by the Man Group PLC. Winners are announced in midyear. Prize: £60,000.

Chinua Achebe (Nigeria), awarded in 2007

Astrid Lindgren Memorial Award for Literature

This award, first bestowed in 2003 by the government of Sweden, is given annually to one or more living authors who, in the words of the organizers, "in their writing have produced literature for children and young people of absolutely the highest artistic quality and in the humanistic spirit associated with Astrid Lindgren." Prize: SKr 5 million.

Sonya Hartnett (Australia)

Commonwealth Writers' Prize

Established in 1987 by the Commonwealth Foundation. In 2008 there was one award of £10,000 for the best book submitted, as well as an award of £5,000 for the best first book. In each of the four regions of the Commonwealth, two prizes of £1,000 are awarded: one for the best book and one for the best first book.

Best Book	*The Book of Negroes* by Lawrence Hill (Canada)
Best First Book	*A Golden Age* by Tahmima Anam (Bangladesh)
Regional winners—Best Book	
Africa	*The Hangman's Game* by Karen King-Aribisala (Nigeria)
Caribbean & Canada	*The Book of Negroes* by Lawrence Hill (Canada)
Europe & South Asia	*Animal's People* by Indra Sinha (India)
Southeast Asia & South Pacific	*The Time We Have Taken* by Steven Carroll (Australia)

Man Booker Prize

Established in 1969, sponsored by Booker McConnell Ltd. and, beginning in 2002, the Man Group; administered by the National Book League in the U.K. Awarded to the best full-length novel written by a citizen of the Commonwealth or the Republic of Ireland and published in the U.K. during the 12 months ended September 30. Prize: £50,000.

The White Tiger by Aravind Adiga

Costa Book of the Year

Established in 1971 as the Whitbread Literary Awards (from 1985 Whitbread Book of the Year); Costa Coffee assumed sponsorship in 2006. The winners of the Costa Book Awards for Poetry, Biography, Novel, and First Novel as well as the Costa Children's Book of the Year each receive £5,000, and the winner of the Costa Book of the Year prize receives an additional £25,000. Winners are announced early in the year following the award.

Day by A.L. Kennedy (2007 award)

Orange Broadband Prize for Fiction

Established in 1996. Awarded to a work of published fiction written by a woman in English and published in the U.K. during the 12 months ended March 31. Prize: £30,000 and a bronze figurine called the "Bessie."

The Road Home by Rose Tremain (U.K.)

Frank O'Connor International Short Story Award

The prize was first awarded in 2005 and recognizes a collection of short stories in English by a living author and published in the previous 12 months. The award is organized by the Munster Literature Centre in Ireland and Cork and underwritten by the Cork City Council in association with the *Irish Times*. Prize: €35,000, shared by the writer and the translators (if any).

Unaccustomed Earth by Jhumpa Lahiri (U.S.)

Bollingen Prize in Poetry

Established in 1949 by Paul Mellon. It is awarded to an American poet every two years by the Yale University Library. Prize: $100,000.

Frank Bidart (2007 prize)

PEN/Nabokov Award

With this award, in even-numbered years the PEN American Center recognizes a living author for his or her body of work in a variety of genres written in, or translated into, English. The award, named for Vladimir Nabokov and supported by the Vladimir Nabokov Foundation, was first presented in 2000. Prize: $20,000.

Cynthia Ozick (2008 award)

PEN/Faulkner Award

The PEN/Faulkner Foundation each year recognizes the best published works of fiction by contemporary American writers. The award, named for William Faulkner, was founded by writers in 1980 to honour their peers. Prize: $15,000.

The Great Man by Kate Christensen

Pulitzer Prizes in Letters and Drama

Begun in 1917. Awarded by Columbia University, New York City, on the recommendation of the Pulitzer Prize Board for books published in the previous year. Five categories in Letters are honoured: Fiction, Biography, and General Non-Fiction (authors of works in these categories must be American citizens); History (the subject must be American history); and Poetry (for original verse by an American author). The Drama prize is for "a distinguished play by an American author, preferably original in its source and dealing with American life." Prize: $10,000 for each award.

Fiction	*The Brief Wondrous Life of Oscar Wao* by Junot Díaz
Drama	*August: Osage County* by Tracy Letts
History	*What Hath God Wrought: The Transformation of America, 1815–1848* by Daniel Walker Howe
Poetry	*Time and Materials* by Robert Hass
	Failure by Philip Schultz
Biography	*Eden's Outcasts: The Story of Louisa May Alcott and Her Father* by John Matteson
General Non-Fiction	*The Years of Extermination: Nazi Germany and the Jews, 1939–1945* by Saul Friedländer

National Book Awards

Awarded since 1950 by the National Book Foundation, a consortium of American publishing groups. Categories have varied, beginning with 3-Fiction, Nonfiction, and Poetry-swelling to 22 awards in 1983, and returning to the following 4 in 2001. Prize: $10,000 and a crystal sculpture in each category.

Fiction	*Shadow Country* by Peter Matthiessen
Nonfiction	*The Hemingses of Monticello: An American Family* by Annette Gordon-Reed
Poetry	*Fire to Fire: New and Collected Poems* by Mark Doty
Young People's Literature	*What I Saw and How I Lied* by Judy Blundell

Frost Medal

Awarded annually since 1930 by the Poetry Society of America for distinguished lifetime service to American poetry.

Michael S. Harper

WORLD LITERARY PRIZES 2008 (continued)

Association for Library Service to Children (ALSC) Awards

The ALSC, a branch of the American Library Association (ALA), presents a series of awards each year for excellence in children's literature. The two best-established and best-known are the following:

The **Newbery Medal,** first bestowed in 1922 (the oldest award in the world for children's literature), honours the author of the most distinguished contribution in English to American literature for children. The award consists of a bronze medal.

Laura Amy Schlitz, for *Good Masters! Sweet Ladies! Voices from a Medieval Village*

The **Caldecott Medal,** first bestowed in 1938, is awarded to the artist of the most distinguished picture book for children. The award consists of a bronze medal.

Brian Selznick, for *The Invention of Hugo Cabret*

Governor General's Literary Awards

Canada's premier literary awards. Prizes are given in 14 categories altogether: Fiction, Poetry, Drama, Translation, Nonfiction, and Children's Literature (Text and Illustration), each in English and French. Established in 1937. Prize: Can$25,000.

Fiction (English)	*The Origin of Species* by Nino Ricci
Fiction (French)	*Naissance de Rebecca à l'ère des tourments* by Marie-Claire Blais
Poetry (English)	*More to Keep Us Warm* by Jacob Scheier
Poetry (French)	*La Lanteur du monde* by Michel Pleau

Griffin Poetry Prize

Established in 2001 and administered by the Griffin Trust for Excellence in Poetry. The award honours first-edition books of poetry published during the preceding year. Prize: Can$50,000 each for the two awards.

Canadian Award	*The Holy Forest: Collected Poems of Robin Blaser* by Robin Blaser
International Award	*Notes from the Air: Selected Later Poems* by John Ashbery (U.S.)

Büchner Prize

Georg-Büchner-Preis. Awarded for a body of literary work in the German language. First awarded in 1923; now administered by the German Academy for Language and Literature. Prize: €40,000.

Josef Winkler (Austria)

Hooft Prize

P.C. Hooftprijs. The Dutch national prize for literature, established in 1947. Prize: €60,000.

Abram de Swaan

Nordic Council Literature Prize

Established in 1961. Selections are made by a 10-member jury from among original works first published in Danish, Norwegian, or Swedish during the past two years or in other Nordic languages (Finnish, Faroese, Sami, etc.) during the past four years. Prize: DKr 350,000.

Bavian by Naja Marie Aidt (Denmark)

Prix Goncourt

Prix de l'Académie Goncourt. First awarded in 1903 from the estate of French literary figure Edmond Huot de Goncourt, to memorialize him and his brother, Jules. Prize: €10.

Syngué Sabour, pierre de patience by Atiq Rahimi

Prix Femina

Established in 1904. The awards for works "of imagination" are announced by an all-women jury in the categories of French fiction, fiction in translation, and nonfiction. Announced in November together with the Prix Médicis. Prize: Not stated.

French Fiction	*Où on va, papa?* by Jean-Louis Fournier

Strega Prize

Premio Strega. Awarded annually since 1947 for the best work of prose (fiction or nonfiction) by an Italian author in the previous year. The prize is supported by the beverage company Liquore Strega and Telecom Italia. Prize: not stated.

La solitudine dei numeri primi by Paolo Giordano

Cervantes Prize for Hispanic Literature

Premio Cervantes. Established in 1976 and awarded by the Spanish Ministry of Culture for a body of work in the Spanish language. Announced in November or December and awarded the following April. Prize: €125,000.

Juan Marsé (Spain)

Planeta Prize

Premio Planeta de Novela. Established in 1951 by the Planeta Publishing House for the best unpublished original novel in Spanish. Awarded in Barcelona in October. Prize: €601,000 and publication by Planeta.

La hermandad de la buena suerte by Fernando Savater

Camões Prize

Prémio Camões. Established in 1988 by the governments of Portugal and Brazil to honour a "representative" author writing in the Portuguese language. Prize: €100,000.

João Ubaldo Ribeiro (Brazil)

Russian Booker Prize

Awarded since 1992, the Russian Booker Prize has sometimes carried the names of various sponsors—e.g., Smirnoff in 1997-2001. In 2004 it was underwritten by the Open Russia Charitable Organization and called the Booker/Open Russia Literary Prize. Awards: $15,000 for the winner; $1,000 for each finalist.

Bibliotekar by Mikhail Yelizarov

Big Book Prize

Premiya Bolshaya Kniga. First given out in 2006; it is sponsored by the government of Russia and underwritten by a number of prominent businessmen, who also serve as the jury. Awards: 3 million rubles for first prize, 1.5 million for second, and 1 million for third.

Vladimir Makanin for his novel *Asan*

Naguib Mahfouz Medal for Literature

Established in 1996 and awarded for the best contemporary novel published in Arabic. Prize: $1,000 and a silver medal. The winning work is translated into English and published in Cairo, London, and New York.

Al-Fa'il ("The Labourer") by Hamdī Abū Jalīl (Egypt)

Caine Prize for African Writing

The Caine Prize for African Writing is awarded annually for a short story written by an African writer and published in English. The prize is named for Sir Michael Caine, longtime chairman of Booker PLC, the publishing company, and chairman of the Booker Prize management committee for 25 years. The Caine Prize was first given out in 2000. Award: £10,000 plus a travel allowance.

Henrietta Rose-Innes (South Africa) for "Poison"

Man Asian Literary Prize

This prize is to be awarded annually, beginning in autumn 2007, for an Asian novel unpublished in English. The prize is underwritten by the Man Group PLC and the Hong Kong International Literary Festival Ltd. Prize: $10,000 for the author and $3,000 for the translator, plus publication and distribution of the work if other arrangements have not been made.

Ilustrado by Miguel Syjuco (Philippines)

Jun'ichirō Tanizaki Prize

Tanizaki Jun'ichirō Shō. Established in 1965 to honour the memory of novelist Jun'ichirō Tanizaki. Awarded annually to a Japanese author for an exemplary literary work. Prize: ¥1,000,000 and a trophy.

Natsuo Kirino for *Tōkyō-jima* ("Tokyo Island")

Ryūnosuke Akutagawa Prize

Akutagawa Ryūnosuke Shō. Established in 1935 and now sponsored by the Association for the Promotion of Japanese Literature, the prize is awarded in January and June for the best serious work of fiction by a promising new Japanese writer published in a magazine or journal. Prize: ¥1,000,000 and a commemorative gift.

"Chichi to ran" ("Breasts and Egg") by Mieko Kawakami (138th prize, second half of 2007)

"Toki ga nijimu Asa" ("A Morning When Time Blurs") by Yang Yi (139th prize, first half of 2008)

Mao Dun Literary Award

Established in 1981 to honour contemporary Chinese novels and named after novelist Shen Yanbing (1896–1981), whose nom de plume was Mao Dun; awarded every five years. The latest awards were given on Oct. 25, 2008.

Qinqiang ("Qin Opera") by Jia Pingwa

Ergun He you an ("The Right Bank of the Argun River") by Chi Zijian

Hu guang shan se ("The Scenery of Lakes and Mountains") by Zhou Daxin

An suan ("Plotting") by Mai Jia

(continued from page 255)
as an "idiosyncratic discussion of how zoology, history and ecology meet." Stuart Clark's short-listed book *The Sun Kings: The Unexpected Tragedy of Richard Carrington and the Tale of How Modern Astronomy Began* (2007) told of Carrington's discovery that the Earth could be affected by influences in space after a vast solar storm in 1859 crashed telegraph systems and sent magnets reeling. His unfolding of Carrington's struggles with the scientific community showed the importance of personalities and life events in determining the course of scientific inquiry. One reviewer wrote, "The reader is left with the clear sense that science often advances in random, but very human, ways." Ian Stewart, meanwhile, gave a dramatic account of the history of symmetry from ancient Babylon to the 21st century in *Why Beauty Is Truth: The History of Symmetry* (2007). The winner of the Royal Society's General Award was science writer Mark Lynas, who looked back to warmer periods in the Earth's history to predict what higher average temperatures might mean to human civilization in the future. *Six Degrees: Our Future on a Hotter Planet* (2007) paints a very grim picture of superstorms, vast conflagrations, crippling droughts, and millions upon millions of environmental refugees, but the judges felt that its overall message was one of "practical optimism toward the issues facing us."

The best of children's and teenage fiction confronted difficult issues in a way that did not patronize. The winner of the Carnegie Medal was likely to please 12-year-old boys with an appetite for gore, but it also dealt with issues of truth. *Here Lies Arthur* by Philip Reeve is a refashioning of the Arthurian legend, stripping it of its knights and Round Table and making its hero a brutish local tyrant who spends his time pillaging and stirring up boundary disputes. The reality of his thuggish character, however, is obscured by Myrddin, an old bard who uses storytelling and conjuring tricks to weave around Arthur the atmosphere of legend. *The Guardian*'s Kathryn Hughes noted, "Particularly useful is the way that Reeve asks his young readers to think carefully about the way that stories harden into official narratives when enough people are prepared to believe them." The winner of the 2008 Guardian Children's Fiction Prize was equally hard-hitting. The first in a trilogy for teenagers by Patrick Ness, *The Knife of Never Letting Go* is set in a future dystopia known as Prentisstown where all the women are dead and everyone's thoughts can be heard in an uncensored cacophony, known as "the noise." The fast-paced read pulled no punches, dealing with topical issues such as information overload and the attraction of violence. As Ness commented, "The thing a teenage audience will do for you is that if you don't insult their intelligence, they will often follow you to strange places."

(CAROL PEAKER)

United States. In 2008, the year of the unending U.S. presidential primaries and then the unnerving stock market dive and the epoch-making election campaign, U.S. literature seemed to lurk in the shadows, except for those who loved it as much as life and political news.

Some literary good news came in the form of Peter Matthiessen's huge novel *Shadow Country*, a one-volume reworking of a trilogy he published in the 1990s. *Shadow Country* took place in the early 20th century on the southern Florida frontier, in all of its watery, mythological, and intense psychological glory. The novel explored from multiple points of view the life and legend of frontier bad man/madman E.J. Watson, an Everglades farmer and outlaw; the character is large enough and dangerous enough to fill Matthiessen's nearly 900-page novel.

Several other works were published by reigning American masters, including Philip Roth's raw college novel set in the period of the Korean War (the early 1950s), *Indignation;* Joyce Carol Oates's rendering of a recent American child murder case, *My Sister, My Love;* and Nobel Prize winner Toni Morrison's tale of slavery in colonial America, *A Mercy.*

Lifelong Pacific Northwest resident Ursula K. Le Guin looked back to the legend of the founding of Rome for the materials of *Lavinia*, her critically well-received new novel. The wife of Aeneas tells the story: "I remember Aeneas' words as I remember the poet's words. I remember every word because they are the fabric of my life, the warp I am woven on."

History played a role in a number of other admirable novels. Expatriate writer Jerome Charyn went back to American colonial times for his raucous story of soldiers, spies, and bawds in *Johnny One-Eye*, a pitch-perfect rendering of the Revolutionary War period. Nicholas Delbanco chose New England and Europe for his setting of a story from the same period in *The Count of Concord*, a novel about Benjamin Thompson, the brilliant American Tory whose scientific discoveries were largely unsung. In *The Plague of Doves*, Louise Erdrich took up the matter of a social atrocity out of the early history of the upper Midwest. In *To Catch the Lightning*, Alan Cheuse offered a fictive version of the life of Edward S. Curtis, Pacific Northwest photographer of the American Indian.

Adultery lies at the romantic centre of Russell Banks's beautifully made novel *The Reserve*, which was set in the 1930s and etched in a stylized fashion that recalled the best of F. Scott Fitzgerald. In her whimsical second novel, *The Invention of Everything Else*, Samantha Hunt chose a friendship between a New York City hotel maid in the 1940s and Nikola Tesla, the eccentric genius of an inventor. An adulterous affair in the middle of a presidential primary campaign trips up one of the major characters in Ethan Canin's engaging novel *America, America*, which was published on the cusp of the general election. John Edgar Wideman brought out *Fanon*, an experimental novel about one of the founders of the post-colonial perspective. In his short novel *Peace*, Richard Bausch beautifully carved out a resonant moment on the U.S. front in Italy during World War II.

Part of the present time is the raucous, ribald charm of *The English Major*, Jim Harrison's new novel about a 60-something Midwesterner, a schoolteacher turned farmer who, after his marriage crumbles, sets out on the road ready for any adventures that come his way. Also closer to home was Charles Baxter's novel *The Soul Thief*, which dealt with questions of family and identity. Joseph Olshan, in *The Conversion*, which was set among gay American expatriates in Europe, added the question of art and aesthetics to the mix. Paul Auster, in *Man in the Dark*, played with questions of illusion and reality in a brooding surmise of a contemporary American's life during the period of the Iraq War. *Famous Suicides of the Japanese Empire*, poet and essayist David Mura's first novel, took up the question of family life under the shadow of the internment camps for Japanese Americans during World War II.

Novelist and futurist James Howard Kunstler published *World Made by Hand*, a subtle, low-key, and enormously persuasive portrait of an early 21st-century United States that suffers a series of terrorist attacks and the cut-off of foreign oil. Three of the country's most entertaining novelists—Stephen

King, John Grisham, and Christopher Buckley—published, respectively, *Duma Key, The Appeal,* and *Supreme Courtship.*

The distinguished Library of America added another Philip Roth volume to its series—Roth was the first living writer in the series—and brought out huge compilations of the work of William Maxwell (including a number of full-dress novels, story collections, and the luminous short novel about a Midwestern murder *So Long, See You Tomorrow*) and Katherine Anne Porter (represented by 500 pages of her short fiction and another 500 pages of essays and reviews).

American short-story writers helped to make 2008 a fine year. *Lost in Uttar Pradesh,* Evan S. Connell's new and selected stories, led the pack in depth of vision and exquisite prose. Tobias Wolff published *Our Story Begins: New and Selected Stories;* Joyce Carol Oates came out with *Wild Nights!,* her fictionalized versions of the last days of a number of American writers from Edgar Allan Poe to Ernest Hemingway. The highly regarded short-story writer Jhumpa Lahiri signed in with *Unaccustomed Earth,* a set of beautifully developed long stories about South Asians in the United States.

Jay Parini tried to address the general neglect of poetry in *Why Poetry Matters,* as did publisher Robert Giroux and poet and music critic Lloyd Schwartz by editing the Library of America volume of Elizabeth Bishop's *Poems, Prose, and Letters.* Former poet laureate Charles Simic added *That Little Something* to his shelf of volumes. Frank Bidart stepped away from narrative poems to a more lyric tone in *Watching the Spring Festival.* Campbell McGrath offered *Seven Notebooks:* "Then the imagination withdraws, drifts across the table to investigate the glass flowers rolled in cloth tape. / It hovers, probes the petals, some like galaxies, some like figs or seashells. Dutiful and penitent, / it shimmers back across the gulf of air, without a metaphor, to doze away the afternoon."

Jane Shore got playful in a serious way—or was it the reverse?—in *A Yes-or-No Answer:* "Have you read The Story of O? Will Buffalo sink under all that snow? / Do you double-dip your Oreo?/ Please answer the question yes or no. / The surgery—was it touch and go? / Does a corpse's hair continue to grow? / Remember when we were simpatico? / Answer my question: yes or no." Marie Howe employed plain speech in *The Kingdom of Ordinary Time.* Thomas Lux now and then went for the humorous in *God Particles;* for example, in "Eyes Scooped Out and Replaced by Hot Coals," he wrote: "the eyes shall be gouged out / and replaced by hot coals / in the head, *the blockhead,* / of each citizen who, / upon reaching his/her majority, / has yet to read / *Moby-Dick,* by Mr. Herman Melville (1819–1891), American novelist / and poet." In *Dear Darkness,* Kevin Young showed off a similar slyness of tone and attentiveness to the vernacular: "I love you like barbecue /You leave nothing on the bone / I love you like barbecue / Leave me nothing but bone / You make me go hogwild honey / Make me want to hurry home."

Pulitzer Prize winner Michael Chabon published *Maps and Legends,* a collection of offbeat essays that ranged through themes of writing and reading. James D. Houston collected his essays about life in California in *Where Light Takes Its Color from the Sea.* David Shields came in with *The Thing About Life Is that One Day You'll Be Dead,* and Terry Tempest Williams offered *Finding Beauty in a Broken World. Dreaming Up America* showed off Russell Banks's estimation of the history of the American imagination. In *The Writer as Migrant* prizewinning novelist Ha Jin took up the question of literary exile and the displaced writer's relation to narrative language.

This year saw the posthumous publication of William Styron's engaging personal essays under the title *Havanas in Camelot.* Ian Frazier came out with *Lamentations of the Father;* William T. Vollmann published *Riding Toward Everywhere;* and essayist Barbara Hurd was represented by *Walking the Wrack Line.* Jay Parini edited *The Selected Essays of Gore Vidal.* Novelist Larry Woiwode addressed his poignant and informative memoir, *A Step from Death,* to his only son, Joseph: "So, dear son, where to begin? . . . Let me step back as far as I can and say that what I remember most about my beginnings, besides the voice of my mother striding down through layers of dark to where I lay under the wonder of the onrush of sleep, is how I felt set apart."

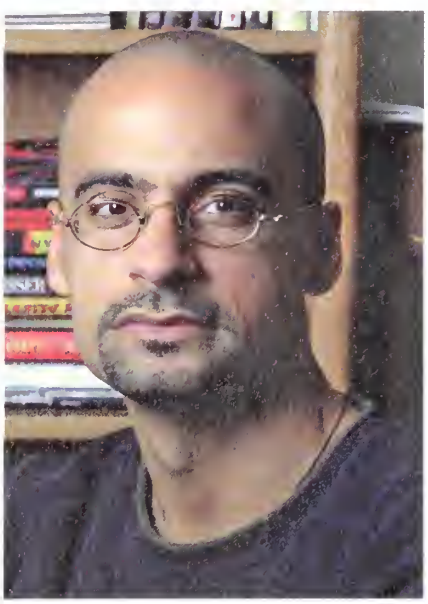
The biographical year began with the late 2007 publication of *Alfred Kazin: A Biography* by Richard M. Cook. One of the most highly regarded literary critical works of the year was poet Stanley Plumly's *Posthumous Keats.* Adam Kirsch signed in with useful essays in *The Modern Element: Essays on Contemporary Poetry,* and among a number of interesting literary biographies were works by novelists Lily Tuck and Edmund White, who wrote on Elsa Morante and Rimbaud, respectively, in *Woman of Rome* and *Rimbaud: The Double Life of a Rebel. The Selected Letters of Thornton Wilder,* edited by Robin G. Wilder and Jackson R. Bryer, arrived in the second half of the year.

Wallace Stegner and the American West by Philip L. Fradkin showed off a highly regarded late 20th-century writer in a broad context. Historian David Levering Lewis delivered *God's Crucible: Islam and the Making of Europe, 570 to 1215.* Novelist Les Standiford deployed his narrative skills in *Washington Burning.*

In 2008 Kay Ryan was named the U.S. poet laureate. Junot Díaz won the Pulitzer Prize in fiction for his novel *The Brief Wondrous Life of Oscar Wao* (2007); in poetry Robert Hass was a co-winner for *Time and Materials* (2007) with Philip Schultz (for *Failure,* 2007); and *Eden's Outcasts: The Story of Louisa May Alcott and Her Father* (2007) by John Matteson took the biography category. The PEN/Faulkner Award for fiction went to Kate Christensen for her novel *The Great Man* (2007). Matthiessen's *Shadow Country* won the National Book Award for fiction; the nonfiction prize went to Annette Gordon-Reed for *The Hemingses of Monticello;* and Mark Doty won in poetry for *Fire to Fire.*

Prominent literary figures who died in 2008 included writers Studs Terkel,

Dominican-born Junot Díaz won the 2008 Pulitzer Prize in fiction for his novel The Brief Wondrous Life of Oscar Wao.



Jim McKnight/AP

Oakley M. Hall, William F. Buckley, Jr., Michael Crichton, Paula Gunn Allen, James Crumley, Tony Hillerman, David Foster Wallace, Donald Westlake, and William Wharton; critic John Leonard; and publisher Robert Giroux. (*See* OBITUARIES.) Among the other losses to American letters were those of S.J. Hamrick (who wrote as W.T. Tyler), George Garrett, Arturo Vivante, Helen Yglesias, and esteemed magazine editor Raymond J. Smith. (ALAN CHEUSE)

Canada. Estrangement was a common theme of Canadian novelists in 2008. Rawi Hage's *Cockroach* portrayed society's outcasts as they endure the indignities of immigrant life; similar experiences were depicted by Austin Clarke in *More*, a tale of an immigrant woman who mourns her alienation from her gangster son. In Rivka Galchen's *Atmospheric Disturbances*, a character's disturbed mind ponders its condition with a skewed sense of humour. Canadian cowboy volunteers in the South African Boer War find that reality shatters their illusions in Fred Stenson's *The Great Karoo*. The aboriginal experience formed the backdrop both to Joseph Boyden's Giller Prize-winning *Through Black Spruce* and to David Bergen's *The Retreat*, a complicated tale of relations between and among white women and aboriginal men.

Strange families provided material for many novelists. In Marina Endicott's *Good to a Fault*, a single woman takes in a homeless family, and they live together in a mélange plagued by guilt, gratitude, love, rage, and too much self-analysis. A family of a different sort, a woman and her niece and nephew, take to the road in search of the children's father in *The Flying Troutmans* by Miriam Toews. Even more troubled families predominated in Mary Swan's *The Boys in the Trees*, in which a man's murders of his wife and children threaten the secrets of other "ordinary" people, and in poet Patrick Lane's first novel, *Red Dog, Red Dog*, which chronicled the unfulfilled lives of a dysfunctional family in a dysfunctional community. In Neil Bissoondath's *The Soul of All Great Designs*, two families rise up in equal and opposite alarm when their children begin dating.

The Cellist of Sarajevo by Steven Galloway was based on the true story of the brave man who played his cello in the public square every day. A young man haunted by an extraordinary experience in the Galapagos Islands was the protagonist of Nino Ricci's *The Origin of Species*. Helen Humphrey's sixth novel, *Coventry*, traced the difficult search for one's bearings in a world at war. Daccia Bloomfield's *Dora Borealis* delved below the surface of Toronto's insular art scene to reveal what it means to be pursued by a dream. In Paul Quarrington's semicomic, semiautobiographical novel *The Ravine*, a writer squanders his talents through drink and knavery, yet he somehow survives to write the tale; and four disparate people in an assisted-living retirement home in Joan Barfoot's *Exit Lines* face the question of whether to support the suicide of one of them.

Short stories ranged widely. Kunal Basu's collection *The Japanese Wife* wandered from student demonstrations in China's Tiananmen Square to funeral rites on the Ganges; *The Cult of Quick Repair* was Dede Crane's artful denial of the quick fix in stories of flagrant sinners and their seedy fates; and Sarah Steinberg's *We Could Be like That Couple* was peopled with characters who perpetually look elsewhere than their own lives for fulfillment. Anthony De Sa's *Barnacle Love* captured the immigrant experience through linked stories about a father and his son; in contrast, Pasha Malla took a different tack with a bizarre interplay of styles, voices, vices, and taboos in *The Withdrawal Method*. In Rohinton Mistry's story *The Scream*—issued by itself in a special illustrated edition—a dying man, who is confined to a Mumbai (Bombay) apartment, rails against the ending of his life.

Poetry addressed a variety of situations. Barbara Pelman's *Borrowed Rooms* was about the temporary personas people try on to suit their circumstances; Daphne Marlatt's *The Given* was the story of a woman imprisoned in 1950s housewifery; and *The Dream World* by Alison Pick described the sojourn of an outsider "come-from-away" in backcountry Newfoundland. Don McKay's *The Muskwa Assemblage* juxtaposed poetry and prose to describe a wilderness trip in the Muskwa-Kechika region of British Columbia; A.F. Moritz's *The Sentinel* watched the planet's goings-on and reported in detached tones on the convolutions and risks of being fully human; and Sachiko Murakami's *The Invisibility Exhibit* tackled the resounding silences that have swallowed up Vancouver's "missing women."

A number of works were written in a lighter vein. These included Robert Priest's *Reading the Bible Backwards*, an innovative reverse engineering of the Bible and other cultural narratives; Weyman Chan's *Noise from the Laundry*, a breathtaking romp of wit, wisdom, and linguistic acrobatics; and Karen Houle's *During*, which marked the flux of events through disjointed abstract syntax and vocabulary, at once lyrical and cerebral.

(ELIZABETH RHETT WOODS)

Other Literature in English. The prodigious and diverse output of new books in 2008 from sub-Saharan Africa, Australia, and New Zealand was highlighted by outstanding literary works from both established and emerging authors. In Africa writers from Nigeria and South Africa dominated in offering critically acclaimed and commercially successful new releases. Veteran Nigerian novelist Chukwuemeka Ike joined a distinguished pantheon of other African writers to receive the prestigious Fonlon-Nichols Award. Nigeria also celebrated—with much of the rest of the world—the 50th anniversary of the first publication of favourite son Chinua Achebe's classic work *Things Fall Apart* (1958), the best-selling novel of all time by an African.

Nigerian Sade Adeniran drew praise as the recipient of the 2008 Commonwealth Writers' Prize (CWP) for best first book (African region) for her novel *Imagine This* (2007), a story based on the journal of Lola

Canadian author Neil Bissoondath's **The Soul of All Great Designs** *examined a situation that brings two families reluctantly together.*

Ulf Andersen/Getty Images

Ulf Andersen/Getty Images

Australian author Steve Toltz's first novel, A Fraction of the Whole, *was short-listed for the Man Booker Prize.*

Ogunwole, which chronicled her life from age nine to adulthood. The CWP for best book (Africa region) went to another Nigerian woman, Karen King-Aribisala, for *The Hangman's Game* (2007).

South African readers welcomed the release of two works by internationally renowned authors who wrote in both Afrikaans and English: *Other Lives,* a novel divided into three interrelated parts, by fiction writer, essayist, and university professor André Brink; and *A Veil of Footsteps (Memoir of a Nomadic Fictional Character)* by author, painter, and activist Breyten Breytenbach. Athol Fugard, arguably South Africa's finest living playwright, produced *Coming Home,* which was scheduled to have its world stage premiere in early 2009. The Caine Prize, awarded annually for the best short story in English by an African writer, went to South Africa's Henrietta Rose-Innes for her short story "Poison" (published in the collection *Africa Pens,* 2007).

New Zealand honoured some of its finest writers with the annual Montana New Zealand Book Awards. Among the recipients were *Opportunity* (2007) by Charlotte Grimshaw, for fiction; *Cold Snack* (2007) by Janet Charman, for poetry; and *The Blue* (2007) by Mary McCallum, in the categories of best first book and readers' choice. Maori literature received much-deserved promotion in the West when Patricia Grace was named the latest winner of the Neustadt International Prize for Literature.

Australians hailed the publication of Peter Carey's new novel, *His Illegal Self.* Also of note was worldwide best-selling author and prolific novelist Colleen McCullough's latest work, *The Independence of Miss Mary Bennet,* a novel inspired by Jane Austen's *Pride and Prejudice.* Elsewhere, Steven Carroll won the coveted Miles Franklin Award as well as the CWP (best book, South East Asia and South Pacific region) for his novel *The Time We Have Taken* (2007), and *The Anatomy of Wings* (2007) by Australian Karen Foxlee won in the CWP category of best first book from the region. Tim Winton brought out his ninth novel to date, *Breath,* which, like so much of his fiction, drew heavily from landscape and place, especially coastal Western Australia. Sydney-born author and first-time novelist Steve Toltz demonstrated great promise and delighted readers and critics alike with *A Fraction of the Whole,* which was short-listed for the Man Booker Prize.

(DAVID DRAPER CLARK)

GERMAN

At the beginning of the 2008 Frankfurt Book Fair, 40-year-old author Uwe Tellkamp won the German Book Prize for his novel *Der Turm,* an exploration of life in Dresden in the years leading up to the East German revolution of 1989. Four years earlier Tellkamp had won the Ingeborg Bachmann Prize for the best emerging author in the German language on the basis of the same novel, which was at the time still a work in progress. Since then Tellkamp's novel had been eagerly awaited, and it appeared to widespread critical acclaim. Tellkamp himself—somewhat like his protagonist, Christian Hoffmann—had grown up in Dresden as a doctor's son with literary ambitions, served in the East German National People's Army, and actually spent a short time in jail in the fall of 1989 because as a soldier he refused to go into action against East German protesters. His novel was set among the educated bourgeoisie in socialist East Germany, a class that largely separated itself from socialist politics and sought to create relatively independent niches for itself; one of those niches in the novel was the "tower" society from which the novel got its name. The notion came from one of the first German bildungsromans, Johann Wolfgang von Goethe's *Wilhelm Meisters Lehrjahre.* Whether the kind of literary education and elitism represented by the tower society would be able to survive the collapse of the social and political system it opposed was one of the novel's major themes.

Another celebrated young East German author, Ingo Schulze, also published a novel about the collapse of the former Eastern bloc: *Adam und Evelyn.* Adam is an East German tailor who often becomes erotically involved with his female clients; for this reason his girlfriend Evelyn decides to travel to Hungary without him. Adam follows her there and, because Hungary then opens its borders to the West, ultimately winds up with Evelyn in Munich. The novel alludes to the biblical story of Adam and Eve and their banishment from paradise, with the implication that the fall of the Berlin Wall ultimately banished the citizens of the East German state from a not-so-paradisiacal protective cocoon.

In Turkish-born Feridun Zaimoglu's novel *Liebesbrand,* the protagonist, Richard, has a car accident in Turkey and is saved by a young German woman. He falls in love with her, but she quickly disappears from his life. Zaimoglu used his novel to explore the potential (or lack of potential) for real love in contemporary society. Similar concerns appeared in Iris Hanika's *Treffen sich zwei,* in which two lonely people suddenly find each other; but how long their love will last remains an open question.

Sherko Fatah's *Das dunkle Schiff* was the story of a young man born in Iraq who becomes involved with a group of violent jihadists but manages to find refuge in Germany; his past, however, follows him to his new home. Another novel about contemporary politics was Swiss author Lukas Bärfuss's *Hundert Tage,* the story of a Swiss worker employed by a nongovernmental organization who is hiding out in Rwanda in 1994, during the genocide against the Rwandan Tutsis. Dietmar Dath's novel *Die Abschaffung der Arten* dealt with the potential for ecological catastrophe in the contemporary world. It was set in an uncertain future in which human beings no longer rule the world and animals have taken control, and its protagonist is a lion.

A number of important works by older authors were issued in 2008. Günter Grass published *Die Box: Dunkelkammergeschichten,* the second volume of his autobiography, which had begun in 2006 with the controversial *Beim Häuten der Zwiebel,* in which Grass revealed the fact that as a young man during World War II, he had briefly been a member of the Waffen-

Hans-Werner/AP

German author Uwe Tellkamp displays his novel Der Turm, *for which he won the 2008 German Book Prize in October.*

SS. The second volume of Grass's autobiography, which centred on Grass's family and his literary works, proved much less controversial. The 82-year-old Siegfried Lenz, meanwhile, published *Schweigeminute*, a novel about a love affair between a female high school teacher and a male student. Martin Walser's novel *Ein liebender Mann* also featured age differences, but in this case the older person was Goethe, who at age 73 fell in love with and proposed marriage to a 19-year-old woman named Ulrike von Levetzow. Unsurprisingly, both in Walser's novel and in reality, Goethe did not marry the young woman; fortunately for posterity, out of his disappointment came the "Marienbader Elegie," one of Goethe's most personal and most moving poems. Walser's novel revealed how personal disappointments could result in literary triumphs.

(STEPHEN BROCKMANN)

FRENCH

France. The most important literary event of 2008 in France was the awarding of the Nobel Prize for Literature to J.-M.G. Le Clézio, one of the country's leading writers. (*See* NOBEL PRIZES.) During his 45-year career, Le Clézio's work spanned many phases; early novels were dryly experimental, but later works incorporated luxuriant exoticism, an ecology-based confrontation of Western society, and, more recently, family stories inscribed in the history of Europe and of his own Mauritius. In *Ritournelle de la faim*, Le Clézio told of his mother's coming of age before and during World War II; her bourgeois, fascist-leaning family loses everything when France is occupied. They flee the Nazis, arriving in Nice, where his mother sheds her last childish illusions as she discovers the truth of hunger.

This blending of autobiography with historical fiction, known in France as autofiction, was by far the year's most prevalent trend. In *Jeudi saint* Jean-Marie Borzeix was his own main character. While researching a Nazi massacre in his native village, he stumbles upon the existence of a previously unknown Jewish victim, and he launches a frenetic search to discover that person's identity.

In his *Impératif catégorique*, Jacques Roubaud attempted to revive fading memories of his military service in the Algerian war of independence, which he protested through a hunger strike. He also told, through the haze of memory, of his brother's suicide and of his own beginnings in Parisian literary circles. In her autofiction *Cafés de la mémoire*, Chantal Thomas described her literary origins as a member of the post-Sartre generation through memories of the countless cafés she frequented, seeking freedom in the 1960s and '70s under the influence of Simone de Beauvoir and Roland Barthes. Whereas Thomas described an upward climb, Christine Jordis, in her autofiction *Un Lien étroit*, plotted a bleak descent: her unhappy childhood—during which she was abandoned by her father and left with her miserable mother—her failed marriage, and her present-day loneliness.

Loneliness was also a major theme of the year's fictional works. Catherine Cusset's *Un Brillant Avenir* portrayed the slow crumbling of promise in one woman's life as she passes from orphaned child whose future seems boundless to her adoptive parents, to girl in love, to activist wife, to petty mother-in-law, and finally to sad woman on the verge of widowhood.

Christian Oster treated the theme of loneliness from the male perspective in *Trois hommes seuls*, in which a man must visit his ex-wife in Corsica but is loath to go alone. Having no friends, he asks two acquaintances to accompany him on the ride. Because they barely know each other, the three men stumble awkwardly upon all the wrong questions to reveal the deeply fearful solitude of their existence.

Another important theme of the year's literature was human duality. In *Boutès*, Pascal Quignard approached the question of human duality from his favourite perspective, music. He set two mythological figures as fundamental oppositions of the psyche: Orpheus, whose music is rational, social, ordered, and paternal, against Butes (the Argonaut who dived headfirst and almost drowned trying to reach the Sirens), who represents an ecstatic, solitary, and destructive longing for return to the sound-filled oneness of the maternal womb.

In *Le Rêve de Machiavel*, Christophe Bataille explored the same duality in a historical setting: in 1527 Machiavelli flees a Florence ravaged by plague and arrives at the seemingly safe haven of a village that has not been touched by disease. Soon after, however, the plague strikes the village, and the rational scholar watches as the intellectual advances of his beloved Renaissance are swept away in the return of terrified irrationality, witch hunts, and religious insanity in the face of death.

In *Ce que le jour doit à la nuit* Yasmina Khadra described human duality in the more recent setting of colonial Algeria. There an Islamic Algerian boy has been adopted into the Christian culture of the French colonizers. Treated with love and kindness, he finds beauty in a people most of his countrymen regard as oppressors. At the same time, he fights to retain his father's culture as his privileged comfort among the colonizers contrasts with the misery of his native people.

Guinea-born author Tierno Monénembo attracted attention—and the Prix Renaudot—with his historical fiction.

STR/AFP/Getty Images

The 2008 Prix Femina went to the best seller *Où on va, papa?*, in which Jean-Louis Fournier wrote with brutal humour and heartbreaking honesty about his two mentally disabled sons; he expresses his embarrassment and disappointment that they will never read, but he reiterates throughout his undying love for them. The Prix Médicis was awarded to the long and complicated *Là où les tigres sont chez eux*, in which Jean-Marie Blas de Roblès intertwined many stories and voices—of characters ranging from a 17th-century Jesuit to a modern-day reporter and his cocaine-snorting daughter—to create a fresco of Brazil that spanned the centuries. The Prix Renaudot went to Guinea-born Tierno Monénembo's historical fiction *Le Roi de Kahel*, the story of a 19th-century French adventurer's attempt to carve out a kingdom for himself in what is now Guinea. Afghan-born Atiq Rahimi won the Prix Goncourt for *Syngué sabour*, in which an Afghan woman is nursing her comatose, vegetative mujahideen husband; she sits at his bedside, pouring out her frustration at her marital, social, and religious oppression. In her husband's silence, she finally finds her voice. (VINCENT AURORA)

Canada. The biggest news on the literary scene during the year was not the work of one author but that of a group: the writers and artists who were able to make culture a page-one story during the Canadian federal election. Government cultural funding rarely emerged as an issue, but they brought it to the fore and kept the ruling Conservative Party from winning a majority by depriving it of seats in French Canada, where such issues were tied in with issues of identity.

On the purely literary front, Jacques Poulin picked up the Prix Gilles-Corbeil, given for his entire body of work. True to form, the very reserved Poulin did not appear in person. Other veterans triumphed during the year: Marie-Claire Blais won her fourth Governor General's Literary Award, this time for her novel *Naissance de Rebecca à l'ère des tourments*. Francine Noël returned with *J'ai l'angoisse légère*, giving the characters from her past novels a new life. Popular writer Monique Proulx was short-listed for several prizes but came up empty. Her novel *Champagne*, however, about a group of characters living on a Laurentian lake, was a success among readers. Attendees of Montreal's Salon du Livre gave the nod to Michel Tremblay's *La Traversée du continent* as their favourite book. The prolific Tremblay had been turning out a new book every year.

Ulf Andersen/Getty Images

French Canadian writer Monique Proulx's novel Champagne *was short-listed for numerous honours, including the Governor General's Literary Award for French-language fiction.*

There was some room for younger writers as well. Pierre Samson won the Prix des Collégiens for his novel *Catastrophes* (2007). Catherine Mavrikakis won the Grand Prix du Livre de Montréal for *Le Ciel de Bay City*, a story of death and anxiety. And authors such as Éric Dupont continued to build their careers, despite the domination of the older generation; his novel *Bestiaire* attracted critical praise.

Senior writer Bruno Roy reached back to 1968 to recall Quebec's more turbulent years with *L'Osstidcho; ou, le désordre libérateur*, an essay about rock music and politics. On the other end of the age spectrum, Lino finished his graphic novel trilogy with *La Chambre de l'oubli*, an urban dystopia. In an example of solidarity, the writing community awarded Roger Des Roches the Prix Chasse-Spleen for his book of poems *Dixhuitjinilletdeuxmilleqnatre*, a work other writers considered worthy of attention. (DAVID HOMEL)

ITALIAN

The literary event of the year was the surprising success of Paolo Giordano's *La solitudine dei numeri primi*, winner both of the Campiello Prize for a first novel and of the Strega Prize. The protagonists of the story were compared to a prime pair—prime numbers that are separated by only one even number—near each other yet always apart. The author was a 26-year-old researcher in the field of theoretical physics, and his arrival on the Italian literary scene brought a welcome new perspective. The novel was especially remarkable for its description of the complex thought processes of its male protagonist: a mathematician, scarred by a traumatic childhood experience, whose difficulty in dealing with human relationships bordered on the pathological.

Michele, the protagonist of Francesca Sanvitale's *L'inizio è in autunno*, winner of the Viareggio-Rèpaci Prize for fiction, has difficulty cultivating meaningful attachments until he meets a Japanese art restorer. Michele—who is a psychiatrist—is drawn to the mystery that surrounds the man and begins to discern hidden analogies between their life choices and the crucial scene in Honoré de Balzac's short story *Adieu* (1830), in which Stéphanie cries out her farewell before descending into madness. The novel was inspired by the restoration of the Sistine Chapel and reflected the amazement visitors felt at the sight of the original brilliance of Michelangelo's frescoes, newly delivered to the public after centuries of dust and alterations. The central scene of the novel depicts Michele as he is lost in the contemplation of the artwork but also afraid to direct his glance toward Christ's head, the detail that could unveil the mystery of his Japanese friend.

Un cappello pieno di ciliege, Oriana Fallaci's posthumous work, was preceded by an intense publicity campaign and met with predictable success. Fallaci (1929–2006), an international journalist and best-selling author who spurred controversy for her public contempt of Islam following the Sept. 11, 2001, attacks in the United States, returned to personal history in the epic saga of her family from 1773 to 1889. Maria Rosa Cutrufelli's novel *D'amore e d'odio* also proposed a long chronological span, from 1917 to 1999, but adopted a different narrative strategy. Each chapter (or "time," as Cutrufelli called them) bears a date and the name of a woman who tells her story to an interlocutor whose reactions, objections, and emotional participation are not transcribed and therefore can only be imagined. The seven "times" of the novel take readers through different epochs and geographic locations to end five minutes before the advent of the 3rd millennium. Delina, the Italo-Albanian protagonist of the final segment, is a photographer who has just

Italian author Paolo Giordano was praised for his description of complex thought processes in his debut novel, La solitudine dei numeri primi.

witnessed the plight of clandestine immigrants and found it strikingly similar to her childhood memories.

La città dei ragazzi is the name of a community that was founded in Rome at the end of World War II and that brings together displaced children from all over the world. It was also the title of Eraldo Affinati's book about his experiences as a teacher in that community. The author's journey to Morocco with two of his students leads to an interrogation on his role as a teacher and on the meaning of being a father.

Elvira Seminara's *L'indecenza* focused on the havoc caused by the arrival of a Ukrainian caretaker in the life of a Sicilian couple. The presence of the young foreigner brings to the fore the contradictions in the couple's ostensibly flawless daily routine and a secret tragedy in their life. This novel was one of the first to reflect on a new phenomenon in Italian culture—i.e., the advent of the *badante*, the often young and almost inevitably foreign and female caretaker who is charged with attending to the needs of the old and the sick. In her portrayal of Ludmila, the Ukrainian *badante* of her novel, Seminara masterfully explored the uncanny combination of distance and intimacy that the role entails.

The enduring success of Roberto Saviano's *Gomorra* (2006), which forced the young author to live in hiding and under police protection, inspired several books on the city of Naples, such as Francesco Durante's *Sciorno* and Andrej Longo's *Dieci* (2007). The 10 stories in Longo's collection were a paradoxical reflection on the Ten Commandments, which are systematically perverted under the dire social conditions depicted by the author.

Several important writers died in 2008, including Mario Rigoni Stern, whose memoir *Il sergente nella neve* (1953) was a celebrated representation of Italian soldiers' life and death on the Russian front during World War II, and Fabrizia Ramondino, author of *Althénopis* (1981), an elegant novel in which the complexity of Naples mirrors an intricate mother-daughter relationship. The same Mediterranean Sea that played such a prominent role in Ramondino's work was also responsible for her death: she drowned just before her last novel, *La via*, appeared in bookstores. (LAURA BENEDETTI)

SPANISH

Spain. Chaos, fear, and secrecy were characteristic themes in the novels published in Spain in 2008. As a follow-up to the enormous success of his novel *La sombra del viento* (2001), Carlos Ruiz Zafón came out with the best-selling *El juego del ángel*, a narrative of intrigue, romance, and tragedy woven through a labyrinth of secrets in which the spell of books, passion, and friendship combined to create an amazing story. In the tragicomic *Instrucciones para salvar el mundo*, Rosa Montero reflected on senselessness and hope.

Ray Loriga's *Ya sólo habla de amor* addressed the failure of love and the mental subterfuges people use to overcome it. In *El país del miedo*, Isaac Rosa explored the origin of a generalized fear that prompts people to accept abusive forms of protection and to make defensive responses that paradoxically create more vulnerability.

A mixture of historical novel, detective novel, hagiography, and parody, *El asombroso viaje de Pomponio Flato* by Eduardo Mendoza was both his most unusual and one of his funniest books. *El día de hoy* by Alejandro Gándara was about the eternal struggle against luck and destiny, about the lies that structure experience and the memories that are forgotten. The novel was a unique view of a city as a biography, narrated as a walk that encounters corners, lies, escapes, and opportunities.

Spain's richest literary prize, the Planeta Prize, was awarded to *La hermandad de la buena suerte*, a detective novel by writer and philosopher Fernando Savater. The book told the story of a rich man who hires mercenaries to look for someone who has disappeared. In Savater's words, "It's an adventure novel with a touch of the metaphysical." The most renowned Spanish-language literary prize, the Cervantes Prize, was awarded to novelist Juan Marsé.

Juan José Millás won the 2008 National Prize for Narrative with *El mundo* (2007), which had also been awarded the 2007 Planeta Prize; the novel related the childhood memories of a boy in what was essentially a literary psychoanalysis. The Primavera Prize went to *Nudo de sangre* by Agustín Sánchez Vidal, a historical novel that takes place in colonial Peru between the 16th and the 18th century. The book described the search for Inca emperor Atahualpa's treasure and for the lost city of Vilcabamba after the Jesuits were expelled from Spain. The unwanted Jesuits appeared also in Francisco Casavella's *Lo que sé de los vampiros*, which was awarded the Nadal Prize. In the novel an aristocratic young man named Martín de Viloalle travels

Spanish writer Carlos Ruiz Zafón holds El juego del ángel, *a complicated story of intrigue and secrets that became a best seller.*

Gustau Nacarino—Reuters/Landov

around Europe with the exiled Jesuits, making a living with his drawings. The Alfaguara Prize was awarded to Cuban writer Antonio Orlando Rodríguez for his novel *Chiquita*. A loss to Spanish letters was the death in January of esteemed poet Ángel González. (*See* OBITUARIES.) (VERÓNICA ESTEBAN)

Latin America. Detective novels were popular in 2008. Mexican writer Élmer Mendoza presented *Balas de plata*, which featured a depressed detective who struggles to complete his investigation as he confronts drug traffickers and the politicians associated with them. *Balas de plata* denounced corruption in an original, impeccable style; as a manuscript titled *Quien quiere vivir para siempre*, it had won the 2007 Premio Tusquets Editores de Novela.

In *La muerte lenta de Luciana B* (2007; *The Book of Murder*, 2008) by Argentine author Guillermo Martínez, the detective is a writer and literary critic who, in the manner of Jorge Luis Borges, is more interested in examining differing versions of the crime than in finding the culprit. *Tuya* (2005) by Argentine Claudia Piñeiro was reedited in 2008 after a first edition was unsuccessful. In this crime novel the woman who acts as a detective is involved in a love triangle. The novel offered a thorough psychological analysis of the Argentine middle class. Another Argentine writer, Juan Sasturain, reintroduced his detective Etchenike in *Pagaría por no verte*, a good crime novel that depicted local customs against the tragic background of Argentina in the 1980s.

The novel *La sombra del prigil* by Argentine Eduardo Berti was a sophisticated tale of family conflicts during Argentina's military dictatorship. At the end of 2007, Chilean writer Roberto Brodsky published *Bosque quemado*, in which the topic of state terrorism was treated in conjunction with the themes of exile and return. The novel won the 2007 Premio Jaén de Novela. Guerrilla wars and intergenerational family problems were the focus of *Una familia honorable* by Guatemalan Rafael Cuevas Molina.

Ronald Flores of Guatemala searched for the origins of violence and religious conflicts in the 18th century. In *La rebelión de los zendales*, he told the story of the Indian uprising in an area extending from Guatemala into Mexico. The world of Bolivia's aboriginal peoples was represented in all its complexity in *Música de zorros* by Manuel Vargas. In this novel dreamlike and real aspects of the Indians' world are seen as present and overlapping. A dreamlike reality was also depicted with deft touches in *Vidas perpendiculares* by Mexican author Álvaro Enrigue. The main character relives or dreams other lives, which appear one on top of the other in a tale in which space and time are juggled with humour and sarcasm.

Several works mixed autobiography and fiction. In his posthumously published novel *La ninfa inconstante*, Guillermo Cabrera Infante reminisced about the prerevolutionary Havana of his youth, and he depicted in detail the city's nightlife, streets, music, movies, and characters—all the obsessions already present in his two previous novels. In this historical setting, a mature film critic falls in love with a 16-year-old Havana-born Lolita. Cabrera Infante's great literary talent was again evident in the constant linguistic play that earned him the devotion of his readers. In a similar way, Carlos Fuentes's obsessions reappeared in *La voluntad y la fortuna*, a title intended as an homage to Machiavelli, whose political philosophy pervades the book. (In a famous passage from *The Prince*, Machiavelli asserts that fortune can and must be mastered by will.) This long novel encompassed earlier parts of Fuentes's story and a big part of Mexico's history, in particular the violence in daily life, drug trafficking, political corruption, and intractable problems that caused recurrent fratricidal fights. Argentine Graciela Schvartz explored in *Señales de vida* the bittersweet remembrances of adolescent joys and fears with a provocative language that moves seamlessly from colloquial to lyrical and back. In *El boxeador polaco*, Guatemalan Eduardo Halfon evoked the story of his grandfather, who was interred at the Nazi extermination camp in Auschwitz.

Vittorio Zunino Celotto/Getty Images

Internationally respected Mexican writer and critic Carlos Fuentes entwined the philosophy of Machiavelli with Mexico's past and present circumstances in La voluntad y la fortuna.

La casa de Dostoievsky by Chilean writer Jorge Edwards won the Planeta-Casa de América award. This roman à clef was full of appearances by well-known poets—Enrique Lihn, Nicanor Parra, Heberto Padilla, "Nerón" Neruda—by name or thinly disguised. Patricio Fernández, founder of the satiric magazine *The Clinic* (the title was a reference to the London clinic where Chilean dictator Augusto Pinochet was treated), published *Los nenes*, a novel in which the characters are writers whose names are only slightly altered. The novel took on the literary world, portraying the writers as at times coarse and irresponsible. The work also incorporated the discovery of Pinochet in London, his return to Chile, and his death.

Dominican writer Junot Díaz wrote in perfect English as well as in Spanish. His novel *The Brief Wondrous Life of Oscar Wao* (2007) won the 2008 Pulitzer Prize for Fiction. It was published in Spanish in 2008 as *La breve y maravillosa vida de Óscar Wao*, translated by Cuban writer Achy Obejas.

Two important anthologies of short stories were published in 2008, *El descontento y la promesa: nueva/joven narrativa uruguaya*, edited by Hugo Achúgar, and *Sol, piedra y sombras: veinte cuentistas mexicanos de la primera mitad del siglo XX*, edited by Jorge F. Hernández. (LEDA SCHIAVO)

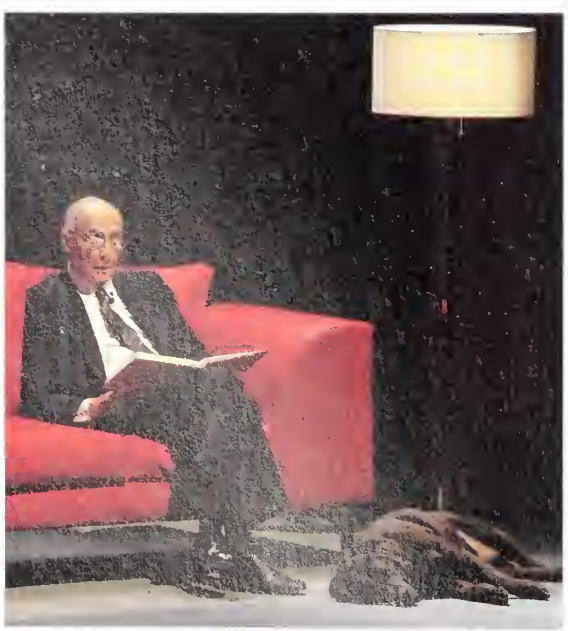
PORTUGUESE

Portugal. The 2008 short-story prize of the Association of Portuguese Writers was awarded to Angolan author Ondjaki, the most international of current young Lusophone African writers, for his book *Os da minha rua* (2007). Among the works of this prolific novelist, poet, children's storyteller, and documentarian were *Bom dia, camaradas* (2000) and *O assobiador* (2002), pub-

lished in English in 2008 as *Good Morning, Comrades* and *The Whistler*, respectively. The 2008 Camoes Prize, the most important trophy of Portuguese-language literatures, went to Brazilian novelist, journalist, and scholar João Ubaldo Ribeiro, author of such influential works as *Viva o povo brasileiro* (1984; *An Invincible Memory*, 1989) and *A casa dos Budas ditosos* (1999).

Ten years after winning the Nobel Prize and following the publication of several less-successful titles, José Saramago returned to form with the novel *A viagem do elefante*. Critic Pedro Mexia described the book as the "itinerary" from Lisbon to Vienna of the eponymous elephant—a gift of the 16th-century King John III of Portugal to his cousin Maximilian of Austria. Saramago's worldwide success *Ensaio sobre a cegueira* (1995; *Blindness*, 1997) was adapted to film (2008) by acclaimed Brazilian director Fernando Meirelles. Another internationally celebrated Portuguese writer, António Lobo Antunes, published his 20th novel, *O arquipélago da insónia*. Antunes's most influential critic, Maria Alzira Seixo, linked this "story of family disintegration, seen from the perspective distorted by illness of the [autistic] narrator," to *Auto dos danados* (1985; *Act of the Damned*, 1993) and to *O manual dos inquisidores* (1996; *The Inquisitors' Manual*, 2003).

Portuguese Nobel laureate José Saramago attends a reading of his work in 2006. The writer drew attention in 2008 for his effective new novel A viagem do elefante *and because the much-praised film* Blindness *was based on one of his books.*



Ivan Garcia—AFP/Getty Images

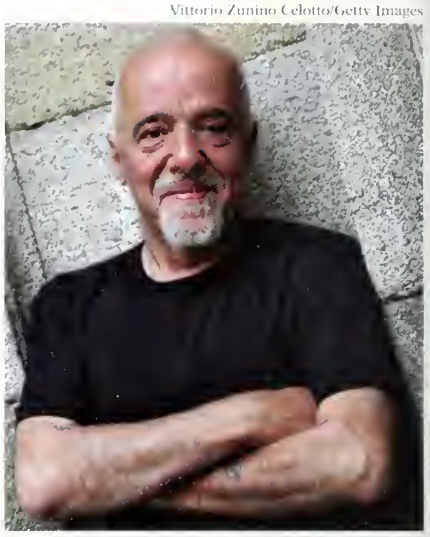
The 2008 Grand Prize of Poetry of the Association of Portuguese Writers went to Ana Luísa Amaral for her *Entre dois rios e outras noites* (2007). Herberto Helder, one of Portugal's most respected contemporary poets, published *A faca não corta o fogo: súmula e inédita*, his first collection since 2001. Renaissance scholar Vítor Manuel de Aguiar e Silva, author of *Camões: Labirintos e Fascínios* (1994), received in 2007 the Literary Life Prize of the Association of Portuguese Writers. The prestigious 2007 Pessoa Prize was awarded in 2008 to historian Irene Flunser Pimentel, the author of *A história da PIDE* (2007), a study of the Portuguese political police from 1945 to 1974. Earlier 20th-century history was revisited in *D. Carlos* (2006), Rui Ramos's acclaimed and timely biography of King Carlos I, who was assassinated in Lisbon in 1908; the regicide was commemorated throughout 2008.

(VICTOR K. MENDES)

Brazil. The major highlight of the 2008 literary year was the marking of the centenary of the death of Brazil's world-renowned novelist Joaquim Maria Machado de Assis (1839–1908). Major colloquia and exhibitions in his honour were organized throughout Brazil and internationally.

Several notable works of fiction gained wide attention, including Milton Hatoum's *Órfãos do Eldorado*, a family saga set in the rubber-boom Amazon of the early 20th century. Miguel Sanches Neto published *A primeira mulher*, a police thriller about a professor's midlife crisis. Paulo Coelho also turned to a thriller, in a departure from his esoteric fiction, with *O vencedor está só*, in which a serial killer searches for his ex-wife. The Bahian poet Ruy Espinheira Filho published a semiautobiographical novel, *De paixões e de vampiros: uma história do tempo da Era*, of life in his native rural Bahia in the 1960s, prior to the military dictatorship. Flávio Izhaki's *De cabeça baixa* narrates the life of a failed novelist who, upon discovering a copy of his novel with annotations by an unknown critic, decides to revive his literary career.

Vittorio Zunino Celotto/Getty Images



In a departure from his previous esoteric themes, Brazilian author Paulo Coelho published a thriller in which a serial killer searches for his ex-wife.

Among the new theatrical works was *Leopoldina—cartas e relatos*, a montage of letters written by the Brazilian Empress Maria Leopoldina, mother of Dom Pedro II, at the time of Brazilian declaration of independence from Portugal in 1822. In this year devoted to Machado de Assis, Lygia Fagundes Telles finally published the award-winning play *Capitu*, written in 1968 with Paulo Emílio Salles Gomes, which focused on the "oblique and sly" eyes of the heroine in Machado's novel *Dom Casmurro*. The dramatist Aimar Labaki published a study of the life, works, and great influence of theatrical director José Celso Martinez Correa (Zé Celso).

The Camões Prize 2008 for literature was awarded to the Bahian novelist João Ubaldo Ribeiro for his body of work. The Brazilian Jabuti prize for best novel was awarded to Cristóvão Tezza for *O filho eterno* (2007). Among the notable publications about Brazilian culture were Alberto Carlos Almeida's *A cabeça do brasileiro* (2007), which set out to describe the national mind-set in the early 21st century, and José Miguel Wisnik's *Veneno remédio—o futebol e o Brasil*, a cultural interpretation of the role of association football (soccer) in Brazilian life.

Deaths included those of novelist-memoirist Zélia Gattai (wife of Jorge Amado), Bahian poet and musician Dorival Caymmi (*see* OBITUARIES), and writers José Alcides Pinto, Fernando Barbosa Lima, and Fausto Wolff.

(IRWIN STERN)

RUSSIAN

Several new, contradictory, and at times surprising trends were noticeable in Russian literature in 2008. The short list for the Russian Booker Prize bore clear witness to this. The nominees Ilya Boyashev's *Armada* (2007; "Armada"), Yelena Nekrasova's *Shchukinsk i goroda* ("Shchukinsk and Cities"), German Sadulayev's *Tabletka* ("The Pill"), Vladimir Sharov's *Budte kak deti* ("Be like Children"), and Galina Shchekina's *Grafomanka* ("The Graphomaniac") ultimately lost to Mikhail Yelizarov's *Bibliotekar* (2007; "The Librarian"). Most of these novels were written in a style similar to magic realism, which only a few years earlier had been associated in Russia with popular literature. The latest work of the best known of these authors, Vladimir Sharov, was another of his paradoxical narratives that featured a collision of the everyday, the historical, and the fantastic in a Gnostic vein. In *Budte kak deti* Lenin and his fellow atheistic Bolsheviks are secretly Christian mystics. A no-less-paradoxical reconsideration of the Soviet period was at the heart of Yelizarov's *Bibliotekar*, which was heavily influenced by the work of Argentine writers Jorge Luis Borges and Julio Cortázar. The novel told the story of a conformist Soviet writer—author of rather ordinary Socialist Realist novels—whose works turn out to be the source of a mystical energy. The fantastic elements of Nekrasova's novel are rooted in daily life; in Boyashev's *Armada*, the setting was an antiutopia.

In reaction to the playful postmodern novels of the 1990s, there was a marked increase of interest in novels of manners and of everyday life; eventually, however, such novels aroused interest only when they contained an element of social radicalism (as was the case with Sadulayev's *Tabletka* or in the works of Zakhar Prilepin, another popular young author and winner of the 2008 National Bestseller Prize for his novel *Grekh* ["Sin"]) or when they took an uncompromising stance on contemporary life (examples include Vadim Chekunov's novel about the contemporary Soviet army, *Kirza* ["Boots"], and Nataliya Klyuchareva's *Rossia: obshchy vagon* ["Russia: The Third-Class Car"]). Novels depicting Russian prosperity, which were common during the early 2000s, clearly had fallen out of fashion. By contrast, books about personal and private life found an audience—e.g., Pavel Sanayev's *Pokhoronite menya za plintusom* ("Bury Me Behind the Plinth"), which went unnoticed when first published in 1996 but became a best seller in 2008. (Its success did have a sensational side: it was a novel about a family of easily identifiable contemporary actors by an author who was the son of well-known actors.)

Significantly, new works published in 2008 by two of the 1990s' most noted authors, Vladimir Sorokin and Viktor Pelevin, were greeted with indifference. Sorokin's *Sakharny kreml* ("Sugar Kremlin"), a book of thematically linked short stories, was a sequel to his last, highly political antiutopian novel, *Den oprichnika* (2006; "Day of the Oprichnik"). Pelevin's book, *P5: proshchalnye pesni politicheskikh pigmeyev Pindostana* ("P5: Songs of Parting from the Political Pygmies of Pindostan"), was generally panned.

Interesting works by talented authors that went largely unnoticed by critics and prize givers included Demyan Kudryavtsev's structurally complex 20th-century family saga *Bliznetsy* ("Twins"); Aleksey Lukyanov's elegant metaphysical novella *Zhestokokryly nasekomy* ("Coleoptera"); a collection of prose fiction combining the surreal and grotesque from one of the Leningrad underground's most venerable figures, Boris Dyshlenko; Yury Buyda's *Tretye serdtse* ("The Third Heart"), a stylized gothic tale about Russian immigrants in the 1920s in Europe; and Lev Usyskin's collection of stylized historical stories, *Russkie istory* ("Russian Stories").

The attempt to integrate poetry into popular culture (for the first time since the Soviet era) was visible in the appearance of a new glossy magazine called *POETomu* (a wordplay pulling the English word *poet* from the Russian word for "because" [*poetomu*]) and the televising of the competition *King of the Poets*. The winner was well-known writer Dmitry Vodennikov, a leading practitioner of the "new sincerity" in Russian poetry. Vodennikov's success, and that of several other young authors, at winning a popular audience for poetry provoked a vigorous critical debate, whose participants included leading figures such as Mikhail Aizenberg and Dmitry Kuzmin, on the relationship between popular success and critical judgment. Yelena Fanailova's latest highly charged and very political poems, especially the cycle *Baltisky dnevnik* ("Baltic Diary"), provoked a no-less-sharp and heated discussion. Some saw in her work a new direction in Russian poetry, but others discerned a return to the language and style of thought of Soviet literature (or rather anti-Soviet literature, its mirror image).

The publication of the third and fourth volumes of Yelena Shvarts's *Collected Works* was a significant event for Russian literature in 2008. Other noteworthy books of poetry came from Aleksey Tsvetkov (Andrey Bely Prize winner for 2007), Nataliya Gorbanevskaya, Mikhail Aizenberg, Andrey Rodionov, and Vadim Mesyats. Among first books the most significant came from Alla Gorbunova and Vasily Borodin. The launching of the Internet site Openspace, devoted exclusively to culture, proved quite valuable for the discussion of Russian literature.

The year 2008 marked the passing of the 1970 Nobel Prize winner Aleksandr Solzhenitsyn. A biography of him by Lyudmila Saraskina, published shortly before his death, won the second prize for the Big Book Award. First prize was captured by Vladimir Makanin's *Asan*. (*See* OBITUARIES.)

(VALERY SHUBINSKY)

PERSIAN

The much-diminished number of published literary works marked 2008 as the year in which the efforts of Iranian Pres. Mahmoud Ahmadinejad's government to limit intellectual freedoms, including literary activity, finally bore fruit. On the positive side, 2008 was also the year in which the Internet as an alternative literary forum took hold in Iran and the rest of the Persian-speaking world. Among the most-read noteworthy works of fiction were two short-story collections, *An gushih-yi danj-i samt-i chap* ("That Secluded Corner to the Left") by Mahdi Rubbi and *Zindagi mutabiq-i khastah-yi tu pish miravad* (2006; "Life Goes On as You Would Expect") by Amir-Husayn Khurshidlar. Ziya' Muvahhid's *Nardban andar biyaban* (2006; "A Ladder in the Desert") became the year's top innovative poetry collection. Two other poetry collections, Sarvenaz Heraner's *Sarrizha-yi sukut* ("Overflowing of Silence") and Ru'ya Muqaddas's *Ru'yaha-yi 'ashiqanah: 'ashiqanahha-yi Ru'ya* ("Loverly Reveries: Love Songs of Ru'ya"), were the most notable works of Persian poetry. Paul Sprachman's 2006 English translation of Ahmad Dehqan's *Safar bih gara-yi 270 darajah* (*Journey to Heading 270 Degrees*) was the best seller among translated Persian works.

Among Persian Web sites that published recently censored or long-suppressed literary works on the Internet, Gooya (http://mag.goova.eu/culture/archives/cat_croman.php), which listed hundreds of short stories and poems throughout the year, remained the most popular. Other major Web sites with literary content included http://www.iransliterature.com/pe/, http://www.golshiritoundation.org/, and http://www.andischeh.com.

Hundreds of new personal blogs were also set up, mostly by authors eager to publish without having to submit their work to a government ministry for vetting. The rift between the state and the youth of Iran became clear in official speeches and Internet discussions on the functions of literature. While younger poets such as Rosa Jamali experimented with ever-newer forms and styles of expression, state authorities continued to urge writers to capture the spirit of Islam and the revolution in their works. Meanwhile, the deaths of Afghan poet ʿAqil Birang Kuhdamani in December 2007 at age 56 and Iranian expatriate novelist and singer Shusha Guppy in March 2008 at age 72, both in London, topped the list of literary losses. (AHMAD KARIMI-HAKKAK)

ARABIC

The 2008 Arab literary scene was characterized by topical diversity and intellectual fatigue. Further, the continued repercussions from the events of Sept. 11, 2001, created a state of confusion that is at the centre of Naṣir ʿIrāq's novel *Min faṛṭ al-gharām* ("From an Excess of Love").

In Egypt, motivated largely by what the critic Sabry Hafez described as "national worry," writers tackled issues of exploitation, abuse of power, and corruption. The critic ʿIzzat al-Qamḥāwī wondered sarcastically where the government had gone as the people missed it. ʿIzz al-Dīn Shukrī wrote his *Ghurfat al-ʿināyaṭ al-murakkazaṭ* ("The Intensive Care Unit"), which—in its tale of the Sudanese government's improvisations and half-solutions during the aftermath of a consulate bombing in Khartoum—pointed out the country's fundamental political and administrative disorder. While awaiting excision from the wreckage, the bomb victims could not help but wonder if they would live long enough to make it to the emergency room. Muḥammad Nājī's *al-Afandī* ("The Gentleman") touched on the absence of standards in the field of publishing, where review committees were rare and money seemed the sole determinant of worthiness for publication. Somewhat detached from daily political life in his country, Jamāl al-Ghīṭānī published *Rinna* ("Was Sounded"), the sixth volume of his memoirs collectively titled *Daſātir al-tadwīn* ("Notebooks"). It was a largely spiritual journey in the footsteps of the great Sufi mystic Abū al-Fayḍ Dhū al-Nūn al-Miṣrī (Dhun-nun).

Marwan Naamani—AFP/Getty Images

Egyptian writer and editor Jamāl al-Ghīṭānī published the sixth volume of his memoirs collectively titled, Dafātir al-tadwīn *("Notebooks").*

The prolific Lebanese novelist Rabīʿ Jābir wrote about his country's civil war and acts of revenge in *al-Iʿtirāfāt* ("The Confessions"). Ibrāhīm Nasr Allāh, a Jordanian-Palestinian writer, in his *Zaman al-khuyūl al-bayḍā* (2007; "The Time of White Horses"), offered an epopee of Palestinian history from Ottoman times to 1948, the year Palestinians call the *nakbaṭ* ("catastrophe"). The action of the novel occurs in a village strongly anchored in Palestinian culture and traditions of honour. Tunisian Al-Habib al-Salmī (ʿAbd al-Malik ibn Ḥabīb) presented a love story in *Rawaʾiʿ Marie-Claire* ("Marie-Claire's Perfumes") against the background of the cultural divide between East and West. Moroccan Tahar Ben Jelloun wrote (in French) a semiautobiographical novel about his mother's dementia in *Sur ma mère* ("About My Mother"), revealing at the same time much about Moroccan culture and his own childhood memories. Libyan novelist Aḥmad Ibrāhīm Faqīh made waves at the end of 2007 with the publication of his 12-volume epic novel *Khurāʾiṭ al-rūḥ* ("The Maps of the Soul"). The novel was set in Libya from 1931 to the early 1950s, after independence was achieved.

In the Gulf countries women writers raised their voices in objection to their lack of personal freedom and to male control over their lives. Kuwaiti novelist and journalist Munā Shāfiʿī addressed the need for freedom and personal choice in women's lives in *Laylat al-junūn* ("The Night of Madness"). Zainab Ḥifnī's *Sīqān multawīya* ("Intertwined Legs") examined the lives of Saudis living in England and their struggle to rear their daughters according to Saudi traditions.

Arab intellectuals were united in their preoccupation with the state of the Arabic language. They deplored its deterioration among writers and students as some writers paid little attention to correct grammar and did not seem embarrassed by their shortcomings. The issue motivated the Arab League and Egypt's al-Majmaʾ al-Lughawi (Egyptian Academy) to debate the question in search of ways in which to restore respect for Arabic and to improve language competency among Arabs. They pointed out the growing tendency among institutes of higher education to dispense education in foreign languages. This deterioration took place at a time of growing interest in Arabic language in the Western world, particularly in the United States.

In February 2008 French-language writer Yasmina Khadra (pseudonym of Mohammed Moulessehoul, a former Algerian army officer), who wrote of Algeria's colonial history in *Ce que le jour doit à la nuit* ("What the Day Owes to the Night"), received the trophy Createurs sans Frontieres at the Quai d'Orsay in Paris. The 2008 Naguib Mahfouz Medal for Literature was awarded to Hamdī Abū Jalīl of Egypt for *Al-Faʾil* ("The Labourer"). Jābir ʿUṣfūr was a cowinner of the 2008 Sharjah Prize for Arab Culture. In August 2008 the Arab world lost its best-known and most creative contemporary poet, Palestinian Maḥmūd Darwīsh. His passing left a huge void in the genre of poetry, especially the poetry of resistance. (*See* OBITUARIES.) (AIDA A. BAMIA)

CHINESE

In 2008 four novels shared the seventh triennial Mao Dun Literary Award, the highest official award for fiction in China. First on the list was *Qinqiang* (2005; "Qin Music," the name of a local opera form and favoured pastime in

northwestern China) by Jia Pingwa, a well-known writer whose 1993 novel *Feidu* ("The Ruined Capital") scandalized many with its theme of illicit sex, graphically described. *Qinqiang*, however, helped redeem the author's reputation. Based on memories of his hometown in Shanxi province, it was commonly considered an elegy on rural life in northwestern China. The book was a powerful expression of Jia's concerns for the future of Chinese rural society presented in a detailed—some might even say long-winded—narrative.

The second recognized book was *Ergun He you an* (2005; "The Right Bank of the Argun River") by Chi Zijian. This novel was the first to focus on the Evenk, a reindeer-herding people eking out a living on the borderlands between China and Russia. It was written in the voice of the group's current shaman, a woman more than 90 years old, who relates a series of affecting tales that reflect the Evenk way of life and struggle for survival.

The third winner was Zhou Daxin's allegorical novel *Hu guang shan se* (2006; "Landscapes of Lakes and Mountains"). Its protagonist was Nuan Nuan, a young rural woman who returns to her village after living for a few years in Beijing as an immigrant worker. The author allegorized the story by equating elements in the narrative of Nuan Nuan's return with *wuxing*, the traditional Chinese cosmological and moral system in which the five elements (metal, wood, water, fire, and earth) overcome and succeed one another in an immutable cycle.

The final winner was Mai Jia's *An suan* (2003; "Plot Against"), a spy story that had gained a large popular following since 2005, when it was made into a 34-part teleplay with the same title (and with Mai as screenwriter). It was the first spy story ever to receive the Mao Dun award.

Another 2008 literary event worthy of mention was the establishment of Shengda Literature Ltd. (SDL), a subsidiary company of Shengda, now the leading Web-based interactive entertainment media company in China. Owning the three biggest Chinese literary Web sites, including *Qi dian zhong wen wang* (Starting Point Chinese Web [SPCW]), SDL had aggressively developed a paid online literary model. In September, as a part of this development, SPCW—which was said to have more than 8 million unique visitors and more than 300 million page views per day—organized an online exhibition of fiction by chairmen of 30 provincial writers associations. These writers allowed their works to be published on SPCW in an effort to attract more online viewers. (WANG XIAOMING)

JAPANESE

In 2008, for the first time in its 73-year history, the Akutagawa Prize, awarded twice yearly to promising Japanese fiction writers, went to a writer whose mother tongue was not Japanese. The prize for the year's first half was awarded—not without controversy (some critics thought her Japanese crude)—to Yang Yi, whose "Toki ga nijimu asa" ("A Morning Steeped in Time") was first published in the June 2008 issue of the literary magazine *Bungakukai*. Yang was born in Harbin, China, in 1964 and went to Japan in 1987 as a student. Her Japanese then was virtually nonexistent. Twenty years later she won the Bungakukai New Writers Award with her debut novel, *Wan-chan* ("Mrs. Wang"). It concerned the struggles of a Chinese bride in Japan to become an intermediary for Japanese men seeking Chinese wives. In "Toki ga nijimu asa", however, Yang portrayed a Chinese student during the Tiananmen Square protests of 1989 and his later immigration to Japan.

The Akutagawa Prize for the second half of 2007 (announced in January 2008) went to the musician and poet Mieko Kawakami's "Chichi to ran" ("Of Breasts and Eggs"), first printed in the December 2007 issue of *Bungakukai*. It was written in an innovative style using rather breathless long sentences in the Kansai dialect of western Japan.

Jakuchō Setouchi, a prominent writer and Buddhist nun, surprised Japanese readers with her confession that at age 86 she had written *Ashita no niji* ("Tomorrow's Rainbow"), a "mobile phone novel" (*keitai shosetsu*). Most of these stories, so called because they were downloaded from mobile phone Web sites, were written by younger authors for a younger audience. Setouchi, the author of a noteworthy modern translation of *The Tale of Genji*, had used the pen name Murasaki ("Purple") to disguise her identity.

Haruki Murakami, another prominent writer, in 2008 published *Tifanī de chōshoku o*, a new translation of Truman Capote's novella *Breakfast at Tiffany's*, and 50 years after its original publication in English, it was one of Japan's best sellers. Well-known writer Banana Yoshimoto again made the best-seller list, this time with a new long novel, *Sansu pointo* ("South Point"). The runaway best seller of 2008 was Takiji Kobayashi's *Kanikōsen* (*The Factory Ship*), originally published in 1929, a classic novel of slave labour that was seen as having some bearing on 21st-century economic conditions.

The Yomiuri Prize for Literature was given to Rieko Matsuura's *Kenshin* (2007; "Dog's Body"). The Jun'ichirō Tanizaki Prize, for the year's most accomplished literary work, was awarded to Natsuo Kirino's *Tōkyō-jima* ("Tokyo Island"). The Yasunari Kawabata Prize, given to the year's most accomplished short story, went to Mayumi Inaba's "Miru" ("*Codium fragile*," the scientific name of an alga commonly known as Dead Man's Fingers), first published in the February 2007 issue of *Shinchō*, and to Shin'ya Tanaka's "Sanagi" ("The Chrysalis"), first published in the August 2007 issue of *Shinchō*. The second Kenzaburō Ōe Prize to be awarded was given to playwright Toshiki Okada's *Watashitachi ni yurusareta tokubetsuna jikan no owari* (2007; "The End of Our Special Time"). The novelists Kunio Ogawa and Saeko Himuro died in 2008. (YOSHIHIKO KAZAMARU)

Yoshikazu Tsuno—AFP/Getty Images

Celebrated writer and Buddhist nun Jakuchō Setouchi of Japan produced a "mobile phone novel" at age 86 under the pen name Murasaki.

Military Affairs

PEACE agreements and CEASE-FIRES disintegrated, and military units worldwide GRAPPLED with SECURITY CONCERNS about information freely available on the INTERNET. Meanwhile, a SOLAR-POWERED UAV set an unofficial WORLD RECORD for ENDURANCE.

Russia and Georgia fought a short, intense war in 2008, fueling global fears of a new Cold War. On August 7 Georgia launched an aerial bombardment and ground attacks against its breakaway province of South Ossetia. Russia responded by sending thousands of troops, citing the need to protect 70,000 Russians in South Ossetia. The fighting spread rapidly to the rest of Georgia. The U.S. and NATO expressed solidarity with Georgia and voiced concerns over Russia's behaviour in the conflict. By August 16 both Georgia and Russia had signed a peace deal brokered by French Pres. Nicolas Sarkozy. Shortly after fighting ceased, Russia officially recognized the independence of South Ossetia and another breakaway province, Abkhazia, further agitating Georgia and some Western governments.

WMD, ARMS CONTROL, AND DISARMAMENT

The Convention on Cluster Munitions, a treaty banning cluster bombs, was approved by 107 countries in May. The use of cluster munitions, which scatter small bomblets across a target area, had been criticized by human rights groups because many of them failed to explode on impact and killed or maimed civilians who encountered them later. Major manufacturers and users of these weapons, including China, Russia, and the U.S., did not participate in treaty negotiations.

Russia announced in November that it intended to deploy a new generation of highly accurate short-range missiles in the Baltic region to counter the extension of a U.S. defense shield to Central Europe. This followed announcements earlier in 2008 that the U.S. would install 10 antimissile missiles in silos in Poland and build a radar station in the Czech Republic as part of its Ballistic Missile Defense System to defend North America and NATO against ballistic missile attack.

CONFLICTS

Africa. A peace deal between the Democratic Republic of the Congo (DRC) and various rebel groups in the eastern part of the country fell apart in August. Despite the presence of approximately 17,000 UN peacekeepers in the DRC, fighting in 2008 led to the displacement of more than 250,000 people and an untold number of casualties.

The UN estimated that approximately 300,000 civilians had fled the fighting in The Sudan's war-torn Darfur region in 2008, and international peacekeepers and aid workers found themselves increasingly at risk from attack. Only about half of the 26,000 troops authorized for the joint UN–African Union force had been deployed by year's end. (*See* WORLD AFFAIRS: *The Sudan:* Sidebar.)

The UN Security Council voted in June to allow countries to send warships into Somalia's territorial waters to combat the growing piracy problem. Dozens of commercial ships were hijacked off Somalia's 28,900-km (1,800-mi)-long coast during the year.

The Americas. The 9,000-strong left-wing Revolutionary Armed Forces of Colombia (FARC) continued its 44-year-old struggle against the government but suffered more than 1,500 desertions in 2008 as the result of a government amnesty plan. FARC commander Manuel Marulanda (*see* OBITUARIES) died in March, and two additional members of FARC's seven-man senior command were killed during the year.

Middle East. In Iraq the level of violence declined considerably throughout the year following the so-called surge of 2007, when U.S. Pres. George W. Bush committed an additional 30,000 U.S. troops. Analysts also attributed much of the decline in violence to the dispersal of ethnically mixed neighbourhoods, where Sunni and Shi'ite Arabs previously lived side by side. About 550 Australian combat troops were withdrawn from Iraq in June, fulfilling an election promise by Prime Minister Kevin Rudd to end his country's military commitment to the war. South Korea withdrew the last of its 600 troops from Iraq in December, ending what was once the third largest mission there (after the U.S. and the U.K.). In addition, Japan ended its air force's mission to ferry supplies for the coalition forces in Iraq. The deployment was Japan's first to a combat zone since World War II. By the end of 2008, Iraqi authorities had taken over responsibility from coalition forces for security in 13 of the country's 18 provinces.

In December Israel launched numerous air and missile attacks on targets across the Gaza Strip, killing hundreds of Palestinians. Militant Palestinians responded by firing rockets into Israel, striking as far as Beersheba, the farthest into Israel that a Palestinian missile had ever reached. The fighting erupted after Hamas, which had controlled the Gaza Strip since 2007, ended a cease-fire declared in June.

South and Central Asia. The war against the Taliban in Afghanistan intensified and widened during 2008. U.S. unmanned aerial vehicles (UAVs) were increasingly used to attack suspected Taliban targets in Pakistan's tribal region close to the Afghan border. Such attacks were credited with killing Taliban leaders, notably Mohammad Omar in October. Pakistanis, however, complained that civilians were often being killed by the UAV attacks and that such incursions were a violation of Pakistan's sovereignty. U.S. and NATO forces in Afghanistan were criticized by the Afghan government and human rights groups for not doing enough to limit the numbers of civilians killed—an estimated 173 in the first eight months of 2008—by attacks on suspected Taliban targets. An additional 367 civilians died from attacks by insurgent forces during the same period. Pakistan increasingly

became a target of attacks by extremist groups. In September, for example, a suicide bomber detonated a truck filled with an estimated 1,000 kg (2,200 lb) of explosives in front of a hotel in Islamabad, killing more than 50 people. This was the deadliest and the largest such attack (in terms of the amount of explosives used) in Pakistan's capital.

Government forces and Liberation Tigers of Tamil Eelam (LTTE) separatists fought a series of pitched battles following Sri Lanka's withdrawal from a cease-fire agreement in January. The government's promise to destroy the insurgency by year's end was not realized. The conflict had killed more than 70,000 people since 1983, when civil war broke out in the Tigers' fight for an independent homeland.

Southeast Asia. Government negotiators in the Philippines reached an agreement in July with Moro Islamic Liberation Front (MILF) rebels on the southern island of Mindanao to end their four-decade-old struggle for a self-governing state. The deal fell apart the next month, however, after Christian politicians objected. Renewed fighting left more than 300 people dead.

MILITARY TECHNOLOGY

In July the Zephyr-6, a British-built solar-powered UAV set an unofficial world endurance record for a flight by an unmanned aircraft, staying aloft for more than 82 hours and running through the night on batteries that it had recharged in sunlight. Military officials hoped that similar UAVs could loiter over an area, collecting reconnaissance data for extended periods.

The U.S. Navy chartered the world's first kite-assisted cargo ship to carry military supplies as part of the Pentagon's efforts to reduce its fuel usage. The MV *Beluga SkySails* was equipped with a sky sail (a giant computer-controlled kite that uses wind power to provide additional propulsion). It was estimated that the sky sail could reduce fuel costs by up to 30%.

With soldiers on the battlefield increasingly laden with up to 9 kg (20 lb) of batteries to power everything from radios to GPS systems, there was a growing need to reduce their burden. The U.S. Department of Defense concluded its Wearable Power contest in October, and the winner was a joint venture by German company Smart Fuel Cell and DuPont. Their contest entry was a 3.8-kg (8.3-lb) combination of methanol-fuel-cell and rechargeable batteries, which was able to provide all the electrical power that an infantry soldier required for four days.

The world's first kite-assisted cargo ship the MV Beluga SkySails *was chartered by the U.S. Navy to carry military supplies.*

ARMED FORCES AND POLITICS

In May Japan's parliament passed a new law allowing Japan to deploy military satellites for nonaggressive missions, including communications and surveillance; the law ended a 40-year self-imposed ban on Japan's military use of space. The use of weapons in space remained banned under Japanese law.

In June France announced the biggest overhaul in its military in 14 years. Under the plan the 320,000-strong armed forces would be reduced by 54,000 personnel, and 50 military bases would be closed. France also announced that it would rejoin NATO's integrated military command, from which it withdrew in 1966.

U.S. Secretary of Defense Robert Gates accepted the resignations of Air Force Chief of Staff Gen. T. Michael Moseley and Secretary of the Air Force Michael Wynne in June after a report highlighted significant oversights in the air force's nuclear security practices. These included a Pentagon admission that it had mistakenly shipped four nuclear-weapon fuses to Taiwan in August 2006. The air force later announced that it was setting up a new Global Strike Command to control all of its nuclear weapons.

The Colombian government fired 3 generals and 24 other soldiers in October in response to the alleged extrajudicial killings of 11 men earlier in the year. The scandal led to the resignation of the commander of the Colombian army, Gen. Mario Montoya.

In October, South Korean and U.S. personnel began the first-ever search in the demilitarized zone (DMZ) dividing North and South Korea for the remains of troops killed in the Korean War (1950–53). An estimated 13,000 South Korean and 2,000 U.S. troops were believed to be buried in the DMZ.

MILITARY AND SOCIETY

Israel sentenced a soldier to 19 days in jail for uploading a photograph of his military base to the social networking Web site Facebook. This was believed to be the first such conviction for an Israeli soldier. It followed a decision made by the U.S. in March to ban Google from photographing details of U.S. military bases for its widely used map services, including Google Earth and Street View. Governments in many countries were increasingly concerned that images and other data available on the Internet could compromise security.

The South African National Defence Force (SANDF) suffered a growing personnel crisis in 2008 owing to both AIDS-related illnesses and the exodus of technical staff to better-paying civilian jobs. An estimated 14,000 positions were unfilled in the armed forces, which made the vacancy rate 15.3%; 23% of SANDF members were HIV-positive. In May a South African high court overturned a SANDF policy barring HIV-positive people from joining the military. (PETER SARACINO)

DARPA—50 Years of Innovation

In 2008 the U.S. Defense Advanced Research Projects Agency (DARPA) celebrated the 50th anniversary of its founding (Feb. 7, 1958). During its existence the organization has consistently been a world leader at turning science fiction into practical technological solutions. DARPA was born in the aftershock of the Soviet Union's surprise launch of Sputnik—the first artificial satellite to orbit Earth—in October 1957. Engaged in Cold War rivalry with the Soviet Union, U.S. Pres. Dwight D. Eisenhower sought a massive boost in research-and-development efforts to give the United States a decisive lead in military and other technologies. ARPA (the D was added in 1972, removed in 1993, then reinstated in 1996) was therefore created with a mandate to develop totally new military capabilities.

Since its beginning the agency has sought to be both bold and innovative. By hiring program managers typically for only four to six years, DARPA acquires fresh insights and experience while minimizing the bureaucratic stagnation that often afflicts large organizations. Although subordinate to the U.S. Department of Defense, DARPA is free from the burdens of military hierarchy and complicated government rules for issuing contracts. As the only research agency not tied to a specific operational mission, DARPA has always enjoyed considerable independence in choosing its projects.

With a 2008 budget of about $3 billion, the agency has fewer than 300 employees, including about 140 program managers. The program managers are authorized to award contracts to universities and industry and are encouraged to fund projects that may be risky but hold promise in becoming novel solutions to current and future military challenges.

DARPA has been a key player in developing numerous military systems such as aircraft, armour, robots, satellites, surveillance aircraft, rifles, information systems, and medical devices. A few highlights include:

- Stealth technology. DARPA's work on developing aircraft that can evade detection by radar led to production of the F-117 stealth fighter and the B-2 stealth bomber.
- High-performance armour. U.S. soldiers in Iraq and Afghanistan use advanced body armour, developed by DARPA, that consists of vest inserts made of boron carbide. The inserts are 35% lighter than previously used materials and strong enough to protect against rifle and light-machine-gun fire.
- Navigation systems. Between 1959 and 1968, DARPA helped establish the first satellite navigation system (Transit), which allowed ships and submarines to establish their positions to within 200 m (650 ft). Transit was superseded by the Navstar Global Positioning System (GPS), and DARPA helped develop compact GPS receivers for military use.
- Night-vision technology. Advanced night-vision systems developed by DARPA assist troops and aircrews to operate in darkness. They also have been integrated into unmanned surveillance systems.
- Unmanned aerial vehicles (UAVs). DARPA pioneered the development of UAVs. Its work led to the introduction of UAVs such as the Predator, which can provide extended military surveillance and reconnaissance.

DARPA's willingness to take risks has sometimes led to embarrassing failure. Among its fiascoes was a Vietnam War-era program code-named Agile, in which $264 million was spent on projects such as building large mechanical elephants for transporting troops through the jungle. In the 1970s DARPA invested in an unsuccessful psychic spy program, which attempted to make use of parapsychology to conduct remote espionage.

Although DARPA is an arm of the Defense Department, its work frequently has led to nonmilitary applications. An early DARPA undertaking was to develop powerful liquid-fuel rocket engines for long-range ballistic missiles. One such engine was the 1.5 million-pound-thrust F-1, which was used in the first stage of the Saturn V rocket that launched NASA's Apollo spacecraft on missions to the Moon. DARPA was also a pioneer of the information revolution; communications technology that it developed helped make the Internet possible. When the early computers of the 1960s began to be used more widely for research, there was a growing need for scientists to share data and computer resources. At the time the only suitable communication link was the old-fashioned circuit-switched telephone system. To speed up data transfer and allow multiple computers to work together, DARPA funded research that resulted in a computer network called ARPANET. It used a new technology, called packet switching, that allowed large chunks of data to be broken up into small "packets," which could then be routed independently to their destination on a computer network. ARPANET later evolved into the Internet, and packet switching proved to be an efficient means of transporting large amounts of data quickly between computers.

Now in its sixth decade, DARPA remains at the forefront of efforts to maintain the U.S.'s lead in military technology. For example, the agency is developing economical and environmentally friendly means of converting coal to liquid fuels in order to reduce the military's dependence on foreign supplies of petroleum. The agency is also working to counter terrorist threats. A program called the Human-carried Explosive Detection Stand-off System, for example, seeks to develop a sensor system that can rapidly detect human-carried explosives at a distance of up to 150 m (490 ft) for the purpose of stopping suicide bombers before they reach their intended targets.

No project epitomizes DARPA better than its Urban Challenge. This competition, begun in 2004 as the Grand Challenge, was designed to encourage industry to develop a new generation of vehicles that could travel along roads and negotiate traffic without a human driver. Urban Challenge culminated in November 2007 with the awarding of a $2 million grand prize to a robotic sport-utility vehicle developed by a consortium led by General Motors and Carnegie Mellon University. The vehicle outperformed several of its competitors on a course designed to simulate street driving and traffic. DARPA hopes that the expertise gained from Urban Challenge will be transformed into practical battlefield solutions. For example, if robotic trucks could be used in supply convoys, humans would be exposed to less risk from roadside attacks.

(PETER SARACINO)

Performing Arts

Highlights in 2008 included the NEW YORK Philharmonic in NORTH KOREA and a Grammy for JAZZ artist Herbie Hancock. On the big screen, COMIC-BOOK heroes Batman and Iron Man ruled, while SERIOUS works—both new and classic—REINVIGORATED the theatre.

MUSIC

Classical. The last vestiges of the Cold War seemed to thaw for a moment on Feb. 26, 2008, when the unfamiliar strains of "The Star-Spangled Banner" unfolded before 1,000 North Koreans as Music Director Lorin Maazel led the New York Philharmonic orchestra in a concert in the East Pyongyang Grand Theatre. Maazel and the orchestra offered a crowd-pleasing array of iconic works, including Antonin Dvorak's *New World Symphony* and George Gershwin's *An American in Paris*. The performance, which was also broadcast live via television and radio to the rest of the country, was as much a historic gesture as it was a concert as two vastly different political systems and cultures used music as a symbol of, perhaps, a new phase in cultural diplomacy.

Another staple of Western classical music, Dmitry Shostakovich's *Symphony No. 7*, was also used as a symbol—albeit of an entirely different sort. In August Russian conductor Valery Gergiev journeyed to Tskhinvali in the region of South Ossetia, Georgia, to lead a performance of that symphony—the composer's paean to the defenders of Leningrad in World War II—to celebrate the "victory" of Russian troops over Georgian forces in their clash over the breakaway region.

Two months later Gergiev led a concert in Jerusalem to promote peace in the Middle East, following in the footsteps of conductor Daniel Barenboim, who had performed at similar events in the region in recent years in efforts to bridge the gulf between Palestinians and Israelis. In January Barenboim had moved a step farther; after playing works by Beethoven in the West Bank city of Ramallah, he announced that he had become a citizen of Palestine.

Politics as usual played out in Germany's Bayreuth Festival, an annual festival devoted to the music of Richard Wagner. In recent years the festival had been the focus of manic speculation about who would become the next head. In a power struggle to gain control upon the retirement of the composer's grandson, Wolfgang (who had ruled the event for 57 years), various branches of the Wagner family starred in an operatic duel of their own. Wolfgang's choice was said to have been his daughter Katharina, whose claim was contested by another group of Wagners in league with Gerard Mortier, then director of the New York City Opera. In the end, Katharina and her half-sister, Eva Wagner-Pasquier, won out. One of their goals was to distance the 132-year-old festival from its associations in the 1930s with the Nazis. (Wagner was Adolf Hitler's favourite composer.)

One of the Nazis' favourite conductors, the late Herbert von Karajan, was honoured throughout the year in celebration of the 100th anniversary of his birth. The conductor—whose political leanings were infamous but who was rehabilitated by his celebrated interpretations of the classical canon in the decades following the end of World War II—was feted at events in Berlin and Vienna, at festivals in Salzburg and Lucerne, and in CD reissues of highlights from some of his 900 recordings.

Another conductor, the late Leonard Bernstein, whose legacy extended to his roles as composer, social activist, educator, and beloved champion of classical music, was honoured throughout the year in which he would have turned 90. He was the subject of "Bernstein: The Best of All Possible Worlds," a multivenue celebration in New York City that featured 30 concerts and events throughout the autumn. In October a performance of Bernstein's *Mass* was led by conductor Marin Alsop at Carnegie Hall.

Elliott Carter, one of the most illustrious composers of the 20th century, turned 100 on December 11. Carter, a 1971 winner of the Gold Medal of the National Institute of Arts and Letters for Eminence in Music and a member of the Classical Music Hall of Fame, was honoured with a series of concerts and events around the world. During the summer program at Tanglewood in Lenox, Mass., he was feted with three orchestral programs. In September, Musikfest Berlin 08 featured a number of his works, including *Soundings* and *Symphonia: Sum fluxae pretium spei* (the latter in its German debut), performed by Barenboim and the Staatskapelle Berlin. Finally, in December an international colloquium devoted to his music, "Hommage à Elliott Carter," was held at the Institut de Recherche et Coordination Acoustique/Musique (IRCAM) in Paris.

American composer Charles Wuorinen had a very busy year as he turned 70. Six of his works received premieres, including his *Second Piano Quintet*, which was performed by pianist Peter Serkin and the Brentano String Quartet at the Rockport (Mass.) Chamber Music Festival. The New York City Opera also announced that Wuorinen had been commissioned to create an operatic version of the story-turned-movie *Brokeback Mountain* for its 2013 season; the company's budget woes later caused the commission to be withdrawn, however.

Milan's La Scala opera company announced in late May a new commission, a version of Nobel Prize winner Al Gore's book-turned-film on climate change, *An Inconvenient Truth*. Italian composer Giorgio Battistelli was commissioned to create the work for the company's 2011 season, in time to mark the 150th anniversary of Italy's unification.

In September the Los Angeles Opera (LA Opera) offered the premiere of *The Fly*, Howard Shore's opera based on his score for the 1986 horror movie; the production was led by the film's director, David Cronenberg. The company also featured a production of Giacomo Puccini's *Il trittico*, with its three segments staged by film directors William Friedkin (*The Exorcist*), who

Mike Marsland—WireImage/Getty Images

Sebastian Goodwin-Day, a member of the 15-person novelty orchestra the Ford Motor Co. assembled in April in the United Kingdom, plays a "clutch guitar." The ensemble's instruments were constructed from parts of a Ford Focus.

prepared two, and Woody Allen (*Annie Hall*).

Cinema played a central part in "An Evening with Anthony Hopkins" at the Meyerson Symphony Center in Dallas. The famed British actor hosted an evening of clips from five of his films and performances of several of his musical compositions, including *The Masque of Time*, which was given its world premiere by the Dallas Symphony Orchestra.

Made in America, a contemporary work by American composer Joan Tower, won three 2008 Grammy Awards in February. The CD of a performance of the piece by Leonard Slatkin and the Nashville Symphony won for best classical album and best orchestral performance, and Tower was honoured for best classical contemporary composition. The work also represented a new approach to the commissioning process, in which a consortium of 65 smaller U.S. orchestras banded together in 2001 to jointly pay for the work's creation and were then given the opportunity to perform it as part of their seasons. Another new work did not fare as well. In April the world premiere of Swedish-Israeli composer Dror Feiler's *Halat hisar* ("State of Siege") was canceled when musicians of Germany's Bavarian Radio Symphony Orchestra claimed that the volume level of the work—which incorporates simulated machine-gun fire—caused many of them to suffer ringing ears after a rehearsal.

Two wildly disparate ensembles marked significant anniversaries in 2008. The Hallé Orchestra in Manchester, Eng., the oldest professional symphony orchestra in the United Kingdom, celebrated its 150th anniversary. In Vienna the Vegetable Orchestra marked its 10th anniversary with a concert at the city's RadioKulturhaus. The orchestra's 12 musicians had toured the world, performing on such self-made instruments as "celery bongos," "leek violins," and "cucumberphones."

In England the Ford Motor Co. created an orchestra to perform on instruments made of parts from a Ford Focus. Although the ensemble did not have a name, it was featured in a £45 million (about $66.5 million) advertising campaign in which its 15 members played everything from a "clutch guitar" to a "window harp." The tag line for the ad was: "The new Ford Focus. Beautifully arranged."

A humanoid robot, ASIMO, which was created by Japanese automaker Honda, conducted the Detroit Symphony Orchestra in May in a performance of the song "The Impossible Dream." The segment was part of a youth program that also featured cellist Yo-Yo Ma.

At Severance Hall in Cleveland, the public itself was allowed to take the baton, via the UBS Virtual Maestro. The device, which came with an electronic controller to manipulate tempo and volume level, allowed participants to conduct an onscreen virtual orchestra in excerpts of works such as Gioachino Rossini's "William Tell Overture" and Hector Berlioz's *Symphonie fantastique* during the intermission of performances by the Cleveland Orchestra in May. The device later was taken to other U.S. cities, including Los Angeles, Boston, and Seattle.

Media technology continued to play a role in the popularization of classical music. In September the Metropolitan Opera (the Met) in New York City broadcast its opening-night gala at Lincoln Center via a high-definition (HD) satellite hookup. The event marked the start of the third season of the company's "The Met: Live in HD" initiative, which drew more than one million viewers to cinemas around the world in its first two years. The Met's live simulcasts of several of its productions to 850 venues in Europe, the United States, Canada, Australia, and Japan reshaped the way cutting-edge technology had taken a venerable musical form to a wider world.

The trend was embraced (in the form of recorded performances) in 2008 by other opera companies, including London's Royal Opera House, San Francisco Opera, and La Scala. The LA Opera recorded Plácido Domingo's 40th anniversary gala—which featured tenor Domingo and soprano Patricia Racette and conductor James Conlon leading the LA Opera Orchestra—and broadcast it to 21 venues across the United States.

The Internet also served as a conduit to the classical music marketplace. In January online music retailer ArkivMusic announced that its revenues for the preceding year grew by more than 30%. The Web site, which at the beginning of the year offered more than 82,000 CD titles, saw this growth at a time when CD revenues in the rest of the music industry were declining at a rate of 15% annually. In a press statement, ArkivMusic's president, Eric Feidner, said, "It's hard to overemphasize the significance of this in today's music marketplace. We currently only sell physical CDs of classical music. With the industry's ever-increasing focus on digital downloads, I think this shows just how unique our particular genre of music is relative to the overall music business."

Before the existence of CDs, digital downloads, and other paraphernalia used for music enjoyment, there was the Edison cylinder, which played on the phonograph Thomas Edison introduced in 1877. In October the Marston record label announced that it was releasing three CDs of excerpts from recordings originally made on Edison cylinders in the late 19th and early 20th

centuries by Julius H. Block. Thought to have been destroyed in Germany during World War II, the cylinders had recently been rediscovered in Russia. The label claimed that the cylinders represented some of the earliest recordings of works by Bach, Wagner, and others. Highlights of the first three CDs included such historic snippets as Russian writer Leo Tolstoy reading from his works, what was reputed to be the voice and whistling of composer Pyotr Ilyich Tchaikovsky, an 11-year-old Jascha Heifetz introducing himself at a performance, and a recording of pianist Paul Pabst, who studied with Franz Liszt.

In 2008 the classical music world marked the passing of a number of important artists. Composer-arranger Alexander Courage, who contributed to the scores of more than 100 films, including *My Fair Lady*, along with such television programs as *Star Trek*, died at age 88 on May 15 in Los Angeles. British musicologist Wilfrid Mellers died in May, and American soprano and educator Gail Robinson died in October. Other significant losses included those of Italian tenor Giuseppe Di Stefano, Danish soprano Inga Nielsen, Turkish soprano Leyla Gencer, German-born violinist Siegmund Nissel, Argentine-born composer Mauricio Kagel, and American composers Henry Brant and Norman Dello Joio. (*See* OBITUARIES.) (HARRY SUMRALL)

Jazz. The jazz world was shaken when a pillar of the jazz establishment, the International Association for Jazz Education (IAJE), collapsed. For 40 years the IAJE—which by 2008 had 10,000 members in 50 countries—had provided services for jazz educators, published the *Jazz Education Journal*, and held conventions. After 1996, when the last *JazzTimes* convention was held, the IAJE's annual gathering became the major conclave of jazz students, teachers, and industry representatives, drawing more than 7,000 attendees in 2006 and in 2007.

Attendance in 2008 at the IAJE convention in Toronto plunged to 4,000. After the resignations of its executive director and president-elect, the IAJE canceled its 2009 convention, suspended its journal, and filed for bankruptcy. Almost immediately thereafter, the Jazz Education Network was founded by 35 educators. Mary Jo Papich, who had been elected IAJE president, became president of the new organization.

Much of the year's most interesting activity emerged from new artists and new jazz communities that had matured in the 21st century. After 50 years of jazz education in the United States and abroad, skillful young disciples of major artists such as Bill Evans, Oscar Peterson, and Wayne Shorter emerged not only from the American heartland but also from Australia, Central Europe, and Asia. Most jazz education was oriented to jazz's heritage and to fusions with other musical traditions. A number of daring mentors, however, encouraged young musicians to experiment with organic, original developments of jazz sounds, rhythms, and forms.

New communities of musicians who played free jazz and cultivated free improvisation were often led by well-known veteran artists. Pianist Irene Schweizer was the centre of the scene in Zürich, and pianist Alexander von Schlippenbach was central to Berlin's underground jazz. Saxophonists Evan Parker and Lol Coxhill were senior members of London's large improvising community; interesting Dutch musicians appeared in the wake of drummer Han Bennink and pianist Misha Mengelberg. Pianist-composer Satoko Fujii formed big bands in Japanese cities, and drummer John Pochée and saxophonist Sandy Evans were among the leaders of Sydney's improvisers and composers. Vancouver, the San Francisco Bay Area, Los Angeles, Chicago, Boston, and the New York City region were among North America's hot spots for exploratory jazz.

Veterans remained at the top of their form. Two of the most visible artists in 2008 were 78-year-old saxophonists Sonny Rollins and Ornette Coleman. Both maintained busy international touring schedules, and Rollins released the live album *Road Shows, Volume 1* on his own Doxy label.

Young alto saxophonist Miguel Zenón, whose CD *Awake* appeared, was awarded a John D. and Catherine T. MacArthur Foundation fellowship (a "genius grant"). Legendary early-jazz pianist Tony Jackson was the subject of Clare Brown's play *Don't You Leave Me Here*, which premiered in London. In New York City the Jazz at Lincoln Center orchestra and the Abyssinian Church choir introduced a new composition by Wynton Marsalis to celebrate the Harlem church's 200th anniversary.

Jazz fused with country music as trumpeter Marsalis joined singer Willie Nelson in *Two Men with the Blues*, which made the hit album charts. The great jazz bassist Charlie Haden returned to the music of his childhood, singing with his family in a bluegrass concert in New York City and releasing the album *Ramblin' Boy*, which featured guest appearances by Vince Gill and Ricky Skaggs.

After almost two years without a venue for nationally touring performers, Chicago once again had the Jazz Showcase when Joe Segal reopened the 62-year-old club in a new location. From nearby Evanston, Ill., collector Jim Neumann donated his library of more than 100,000 jazz recordings to Oberlin (Ohio) College. The huge collection was scheduled to be housed in a new building that would be completed in 2009. In a 20-year project, the recordings were slated to be digitized under the supervision of a full-time curator. David Stull, the dean of Oberlin's conservatory, said that the college planned to establish the world's largest online jazz archive.

Toronto-based jazz magazine *Coda* celebrated its 50th year in 2008. In the midst of the U.S. presidential election campaign, an all-star cast of New York musicians, including Roy Haynes, Dee Dee Bridgewater, Kurt Elling, and Roy Hargrove, held a fund-raiser for Barack Obama, who reportedly had tracks by Miles Davis, John Coltrane, and Charlie Parker on his portable music player. Herbie Hancock's album *River: The Joni*

Jazz saxophonist Sonny Rollins performs on August 28 at the Chicago Jazz Festival.

Raymond Boyd—Michael Ochs Archives/Getty Images

Letters, dedicated to singer Joni Mitchell, became the first jazz collection in 43 years to win a Grammy Award for album of the year. Other outstanding albums included the *Ornette Coleman Anthology* by Aki Takase and Silke Eberhard and a belated discovery, Paul Rutherford's *Solo in Berlin 1975*.

A book of major importance, *A Power Stronger than Itself: The AACM and American Experimental Music* by George E. Lewis, came out during the year. Other notable book titles included Howard Mandel's *Miles Ornette Cecil: Jazz Beyond Jazz* and Bob Blumenthal's *Jazz: An Introduction to the History and Legends Behind America's Music* (2007).

With the death of American tenor saxophonist Johnny Griffin, jazz lost one of its last remaining hard-bop stars. British swing trumpeter and radio host Humphrey Lyttelton, American experimental clarinetist Jimmy Giuffre, Cuban bassist and bandleader Cachao, and young Swedish pianist Esbjorn Svensson were among the notable losses in 2008 (*see* OBITUARIES), as were American drummer Lee Young, American composer Neal Hefti, Italian saxophonist Mario Schiano, and Spanish drummer Peer Wyboris.

(JOHN LITWEILER)

Mariam Doumbia (left) and Amadou Bagayoko, the Malian duo Amadou and Mariam, perform during the 2008 All Points West Music and Arts Festival in Jersey City, N.J., on August 10.

Rob Loud—FilmMagic/Getty Images

Popular. *International.* The global music scene was dynamic in 2008. Experimentation and unexpected collaborations abounded, and musicians from the landlocked West African state of Mali were highly visible. The bravery of the new African music scene was epitomized by Malian diva Rokia Traoré, who released her first album in five years, *Tchamantche*. Many of the album's songs reflected Traoré's subtle and bluesy electric guitar, which was matched with an ancient African lute, the *ngoni*. The intimate, sophisticated recording showed the quality and range of her singing and songwriting as she went from a Bambara-language song about the tragedies of illegal immigrants attempting to reach Europe to a highly individual English-language reworking of the Billie Holiday classic "The Man I Love," which begins as a brooding ballad and develops with vigorous improvisation.

Traoré's compatriot Toumani Diabaté, the world's best-known exponent of the *kora*, a West African harp, had a good year as well. He had worked with a wide range of musicians, from his own Symmetric Orchestra to the late Ali Farka Touré, but in 2008 Diabaté released only his second purely instrumental solo recording in 21 years. *The Mandé Variations* was a powerful demonstration of his virtuosic and varied playing; pieces ranged from references to being a *griot* (i.e., descended from a long line of hereditary Malian musicians) to praise songs that include playful musical references to film composer Ennio Morricone. Diabaté's wide-ranging musical interests were also reflected by his contributions to *Maestro*, a new album by American blues guitarist Taj Mahal, and *Welcome to Mali*, a new set by the highly successful Malian duo Amadou and Mariam, which also featured the adventurous British pop star Damon Albarn.

Amadou and Mariam, Albarn, and many other artists took part in the experimental concerts organized by Africa Express, which began in 2006 and in 2008 were held in London and Liverpool, Eng., and Lagos, Nigeria. The aim was to promote equality between African and Western musicians, who were encouraged to perform together onstage. A series of impressive and unexpected spontaneous collaborations resulted; for example, Senegalese star Baaba Maal sang with the British pop band Franz Ferdinand, and Amadou and Mariam played with another British pop band, the Magic Numbers.

Alim Qasimov, the finest exponent of the *mugham*, the dramatic ancient poetry of Azerbaijan, performed alongside the celebrated Kronos Quartet from San Francisco at an emotional concert in London that could lead to further joint projects. From the East charismatic Cambodian singer Chhom Nimol and his colleagues from Los Angeles in the band Dengue Fever released a new album, *Venus on Earth*, and toured in Europe for the first time, bringing to new audiences the Cambodian music styles that flourished in the 1960s before the country's music scene was brutally crushed by the Khmer Rouge.

Barriers were transcended in Cuba, where 77-year-old singer Omara Portuondo was featured on three new albums, including a collaboration with Brazilian star Maria Bethânia and a solo set, *Gracias*, which included a duet with another legendary veteran, Brazilian Chico Buarque. Portuondo could also be heard on *Buena Vista Social Club at Carnegie Hall* (2008), a live recording of the last-ever show by the best-selling Cuban supergroup, which took place in New York City in 1998.

In the United Kingdom the growing popularity of traditional music led to the emergence of new folk artists, including Julie Fowlis, a singer with an exquisite, pure style who specialized in Scottish Gaelic songs. She toured in both Britain and the United States and recorded an acoustic Scottish Gaelic version of the Beatles classic "Blackbird." She also took part in the Rogues Gallery concerts, in which pirate songs and sea shanties were revived by a celebrity cast that also included American actor Tim Robbins, Irish singer Shane MacGowan, and the project's American producer Hal Willner.

One of the tragedies of the year was the early death of the singer and songwriter Andy Palacio, who had brought the world the soulful, gently rhythmic music of the Garifuna people of Central America. Another loss was Rick Wright, the keyboard player and a founding member of the British band Pink Floyd. (*See* OBITUARIES.)

(ROBIN DENSELOW)

Theo Wargo—WireImage/Getty Images

Singer Mary J. Blige and rapper Jay-Z perform at Madison Square Garden in New York City on May 2. The sold-out show was one of several very successful events on their national tour.

United States. The American record industry in 2008 continued to shift from traditional models to a digital marketplace. In the first half of the year, album sales totaled 204.6 million units, down 11% from the first half of 2007. "We're in unpredictable times," said country star Kenny Chesney, who released his *Lucky Old Sun* album in October. "People say, 'The music industry is over.' It's not over, though. . . . People are still going to want to go out and hear live music."

Chesney was the only contemporary American hit maker to sell out numerous stadium concerts in 2008, and even he opted to lower some ticket prices in recognition of fans' economic stresses. Other top touring acts included Madonna, Rascal Flatts, Bon Jovi, and Eagles. Fans also supported an auditorium tour from the once-unlikely duo of Led Zeppelin singer Robert Plant and bluegrass thrush Alison Krauss.

British neosoul singer Amy Winehouse (*see* BIOGRAPHIES) was among the toasts of the 50th annual Grammy Awards, though she was unable to attend because of visa problems. By February Winehouse's erratic behaviour and substance-abuse issues were eroding what had been significant career momentum. Still, she won five Grammy Awards, including record of the year. The Grammys' top prize, album of the year, went to a jazz album—Herbie Hancock's *River: The Joni Letters*—for the first time in 43 years. "I'd like to thank the Academy for courageously breaking the mold," Hancock said as he accepted the award. The Rock and Roll Hall of Fame inducted performers Leonard Cohen, the Dave Clark Five, Madonna, John Mellencamp, and the Ventures, and Kennedy Center Honors—the highest arts awards in the United States—were bestowed on George Jones, Barbra Streisand, Pete Townshend, and Roger Daltrey.

Country music star Kenny Chesney sings at Lincoln Financial Field in Philadelphia, a stop on his Pirates and Poets tour, July 19. Chesney's was the year's most successful tour.

Tom Mihalek/AP

Hip-hop music continued to sell well. For example, Lil Wayne's *Tha Carter III* album sold more than a million copies in its first week of issue. That was the highest debut-week sales figure since the release of 50 Cent's *The Massacre* in 2005. "Lollipop," the debut single from Lil Wayne's album, spent five weeks atop the all-genre *Billboard* charts. Atlanta rapper T.I.'s *Paper Trail* album was another notable release, and hip-hop also showed signs of maturing as a touring genre. Early in 2008 Jay-Z's tour with Mary J. Blige grossed more than $30 million, including sellout shows at Madison Square Garden in New York City and the Hollywood Bowl in Los Angeles. In addition, a tour headed by Kanye West made more than $31 million. These were hopeful signs for a genre that had posted only one top 20 North American tour in the previous five years, according to *Billboard*.

Many performers chose sides in the presidential race between Democrat Barack Obama and Republican John McCain. Bruce Springsteen, John Legend, will.i.am, and others offered public support for Obama, while country stars Hank Williams, Jr., and John Rich were vocal in their support of McCain. Several musicians sought to restrict the use of their songs at political rallies. Tom Petty, Jackson Browne, and the Foo Fighters requested that McCain cease to use their songs; Browne actually sued the campaign. Sam Moore of Sam & Dave asked the Obama campaign to stop playing "Hold On, I'm Comin'."

Several former pop and rock acts released country albums in 2008. Jessica Simpson's *Do You Know* debuted at number one on the *Billboard* country chart, and Hootie & the Blowfish lead singer Darius Rucker became the first African American singer in a quarter century to have a number one solo country single. Country labels and country radio were also partial to *American Idol* alumni; Carrie Underwood, Kellie Pickler, Bucky Covington, and Kristy Lee Cook all worked in that format.

Among 2008's notable losses were soul music legend Isaac Hayes, groundbreaking guitarist Bo Diddley, record producer Jerry Wexler, gospel greats Ira Tucker and Dottie Rambo, singer-songwriter John Stewart, singer Edie Adams, Four Tops lead singer Levi Stubbs, and Country Music Hall of Fame member Eddy Arnold (*see* OBITUARIES); other deaths included those of country guitar virtuoso Jerry Reed, blues singer Nappy Brown, revered session drummer Buddy Harman, and steel guitarist Don Helms. (PETER COOPER)

DANCE

North America. Anniversaries and farewell performances were the highlights of the year's dance activity. In and around New York City, the centennial of Antony Tudor's birth was variously marked, most prominently in a two-day conference that included symposia arranged by the Antony Tudor Ballet Trust in cooperation with the Juilliard School, where Tudor taught for a number of years, and in a fall City Center season by American Ballet Theatre (ABT). The company's annual spring-summer season at the Metropolitan Opera House opened with a rare performance of *The Judgment of Paris*, Tudor's acidic and hilarious take on the ancient story, transposed into the decadent 1930s. The company's fall season in the more intimate City Center included the landmark *Pillar of Fire* and the elegiac *The Leaves Are Fading*.

The spring season of New York City Ballet (NYCB) celebrated the career of Jerome Robbins, who died in 1998, with performances of 33 of his ballets. NYCB was joined by dancers from other companies for whom Robbins worked, such as the Paris Opéra Ballet, the Royal Ballet (London), and ABT. As a complement to NYCB's season, the New York Public Library for the Performing Arts offered a wide-ranging exhibition called "New York Story: Jerome Robbins and His World."

San Francisco Ballet (SFB) started the year with celebratory programs to mark its own 75th anniversary, culminating in the New Works Festival in mid-spring. The event featured the world premieres of 10 works that SFB had commissioned, including ballets by Christopher Wheeldon, Mark Morris, and Paul Taylor. Selections from the festival supplied part of the repertory for SFB's U.S. tour in the fall.

The Alvin Ailey American Dance Theater celebrated its 50th anniversary. In December—during the troupe's annual monthlong season at City Center—two special premieres were given: *Festa Barocca*, a full-company work by Mauro Bigonzetti, and *Go in Grace*, a collaboration between choreographer Hope Boykin and singing group Sweet Honey in the Rock. Lar Lubovitch Dance Company, which had an erratic history (of folding and reopening) during the career of its choreographer and founder, staged a comeback to celebrate its 40th anniversary, with seasons of smaller works at the Dance Theater Workshop in New York City and larger ones at City Center.

Murad Sezer/AP

Dancers of the Alvin Ailey American Dance Theater perform in September in Istanbul during an international tour to celebrate the company's 50th anniversary.

To mark her 35th anniversary as dancer and choreographer, Canadian Margie Gillis presented a program called *M.Body.7*, a group showcase created by Gillis for dancers of a wide range of ages. Laura Dean, long absent from the modern dance scene, was given the prestigious Scripps Award at the American Dance Festival in Durham, N.C., which celebrated its 75th anniversary.

Several illustrious dancers retired from American stages in 2008. At NYCB two male dancers were saluted: Nikolaj Hübbe, a Dane who departed at the end of the winter season to head the Royal Danish Ballet, where he had begun his career, and Damian Woetzel, who since 2007 had also directed the Vail (Colo.) International Dance Festival. Notable ballerinas who announced their retirement included National Ballet of Canada's (NBC's) Jennifer Fournier, who made something of a second name for herself with the Suzanne Farrell Ballet, and Russian-trained, Georgian-born Nina Ananiashvili, who danced her final Giselle at ABT and announced that she would retire from the company in 2009.

Earlier in the year, Ananiashvili had led the State Ballet of Georgia, a troupe she had directed since 2004, on a U.S. tour. Among the offerings in repertory were some works by Aleksey Ratmansky, the departing artistic director of the Bolshoi Ballet. In the fall ABT announced that Ratmansky had signed a five-year contract as artist in residence for the company. Ratmansky's *Concerto DSCH* was a thrilling display of daring dancing to Shostakovich at NYCB and a highlight of the season's new ballets.

Twyla Tharp worked prominently with both Miami City Ballet and ABT. For Miami she created work to music commissioned from Elvis Costello, called *Nightspot*, and for ABT she made *Rabbit and Rogue* to music commissioned from Danny Elfman. In the fall Tharp gave Seattle's Pacific Northwest Ballet two more premieres, *Opus 111* (to music of Johannes Brahms) and *Afternoon Ball* (to music of Vladimir Martynov). By year's end Tharp had been awarded a Kennedy Center Honor.

Christopher Wheeldon wrapped up his work as resident choreographer of NYCB with a Tchaikovsky-inspired ballet called *Rococo Variations*. In the fall Wheeldon's own Morphoses played at City Center following its second appearance at the Vail festival. Wheeldon's Stravinsky-inspired *Commedia* was a highlight of the run.

Houston Ballet's (HB's) artistic director Stanton Welch created new works for his company, including *A Doll's House* (a story of chaos in a toy shop). Canadian choreographer James Kudelka created for the troupe *Little Dancer*, a Degas-inspired work set to the music of Philip Glass. The company had to cancel the end of its run of John Cranko's *Onegin* in the wake of Hurri-

cane Ike. In November, Les Grands Ballets Canadiens de Montréal went to Houston under HB's auspices, taking two works that were new to the city.

Washington's John F. Kennedy Center for the Performing Arts presented two delightful samplers. In June Protégés II offered a mixed bill presenting the top pupils from prominent ballet academies around the world. Subsequently, Kennedy Center offered a five-day long celebration called Ballet Across America, which showcased companies from all regions of the country.

International visitors to North America included the Kirov (Mariinsky) Ballet in its first-ever season at New York City's relatively small City Center, where the stage could hardly contain the radiant and yet cool Uliana Lopatkina and the charmingly brash Alina Somova; the Russian dancers gave Balanchine's works a new accent. Likewise, the Kirov's dancers in the works of William Forsythe toned down some of the often frantic aspects of the dances. (Forsythe's own *Impressing the Czar,* in a revival by the Royal Ballet of Flanders, became the featured dance entry at the Lincoln Center Festival.) Lincoln Center's Great Performers series included dances by Michael Clark in a series of all-Stravinsky programs.

The Mark Morris Dance Group offered Morris's new *Excursions* at Tanglewood, Mass., before presenting *Romeo and Juliet, on Motifs of Shakespeare* at the kickoff of a Prokofiev festival at Bard College, Annandale-on-Hudson, N.Y. The three-act work used a newly discovered original version of Prokofiev's 1930s score, which differed from the work that became widely popular after the composer's revisions of the 1940s.

Among the touring appearances by the Merce Cunningham Dance Company, most notably a series at DIA:Beacon in Beacon, N.Y., the troupe gave a special performance of the Cunningham's John Cage-inspired *Ocean* in the Rainbow Quarry of Waite Park, Minn. The Paul Taylor Dance Company added to its own repertory *Changes,* set to the music of the Mamas and the Papas; the work was made by Taylor to fulfill SFB's anniversary commission.

Events across Canada included Marie Chouinard's *Body Remix/Goldberg Variations,* which was performed in Victoria, B.C., and Vancouver. Alberta-born Aszure Barton offered two works with Les Ballet Jazz de Montréal during Ottawa's Canada Dance Festival. Toronto was the setting for the final, closing performance of the Danny Grossman Dance Company, which had its beginnings in 1977.

The enduringly popular ballet film *The Red Shoes* celebrated its 60th anniversary in 2008. Dance on film and video had highlights, most notably in "Dominque Delouche: Ballet Cineaste," a retrospective festival of the Film Society of Lincoln Center; most of the films had been offered on DVD, notably by Video Artists International. Frederick Wiseman's 1995 documentary about ABT was newly released on DVD by Zipporah Films. Opus Arte, often in collaboration with the BBC, put out a number of titles, including the Royal Ballet in *The Sleeping Beauty* and *La Fille mal gardée.* Elton John's ballet-themed musical *Billy Elliot* (based on the 2000 film) went to Broadway in November.

Losses to North American dance included several Canadians: dancer Ian Gibson, dancer and choreographer Leonard Gibson, ballerina and teacher Rosemary Deveson, teacher and choreographer Kay Armstrong, former NBC artistic director David Haber, and British-born ballerina and teacher Joy Camden. Among the Americans who died in 2008 were jazz dancer and choreographer Gus Giordano, ballerina Sallie Wilson, Russian-born ballerina Irina Baronova, tap dancer Jimmy Slyde, and dancer and actress Cyd Charisse (*see* OBITUARIES), as well as ballerina Ellen Everett, ballet dancer Michael Bjerknes, Russian-born dancer and longtime School of American Ballet teacher Hélène Dudin, Colombian-born modern dancer and choreographer Eleo Pomare, and dance writer Amanda Smith.

(ROBERT GRESKOVIC)

Europe. The bravest initiative in the European ballet world in 2008 was undoubtedly the opening of a completely new classical company in Spain, a country that for many years had seen its most talented dancers leave for lack of opportunities at home. One of those dancers was Ángel Corella, distinguished principal of American Ballet Theatre; thanks to his drive, determination, and years of planning, the 50-strong Corella Ballet gave its official first performance in Madrid in September with Natalia Makarova's production of Petipa's *La Bayadère.*

On a sadder note, the death of Maurice Béjart in late 2007 cast a shadow over the entire dance scene. His own company, Béjart Ballet Lausanne, continued to tour under the directorship of dancer and choreographer Gil Roman; one of the programs the company showed was Béjart's last piece, *Le Tour du monde en 80 minutes,* staged by Roman. Among other groups mounting tribute programs was the Paris Opéra Ballet, featuring Béjart's famous versions of *The Firebird* and *Rite of Spring* as well as the powerful *Serait-ce la mort?*

As usual, the Paris company also presented a new evening-length work by one of its dancers, this time *Les Enfants du paradis* by José Martinez, set to a commissioned score by Marc-Olivier Dupin. Visitors to Paris included New York City Ballet, with a much fuller and more interesting program than those it had presented earlier in the year in London and Copenhagen. Very high prices in London had dampened sales and elicited complaints from dancegoers; a much more reasonable pricing schedule in Paris was rewarded by full houses and a very enthusiastic reception. There was some disappointment, though, that the company had to cancel Balanchine's *Vienna Waltzes*—never seen in Paris—when the estate of composer Richard Strauss withheld permission for his music to be used for this ballet outside the United States.

There were major changes in Scandinavia; the National Norwegian Ballet moved into its new home in a fine new opera house in Oslo, and the national companies of Finland, Sweden, and Denmark each had a change of artistic director. Kenneth Greve took over the National Ballet of Finland, producing narrative ballets by Aleksey Ratmansky and John Neumeier and a triple bill of works by Nordic choreographers. Marc Ribaud's first season at the head of the Royal Swedish Ballet included the premiere of a piece by Patrice Bart based on the life of King Gustav III, the Swedish monarch who founded the company. Nikolaj Hübbe's first premiere for the Royal Danish Ballet (RDB) was a new production of *Giselle,* directed by Hübbe himself in collaboration with Sorella Englund; company ballerina Silja Schandorff and new principal dancer Nehemiah Kish performed the first night. English choreographer Tim Rushton made a new version of *Askepot* (*Cinderella*), in which the RDB was joined by members of Rushton's own Danish Dance Theatre; earlier in the season Christopher Wheeldon had made his first work for RDB—*The Wanderers,* to music by English composer Gavin Bryars. The company made a brief visit to China in connection with the Olympic Games in Beijing following seasons there by the Paris Opéra Ballet and the Royal Ballet (RB) from London.

Belinsky Yuri—Itar Tass/Landov

Yekaterina Kondaurova of the Kirov (Mariinsky) Ballet dances the role of Alma in Kirill Simonov's ballet The Glass Heart, *set to the music of Alexander Zemlinsky.*

The Kirov (Mariinsky) Ballet continued its extensive touring program, visiting U.S. cities as well as sending a smaller group to London with a program of short ballets. At home in St. Petersburg, the troupe premiered *The Glass Heart*, with choreography by company soloist Kirill Simonov; but for some months the headlines about the company focused on the rumoured departure of its director, Makhar Vaziyev, leading up to the announcement that he had indeed left the company and had been replaced by ballet master Yury Fateyev.

The year started for the Bolshoi Ballet with a major success, Johan Kobborg's production of Bournonville's *La Sylphide*. Kobborg himself danced the witch, Madge, at one performance, and the young star Natalya Osipova was much admired in the title role. Later in the season Ratmansky's revival of a famous ballet from the Soviet era, *The Flames of Paris*, combined some elements of the original version with new choreography of his own. Some critics had reservations about the result, but there was praise for Mariya Aleksandrova, and later Osipova, in the leading role. Ratmansky's contract as director of the company expired at the end of the year, after a brilliant if sometimes difficult five-year reign.

Kobborg later reproduced his version of *La Sylphide* in Switzerland for the Zürich Ballet. In Germany, John Neumeier made a new piece, *Verklungene Feste*, for his Hamburg Ballet, and Kevin O'Day created *Hamlet* for the Stuttgart Ballet. In Austria the Ballet of the Vienna State Opera gave its first performances of Kenneth MacMillan's epic *Mayerling* in October.

Also in October, MacMillan's earlier piece *Manon* entered the repertory of English National Ballet (ENB). Made for the RB in 1974, it had been performed by companies all over the world but never before by another British company. In the summer ENB presented at the Royal Albert Hall *Strictly Gershwin*, a spectacular with choreography by Derek Deane; later in the year ENB played a season in its original home, the Royal Festival Hall.

Kim Brandstrup, Christopher Wheeldon, and resident choreographer Wayne McGregor all made new work for the RB, while Jerome Robbins's *Dances at a Gathering*, returned to the repertoire after more than 30 years' absence. Soloists Lauren Cuthbertson and Rupert Pennefather were promoted to principal rank; they joined Edward Watson as the only British dancers at the top level of the company.

Northern Ballet Theatre, one of the most creative companies in the United Kingdom, added two new full-length works to its repertoire: a version of *Hamlet* by director David Nixon and *A Tale of Two Cities* by Cathy Marston, a former RB associate who was director of the ballet company in Bern, Switz. Scottish Ballet produced a new *Romeo and Juliet*, using a pared-down scenario and choreography by Krzystof Pastor. Rambert Dance Company director Mark Baldwin made a new piece, *Eternal Light*, to a new score by Howard Goodall, for his company's autumn tour; the outstanding Jonathan Goddard, who earlier in the year had become the first modern dancer to win the National Dance Award for Best Male Dancer, joined the company from the Richard Alston group. Alston himself, celebrating 40 years as a choreographer, showed a program that included *The Men in My Life*, a compilation of pieces he had made for male dancers during his career. Matthew Bourne's latest work had its premiere at the Edinburgh International Festival, followed by a sold-out run in London; but although *Dorian Gray* seemed a natural subject for him, the piece had a cool reception from the critics.

The dance world was saddened by the deaths in 2008 of Norman Morrice (*see* OBITUARIES), choreographer and former director of both Ballet Rambert and the RB; Nadia Nerina, South African-born former RB ballerina; the great Bolshoi ballerina Natalya Bessmertnova (*see* OBITUARIES); Ulf Gadd, Swedish dancer and choreographer; and former RB principal dancer Maryon Lane. (JANE SIMPSON)

THEATRE

Great Britain and Ireland. Controversies about public funding at the end of 2007 spilled into 2008, and the Arts Council was compelled to backtrack on a series of unpopular cuts in its grants to theatres such as the Bush in West London, a powerhouse of new writing for 30 years; the Northcott in Exeter, an important local venue that had already undergone an Arts Council-sponsored refurbishment; and the Bristol Old Vic, the most significant surviving Georgian theatre in the United Kingdom.

Although the funding pot was increased by 8% (over a three-year period) to a total of £318 million (about $560 million), 185 organizations had their grants cut completely, and 27 saw their subsidies reduced. The Arts Council had detected a cultural shift toward what was disparagingly referred to as "clowns on stilts" theatre and site-specific ventures in nontraditional venues, but as playwright David Edgar pointed out in a powerful polemic, the increased diversity brought by Asian and Afro-Caribbean playwrights was almost entirely text-based.

A commonly voiced complaint was that musicals were pushing the "straight play" out of the West End, though it was generally overlooked that the commercial West End—unlike the National Theatre (NT) or any other government-subsidized organization—had no obligation toward new drama. At any rate, new plays were rife on the fringe and in venues such as the Almeida, the Young Vic, and the Royal Court.

Still, the West End came up with three highly entertaining new dramas: Yasmina Reza's *God of Carnage*, translated by Christopher Hampton and starring Ralph Fiennes and Tamsin Greig in a battle of parents over their respective children; television stars Kris Marshall and Joanna Page in Neil LaBute's brilliant *Fat Pig*, a scabrous study in loyalty, love, and obesity; and Joanna Murray-Smith's *The Female of the Species*, in which Dame Eileen

Atkins reveled in a performance widely taken to be a satiric portrait of the feminist academic Germaine Greer—who, without seeing it, denounced the play and its author. Atkins warmed up for this performance with a cutting comic display in the Theatre Royal, Haymarket's revival by Jonathan Kent of Edward Bond's *The Sea*, a brilliant comedy that combined elements of Benjamin Britten's *Albert Herring* and Shakespeare's *The Tempest*.

The Haymarket's adventurous season concluded with a slightly misfired musical, *Marguerite*, by Michel Legrand and the *Les Misérables* team of Alain Boublil and Claude-Michel Schönberg with Jonathan Kent. Ruthie Henshall gave her all as the eponymous heroine in World War II France, caught in a web of romance and espionage, but the show was not much of a success. Compared with Trevor Nunn's disastrous new version of *Gone with the Wind*, though, perhaps it was a triumph after all.

Audiences settled more happily for the irresistible Broadway import, recast for London, of *Jersey Boys* and found some kind of solace in a new musical version of Isabel Allende's novel of swash and buckle and derring-do, *Zorro;* Matt Rawle was outstanding as the hero, even if the songs by the Gipsy Kings were of average quality. The ersatz genre of the jukebox musical was represented by *Never Forget*—a tribute show to the British boy band Take That—and by a wonderful reimagining and staging of Jimmy Cliff's 1972 reggae film, *The Harder They Come*, which did not find the audience it merited.

The West End was galvanized by two events. The first was director Emma Rice's adaptation of the 1946 David Lean film *Brief Encounter* (itself based on Noel Coward's one-act *Still Life*) as a brilliant mixed-media "happening"—video, fluid stage locations, and vaudeville—in the cinema on the Haymarket where Lean's film had received its premiere. Producer David Pugh worked in collaboration with Kneehigh, one of the United Kingdom's most innovative companies, which also performed at the NT—e.g., in *War Horse* (2007).

The second jolt was provided by the Donmar Warehouse's launching of a West End season at Cameron Mackintosh's magnificently refurbished Wyndham's Theatre on Charing Cross Road. The Donmar continued to prosper at its home base in Covent Garden, with glorious revivals of Pam Gems's *Piaf* starring Elena Roger (it moved into the Vaudeville for a season) and Enid Bagnold's 1956 *The Chalk Garden* (also slated for possible transfer, starring Margaret Tyzack and Penelope Wilton). Donmar artistic director Michael Grandage launched a phenomenally interesting season with Kenneth Branagh in the title role of Chekhov's *Ivanov*, in a new version by Tom Stoppard, and with Sir Derek Jacobi as Malvolio in *Twelfth Night*.

Branagh's return to the London stage after a five-year absence was triumphant. The actor sought no sympathy as a gentleman farmer swimming in debts and depression while his Jewish wife—to whom he is unfaithful and verbally abusive—dies of tuberculosis. The wife was played with pellucid beauty by Gina McKee, but the whole company bristled with spirit and intelligence, from Lorcan Cranitch's impetuous estate manager and Kevin R. McNally's alcoholic neighbour right through to Andrea Riseborough's startling ingenue and Sylvestra Le Touzel's rapacious social climber.

Grandage—whose scheduled NT debut, directing Georg Büchner's *Danton's Death*, was delayed in 2008—imported his familiar high-level production values from his home base in the little 225-seat Donmar Warehouse; the dilapidated designs of Christopher Oram, the exquisite lighting of Paule Constable, and the gloriously discreet sound track of Adam Cork all proclaimed the new technical golden age in the British theatre.

The RSC scored heavily with its season of Shakespeare's history plays at north London's Roundhouse. The season in Stratford—where the Courtyard proved a great success as a temporary home while the main theatre was being rebuilt across the road—had mixed success: *The Merchant of Venice* was generally derided, and *The Taming of the Shrew* starred two unattractive actors and was burdened by a cumbersome "concept." However, David Tennant—best known as Doctor Who on BBC television—was outstanding both as Hamlet and as Berowne in *Love's Labour's Lost*, in productions directed by Gregory Doran.

The best overall Shakespeare work was at the Globe on the river in Southwark, where David Calder gave a marvelously moving *King Lear;* hot new director Jonathan Munby gave new life and spring to *A Midsummer Night's Dream;* and Christopher Luscombe masterminded a delectable production of *The Merry Wives of Windsor*, with Serena Evans and Sarah Woodward as the jolly scheming spouses.

There were several other notable new plays. The Globe, surprisingly, came up with Ché Walker's *The Frontline*, which was a contemporary Ben Jonson-style report from the muddle of drug-infested Camden Town, and the Royal Court garnered raves for American playwright Christopher Shinn's *Now or Later*, in which a Democratic presidential candidate's final push to victory is nearly sabotaged by his son's behaviour.

Ralph Fiennes (top), Janet McTeer (centre), and Ken Stott (bottom) perform in God of Carnage, *a new play by Yasmina Reza, at the Gielgud Theatre in London on March 18.*

Kirsty Wigglesworth/AP

Eddie Redmayne, a rising star, played the freckle-faced transgressor.

At the NT an ongoing success story continued under artistic director Nicholas Hytner (who confirmed that he would stay on at least until London hosted the Olympic Games in 2012). There were tremendous new plays from Simon Stephens and Rebecca Lenkiewicz. Stephens's was *Harper Regan*, an urban odyssey not dissimilar to Mike Leigh's defining movie *Naked* (in which the brilliant NT actress Lesley Sharp, who played Harper, also appeared), while Lenkiewicz's *Her Naked Skin* was directed by Howard Davies and featured Lesley Manville and newcomer Jemima Rooper as a lesbian couple highlighted against the turmoil of the Edwardian suffrage movement.

The NT also presented Howard Brenton's intriguing chronicle play about former prime minister Harold MacMillan, *Never So Good*, with Jeremy Irons in the lead; a magisterial revival of Shaw's *Major Barbara* with Simon Russell Beale and Clare Higgins; a lively version of Thomas Middleton's Jacobean shocker *The Revenger's Tragedy*, with Rory Kinnear (touted as the NT's next Hamlet) entering the underworld of a sleazy nightclub; and Ralph Fiennes as Oedipus in Jonathan Kent's impressively hieratic revival of Sophocles' tragedy, in a new version by Irish playwright Frank McGuinness, with Fiennes in imposing form and an all-male chorus given much individual character and speeches set to music by Jonathan Dove.

The very best new plays of the year, however, were off the beaten track. Philip Ridley's *Piranha Heights* at the Soho Theatre was a stunning account of disastrous interracial dysfunctional relationships at the top of an East London high rise, and Anthony Neilson's *Relocated* in the Royal Court's upstairs studio was a creepy thriller of false accusation and secret fears in the context of mounting public hysteria over child abuse. Sam Shepard's *Kicking a Dead Horse* at the Almeida Theatre, though critically lambasted, was a far-from-insignificant Wild West version of Beckett's *Happy Days*, with Stephen Rea, one of Shepard's most loyal and perceptive interpreters, charting his character's comic cultural dilemma by the side of his own supine equine.

The Almeida under Michael Attenborough had another good year, with a brilliant revival of Harold Pinter's *The Homecoming*; an extraordinary, highly charged theatrical presentation of Stephen Adly Guirgis's *The Last Days of Judas Iscariot* from Philip Seymour Hoffman's LAByrinth company (recast with local actors); and an insidious, compelling revival by Anthony Page of Ibsen's *Rosmersholm* starring Helen McCrory and Paul Hilton.

It was the 50th anniversary year of Pinter's *The Birthday Party*, and a fine production was duly given at the Lyric in Hammersmith, where the play had received its premiere; the staging was timely, in light of Pinter's death at the end of the year. (*See* OBITUARIES.) The Bite program at the Barbican celebrated its 10th anniversary with a particularly rich series headed by Robert Lepage's nine-hour, nine-play masterpiece *Lipsynch*. Kevin Spacey's Old Vic was electrified by his double act with Jeff Goldblum in David Mamet's *Speed-the-Plow*, followed by Matthew Warchus's glorious revival of Alan Ayckbourn's famous trilogy of comedies, *The Norman Conquests*.

Across the road the Young Vic offered a fascinating revival of Thomas Babe's *A Prayer for My Daughter*, which stood up well. The house maintained a high profile with a brilliantly theatrical revival by Richard Jones of Bertolt Brecht's *The Good Soul of Szechuan* (Jane Horrocks opened valiantly in the title role shortly after the real-life natural disasters in that Chinese province) and an overpowering staging of Kurt Weill's *Street Scene*, given too short a run but unquestionably one of the outstanding shows of the year.

The Menier Chocolate Factory marked time with revivals of old Broadway musicals. Jerry Herman and Harvey Fierstein's *La Cage aux folles* was done well, with Douglas Hodge and Philip Quast as the sentimental lovers (Denis Lawson replaced Quast when the show transferred to the Playhouse in October). Marvin Hamlisch and Carole Bayer Sager's *They're Playing Our Song* featured Connie Fisher, chosen in 2006 by television viewers to play Maria in *The Sound of Music*, but she failed to enhance her leading-lady status in the role of a ditsy lyricist.

Liverpool was designated the European Capital of Culture, and the sprawling, diverse drama program included a giant mechanical spider crawling all over the office buildings in the city centre and a *King Lear* in which Pete Postlethwaite renewed his early roots at the Everyman Theatre. The Edinburgh Festival was a bit of a washout—it rained incessantly for three weeks—though everyone loved the raunchy vaudeville *La Clique*, which moved to London at the Hippodrome (formerly the Talk of the Town). The Dublin Theatre Festival hosted Vanessa Redgrave in her startling NT performance (seen in 2007 on Broadway) as Joan Didion in *The Year of Magical Thinking* and presented a new dance drama, *Dodgems*, set on a real fairground bumper-car track. (MICHAEL COVENEY)

U.S. and Canada. The radical economic downturn in the U.S. during the closing months of 2008 sent a chill through both the commercial and the nonprofit sectors of the American theatre. For Broadway the consequences were immediate: holiday tourism slumped; investment capital for all but the safest new projects went south; regular theatergoers slammed their wallets shut; and closing notices were posted in November and December for a spate of shows—including such ostensibly enduring hits as the musical *Hairspray*, slated to close in January 2009 after a six-year run, and Tony Award winners *Spamalot* and *Spring Awakening*—that had been expected to run for months, even years, into the future.

The nation's nonprofit regional theatres, more insulated from the slump's immediate effects by multiseason support from foundations and corporate givers, nevertheless shifted into crisis mode as well, recognizing that belt-tightening loomed on the horizon. The ominous mood was further darkened by the closing of at least four major theatre organizations across the country, including the influential but debt-ridden 30-year-old Theatre de la Jeune Lune of Minneapolis, Minn., and once-viable resident companies in Milwaukee, Wis., Stamford, Conn., and San Jose, Calif.

Hard times were nothing new for the theatre business, of course, and the industry took heart late in the year as the speeches and policy positions of President-elect Barack Obama offered hope that the health of the arts in general—and the National Endowment for the Arts (NEA) in particular—would be high on the coming administration's agenda.

The economic trepidation in some circles was matched by a proud sense of accomplishment in others. Broadway's alarming losses were compensated for, artistically at least, by superb productions of two American classics of the post-World War II era—the 1949 Rodgers and Hammerstein musical *South Pacific*, staged at Lincoln Center Theater with characteristic élan by Bartlett Sher (now in his eighth year as

Sara Krulwich—The New York Times/Redux

Jesse Williams (top) and Lois Markle perform in Edward Albee's absurdist short The Sandbox *at the Cherry Lane Theatre in New York City in March.*

artistic director of Seattle's Intiman Theatre), and Arthur Miller's 1947 drama *All My Sons*, which received a revelatory experimental treatment from British director Simon McBurney. Working with a cast led by John Lithgow, McBurney, the moving force behind the acclaimed London-based ensemble Complicite, employed Brechtian presentation and cinematic flourishes that unleashed a strain of raw power in Miller's warhorse of a play that more conventional productions had failed to tap. (*South Pacific* more or less swept the 2008 Tony Awards, with seven wins, including awards for direction and design; the Miller revival would be up for award consideration in 2009.)

It was a big year for another American theatrical icon, Edward Albee, who turned 80 on March 12. Among three major productions of his work in New York City and environs that were staged during the year were an intriguing self-directed revival of his absurdist shorts *The Sandbox* (1959) and *The American Dream* (1961) and the debut at Princeton, N.J.'s McCarter Theatre Center of *Me, Myself, and I*, an uncharacteristically sunny (and typically punny) treatment of family dysfunction.

The development of new plays continued to receive widespread support in 2008, via such efforts as a new NEA-funded initiative administrated by Arena Stage of Washington, D.C.; the newly established Yale Center for New Theatre in New Haven, Conn., underwritten by a $2.8 million Robina Foundation grant; the Public LAB of New York City's Public Theater, flush with $2.7 million from the Mellon Foundation; and such new-play standard-bearers as the Sundance Institute of Utah, Minneapolis's Playwrights' Center, and New York's New Dramatists. Up-and-comers Tarell Alvin McCraney (*Wig Out*), Shelia Callaghan (*Dead City*), Itamar Moses (*The Four of Us*), and Julie Marie Myatt (*Welcome Home, Jenny Sutter*) were among the new generation of writers to watch.

One of the most talked-about new plays of the season was Octavio Solis's *Lydia*, a dark, poetic melodrama of complex family relationships and sexual violence, set in the writer's native border town of El Paso, Texas. Commissioned and premiered by the Denver Center Theatre Company, *Lydia* was headed for high-profile productions in Los Angeles, New Haven, Conn., and elsewhere.

All 10 of the late August Wilson's 20th-century-cycle plays were mounted in chronological order of setting at the Kennedy Center in Washington, D.C., in March and April, under the overall supervision of Kenny Leon, artistic director of True Colors Theatre Company of Atlanta, Ga. Aiming to present the works "as if they were cut from the same cloth," Leon shared directorial duties with Wilson specialists Israel Hicks, Todd Kreidler, Gordon Davidson, Derrick Sanders, and Lou Bellamy.

Major job changes on the American scene included a virtual round-robin of artistic directorships in Massachusetts: Diane Paulus, whose Broadway-bound Shakespeare in the Park revival of *Hair* was a sensation in New York, took the reins of the influential American Repertory Theatre in Cambridge, Mass., and Peter DuBois moved from his associate director slot at the Public Theatre to the top job at Boston's Huntington Theatre Company. The Huntington's Nicholas Martin, hitting his stride at 70, moved northwest to head the summer-season Williamstown Theatre Festival.

In Canada the much-discussed restructuring of the Stratford Shakespeare Festival went shockingly awry; Marti Maraden and Don Shipley, two members of the three-pronged leadership team that had been announced the previous year, abruptly backed out in March before their tenure began, leaving the American director Des McAnuff as sole head. McAnuff took on Shaw's *Caesar and Cleopatra* as well as *Romeo and Juliet* and imported Stratford's first international production, Deutsches Theater of Berlin's already-well-traveled *Emilia Galotti*. Montreal-based auteur Robert Lepage, who had received the 2007 Europe Theatre Prize, continued to impress audiences and critics around the world with his lavishly visual high-tech interpretation of Hector Berlioz's *La Damnation de Faust*, which impressed audiences and critics at New York City's Metropolitan Opera and elsewhere.

Fringe festivals continued to thrive in major Canadian cities. Toronto's version marked its 20th anniversary by beginning a Next Stage fest-within-a-fest, with selected participants who had already proved themselves on the national fringe circuit (rather than being programmed by the usual lottery-selection process). These handpicked "cream of the crop" shows—in tandem with the festival's on-site heated beer tent—attracted a reported 4,500 spectators in chilly January.

Theatre figures who died during 2008 included actress Estelle Getty, better known for her role in TV's *Golden Girls* than for her considerable accomplishments in Broadway and Off-Broadway productions; playwright William Gibson, author of *The Miracle Worker* and *Two for the Seesaw;* and director and master teacher Paul Sills, a proponent of theatre games invented by his mother, Viola Spolin, and leader of Chicago's ragtag Compass Players, precursor of the comedy troupe Second City (*see* OBITUARIES); other losses included Robert Alexander, creator of the Living Stage Theatre Company, which served for more than 30 years as the community outreach arm of D.C.'s Arena Stage; actress and playwright Oni Faida Lampley; Montreal-born Richard Monette, who led Canada's Stratford Shakespeare Festival for 14 seasons; and Barbara Ann Teer, founder of the National Black Theatre of Harlem. (JIM O'QUINN)

MOTION PICTURES

United States. In a year without Harry Potter, other Hollywood franchises

filled the cinemas with plenty of fantasy and excitement. *Indiana Jones and the Kingdom of the Crystal Skull* gave enjoyable proof that time really can stand still; no bones creaked as director Steven Spielberg and his star Harrison Ford resumed the breezy adventure series for the first time since 1989. The tone of Spielberg's sequel contrasted sharply with the dark complexities and anguish of Christopher Nolan's second Batman adventure with Christian Bale (*see* BIOGRAPHIES), *The Dark Knight*—a film given a frisson all its own by the death in January of Heath Ledger (*see* OBITUARIES), cast as the frighteningly maniacal Joker, the most evil of Batman's adversaries.

Daniel Craig returned as James Bond in *Quantum of Solace* (Marc Forster), a cold film so pumped up for action that characters scarcely had room to breathe. Livelier action-adventure was available in Guillermo del Toro's *Hellboy II: The Golden Army*, a feast of rococo images and humour, and the Marvel Comics spin-off *Iron Man* (Jon Favreau), lifted out of the genre pile by the intense performance of Robert Downey, Jr. (*see* BIOGRAPHIES), as the superhero thrust into the front line against foreign foes of the United States. Klaatu, the extraterrestrial ambassador from the 1951 classic *The Day the Earth Stood Still*, returned in the form of Keanu Reeves in Scott Derrickson's lavish but unimaginative remake.

The year's political dramas were chiefly confined to the real world and to the American presidential elections. Still, it was hard to ignore Oliver Stone's *W.*, a surprisingly judicial treatment of the presidency and early years of George W. Bush, boisterously impersonated by Josh Brolin. Ron Howard's film of Peter Morgan's play *Frost/Nixon* extracted much human interest from the famous 1977 television meeting between interviewer David Frost (Michael Sheen) and disgraced former president Richard M. Nixon (Frank Langella). On the "war on terrorism" front, Ridley Scott's *Body of Lies* made superficial attempts to treat CIA antiterrorist operations realistically, but the film was essentially popcorn fodder.

Enough thoughtful quality product kept audiences' brains engaged. Steven Soderbergh went overboard with ambition in *Che*, an epic two-part biography of the Marxist revolutionary Che Guevara; although the film was weak as drama, it was bolstered by Benicio Del Toro's central performance (he won the best actor prize at the Cannes Festival). Mickey Rourke galvanized Darren Aronofsky's *The Wrestler* with his comeback performance as a faded wrestler attempting to get back on top. In *Changeling*, featuring Angelina Jolie, Clint Eastwood directed one of his most finely controlled and vibrant films; it was inspired by a true story of murder and deception in Los Angeles in the 1920s. *Revolutionary Road*, Sam Mendes's scrupulous adaptation of Richard Yates's 1961 novel, locked the viewer into American suburbia in the 1950s; Leonardo DiCaprio and Kate Winslet excelled as the married couple unable to live happily ever after. The hardships of Brad Pitt (*see* BIOGRAPHIES) proved longer and stranger in *The Curious Case of Benjamin Button*, David Fincher's smoothly accomplished film about a man who ages backward from wizened youth to unlined old age.

After several years of small-scale experimentation, director Gus Van Sant moved closer to the mainstream with *Milk*, a brilliantly observed account of the public career in the 1970s of Harvey Milk, one of the first openly gay politicians in the United States. Sean Penn (an unorthodox casting choice) lit up the film with his mischief and warmth. John Patrick Shanley's version of his Pulitzer Prize-winning play *Doubt* featured a strident Meryl Streep as the Roman Catholic-school nun who spreads suspicions about Philip Seymour Hoffman's priest, but the play's power remained. British director Danny Boyle showed fizz galore in *Slumdog Millionaire*, a bustling film about a Mumbai (Bombay) street kid accused of having cheated on a TV show.

In the animation field, the best undoubtedly was *WALL•E* (Andrew Stanton), Pixar's tale of robot love on an Earth trashed and deserted by humans. *Madagascar: Escape 2 Africa* (Eric Darnell, Tom McGrath) was the rare animation sequel that was actually better than the original. Teenage viewers rushed to see Zac Efron in *High School Musical 3: Senior Year* (Kenny Ortega). This cinema spin-off from the television-movie phenomenon was typically spirited and well staged, but it offered little dramatic nourishment.

Michael Patrick King's film *Sex and the City* was thinly plotted, but four years after the television comedy series ended, fans were still happy to see Carrie Bradshaw (Sarah Jessica Parker) and her fellow New Yorkers, now in their 40s, talk about their lives and dreams. Bigger audiences across the world flocked to *Mamma Mia!*, Phyllida Lloyd's version of the upbeat stage musical garlanded with ABBA songs; it was the year's one resounding feel-good film. *Vicky Cristina Barcelona*, set in Spain, was a funny Woody Allen movie about sexual attraction, sparked into extra heat by the teaming of Javier Bardem (*see* BIOGRAPHIES) and Penélope Cruz. Wider audiences enjoyed Jason Segel and Kristen Bell in *Forgetting Sarah Marshall* (Nicholas Stoller)—a comedy that was rude one minute and sweet the next (in the current fashion) but that was dispatched with well-drawn characters. Two giants in the film industry, Paul Newman and Charlton Heston, died during the year. (*See* OBITUARIES.)

Warner Bros./Everett Collection

Australian actor Heath Ledger—who died from an accidental drug overdose in January—stars as the Joker and Welsh actor Christian Bale portrays Batman in the Hollywood blockbuster **The Dark Knight.**

British Isles. No British film discomfited or transfixed the viewer as much as *Hunger*, the first feature by the video artist Steve McQueen, which described with eloquent visual detail the last weeks of the Irish Republican Bobby Sands in 1981 as he starved himself to death in prison. Michael Fassbender's performance was courageous and unflinching. Mike Leigh, known for exploring urban misery, lightened his mood for *Happy-Go-Lucky*, an ambling comedy about the daily whirl of a chattering, optimistic schoolteacher. Shane Meadows, another individualistic chronicler of modern

Britain, offered *Somers Town*, the natural and funny tale of a cross-cultural teenage friendship. Director Terence Davies returned with *Of Time and the City*, a modest film essay about his home city, Liverpool.

Among "heritage" films, Julian Jarrold's *Brideshead Revisited* bathed the viewer in 1920s nostalgia; though details of Evelyn Waugh's revered novel were changed, the film kept enough of its spirit. Australian director Stephan Elliott's jazzy spin on Noël Coward's play *Easy Virtue* met with a mixed reception, as did *The Edge of Love* (John Maybury), a stylistically confused drama about the wartime loves of 20th-century poet Dylan Thomas. History received a contemporary kick in *The Other Boleyn Girl* (Justin Chadwick), which featured Scarlett Johansson as Mary, sister of Anne Boleyn. Lavish settings and Keira Knightley's beauty dominated another American co-production, *The Duchess;* unfortunately, the drama about the 18th-century duchess of Devonshire lacked meat and wasted the talents of a promising director, Saul Dibb.

Among films set in the present, Noel Clarke's *Adulthood*, a sequel to the earlier *Kidulthood* (2006; directed by Menhaj Huda, written by Clarke), pitched its antiviolence story at the level of a scream, but it proved a hit with British youth pleased to see their own lives mirrored on the screen. The powerful *The Boy in the Striped Pyjamas* (Mark Herman), adapted from John Boyne's novel, viewed the Holocaust through the eyes of the young son of a concentration camp commandant. Asa Butterfield's performance as the boy was exceptional.

Canada, Australia, and New Zealand. No film could top the ambition, length, or flamboyance of Baz Luhrmann's *Australia*—165 minutes of colourful melodrama, stunning landscapes, and political breast-beating wrapped around a plot about Nicole Kidman's aristocratic English outsider who is trying to hold on to her late husband's land. Brandon Walters's mixed-race child supplied the film's political conscience and best performance; Hugh Jackman's cattle drover provided pin-up appeal. On a much smaller scale, Elissa Down's *The Black Balloon* was impressive for its caring treatment of the pressures of living with an autistic sibling. New Zealand's film scene remained quiet.

From Canada, Atom Egoyan's *Adoration*, one of the director's typically multilayered dramas, centred on an orphaned high-school student trying to make sense of his life and the dangerous world. In *Ce qu'il faut pour vivre* (*The Necessities of Life*), Benoît Pilon sensitively explored the experiences of an Inuit tuberculosis sufferer in a Quebec City hospital.

Western Europe. A looming global recession did nothing to stop the French industry from spending $115 million, its largest-ever sum for a film, on *Astérix aux Jeux Olympiques*. French critics tore Frédéric Forestier and Thomas Langmann's comedy to shreds, but they found enough to praise elsewhere. Adapted from François Bégaudeau's memoir, Laurent Cantet's *Entre les murs* (*The Class*), the Palme d'Or winner at the Cannes Festival, swept the viewer into the daily life of garrulous, obstreperous Parisian students and their junior-high-school teacher (convincingly played by Bégaudeau himself). Arnaud Desplechin, a specialist in wayward epics of introverted talk, tightened his grip somewhat in *Un Conte de Noël* (*A Christmas Tale*), which featured Catherine Deneuve as a dysfunctional family's matriarch who needs a bone marrow transplant. The unexpected French hit of the year was Dany Boon's *Bienvenue chez les Ch'tis* (*Welcome to the Sticks*), a comedy that made fun of regional prejudices. Philippe Claudel's *Il y a longtemps que je t'aime* (*I've Loved You So Long*) told the story of two sisters reconnecting after a gap of 15 years; the director and his actors, Kristin Scott Thomas and Elsa Zylberstein, shared the pleasant knack of finding big resonances in small things. A tougher view of life prevailed in *Les Hauts Murs*, Christian Faure's unflinching drama based on the true story of a teenage boy desperate to escape from an imprisoning orphanage.

Belgian filmmakers Jean-Pierre and Luc Dardenne presented the spare *Le Silence de Lorna* (*Lorna's Silence*), a brooding account of a young Albanian woman (brilliantly played by Arta Dobroshi) caught in a deadly immigration scam. Bouli Lanners's *Eldorado* offered absurdist comedy with melancholy touches. Bolder entertainment came from Joachim Lafosse's *Élève libre* (*Private Lessons*), a subversive comedy about a naive teenager and his dangerously sophisticated summer tutor.

Two Italian films displayed fresh energy and a new confidence about wading into the country's political life. Matteo Garrone's *Gomorra* (*Gomorrah*), based on a best-selling exposé, used a chilling documentary approach to strip the glamour from Mafia crime in Naples; the film won the Grand Prix at Cannes. Paolo Sorrentino's jaunty *Il divo* presented the internecine career of the politician Guilio Andreotti, wickedly portrayed by Toni Servillo. Struggling immigrants came under a sophisticated spotlight in Francesco Munzi's *Il resto della notte* (*The Rest of the Night*); the bare life of a Sardinian shepherd took centre stage in *Sonetàula* (Salvatore Mereu), a film that was a victory for Italian neorealism and the painterly, measured image.

In Germany, Uli Edel's *Der Baader Meinhof Komplex* (*The Baader Meinhof Complex*) reactivated painful memories of the Red Army Faction's revolutionary terrorism in the 1960s and '70s. Nikolai Müllerschön's *Der Rote Baron*

(continued on page 288)

Marco Macor (left) and Ciro Petrone perform in Italian filmmaker Matteo Garrone's crime drama Gomorra, *which garnered the Grand Prix at Cannes.*

IFC Films/Everett Collection

INTERNATIONAL FILM AWARDS 2008

Golden Globes, awarded in Beverly Hills, California, in January 2008

Best drama	*Atonement* (U.K./France; director, Joe Wright)
Best musical or comedy	*Sweeney Todd: The Demon Barber of Fleet Street* (U.S./U.K.; director, Tim Burton)
Best director	Julian Schnabel (*Le Scaphandre et le papillon* [*The Diving Bell and the Butterfly*], France/U.S.)
Best actress, drama	Julie Christie (*Away from Her*, Canada)
Best actor, drama	Daniel Day-Lewis (*There Will Be Blood*, U.S.)
Best actress, musical or comedy	Marion Cotillard (*La Môme* [*The Passionate Life of Edith Piaf; La Vie en rose*], France/U.K./Czech Republic)
Best actor, musical or comedy	Johnny Depp (*Sweeney Todd: The Demon Barber of Fleet Street*, U.S./U.K.)
Best foreign-language film	*Le Scaphandre et le papillon* (*The Diving Bell and the Butterfly*) (France/U.S.; director, Julian Schnabel)

Sundance Film Festival, awarded in Park City, Utah, in January 2008

Grand Jury Prize, dramatic film	*Frozen River* (U.S.; director, Courtney Hunt)
Grand Jury Prize, documentary	*Trouble the Water* (U.S.; directors, Carl Deal and Tia Lessin)
Audience Award, dramatic film	*The Wackness* (U.S.; director, Jonathan Levine)
Audience Award, documentary	*Fields of Fuel* (U.S.; director, Josh Tickell)
World Cinema Jury Prize, dramatic film	*Ping-pongkingen* (Sweden; director, Jens Jonsson)
World Cinema Jury Prize, documentary	*Man on Wire* (U.K.; director, James Marsh)
Best director, dramatic film	Lance Hammer (*Ballast*, U.S.)
Best director, documentary	Nanette Burstein (*American Teen*, U.S.)

British Academy of Film and Television Arts, awarded in London in February 2008

Best film	*Atonement* (U.K./France; director, Joe Wright)
Best director	Joel Coen and Ethan Coen (*No Country for Old Men*, U.S.)
Best actress	Marion Cotillard (*La Môme* [*The Passionate Life of Edith Piaf; La Vie en rose*], France/U.K./Czech Republic)
Best actor	Daniel Day-Lewis (*There Will Be Blood*, U.S.)
Best supporting actress	Tilda Swinton (*Michael Clayton*, U.S.)
Best supporting actor	Javier Bardem (*No Country for Old Men*, U.S.)
Best foreign-language film	*Das Leben der Anderen* (Germany; director, Florian Henckel von Donnersmarck)

Berlin International Film Festival, awarded in February 2008

Golden Bear	*Tropa de elite* (Brazil; director, José Padilha)
Silver Bear (Grand Jury Prize)	*Standard Operating Procedure* (U.S.; director, Errol Morris)
Best director	Paul Thomas Anderson (*There Will Be Blood*, U.S.)
Best actress	Sally Hawkins (*Happy-Go-Lucky*, U.K.)
Best actor	Reza Najie (Mohammed Amir Naji) (*Avaze gonjeshk-ha*, Iran)

Césars (France), awarded in Paris in February 2008

Best film	*La Graine et le mulet* (*Couscous*) (France; director, Abdellatif Kechiche)
Best director	Abdellatif Kechiche (*La Graine et le mulet* [*Couscous*], France)
Best actress	Marion Cotillard (*La Môme* [*The Passionate Life of Edith Piaf; La Vie en rose*], France/U.K./Czech Republic)
Best actor	Mathieu Amalric (*Le Scaphandre et le papillon* [*The Diving Bell and the Butterfly*], France/U.S.)
Most promising actor	Laurent Stocker (*Ensemble, c'est tout*, France)
Most promising actress	Hafsi Herzi (*La Graine et le mulet* [*Couscous*], France)

Academy of Motion Picture Arts and Sciences (Oscars; U.S.), awarded in Los Angeles in February 2008

Best film	*No Country for Old Men* (U.S.; directors, Ethan Coen and Joel Coen)
Best director	Ethan Coen and Joel Coen (*No Country for Old Men*, U.S.)
Best actress	Marion Cotillard (*La Môme* [*The Passionate Life of Edith Piaf; La Vie en rose*], France/U.K./Czech Republic)
Best actor	Daniel Day-Lewis (*There Will Be Blood*, U.S.)
Best supporting actress	Tilda Swinton (*Michael Clayton*, U.S.)
Best supporting actor	Javier Bardem (*No Country for Old Men*, U.S.)
Best foreign-language film	*Die Fälscher* (*The Counterfeiter*) (Austria/Germany; director, Stefan Ruzowitzky)
Best animated film	*Ratatouille* (U.S.; director, Brad Bird)

Cannes Festival, France, awarded in May 2008

Palme d'Or	*Entre les murs* (*The Class*) (France; director, Laurent Cantet)
Grand Prix	*Gomorra (Gomorrah)* (Italy; director, Matteo Garrone)
Jury Prize	*Il divo* (Italy/France; director, Paolo Sorrentino)
Best director	Nuri Bilge Ceylan (*Uc maymun* [*Three Monkeys*], France/Italy/Turkey)
Best actress	Sandra Corveloni (*Linha de passe*, Brazil)
Best actor	Benicio Del Toro (*Che*, France/Spain/U.S.)
Caméra d'Or	*Hunger* (U.K./Ireland; director, Steve McQueen)

INTERNATIONAL FILM AWARDS 2008 (continued)

Locarno International Film Festival, Switzerland, awarded in August 2008

Golden Leopard	*Parque vía* (Mexico; director, Enrique Rivero)
Special Jury Prize	*33 sceny z zycia* (*33 Scenes from Life*) (Germany/Poland; director, Malgorzata Szumowska)
Best actress	Ilaria Occhini (*Mar nero*, Italy/Romania/France)
Best actor	Tayanc Avaydin (*Pazar: Bir ticaret masali*, Germany/Turkey/U.K./Kazakhstan)

Montreal World Film Festival, awarded in September 2008

Grand Prix of the Americas (best film)	*Okuribito* (*Departures*) (Japan; director, Yojiro Takita)
Best actress	Barbara Sukowa (*Die Entdeckung der Currywurst* [*The Invention of the Curried Sausage*], Germany)
Best actor	Erick Cañete (*El viaje de Teo* [*Teo's Voyage*], Mexico)
Best director	Goran Markovic (*Turneja* [*The Tour*], Serbia/Bosnia and Herzegovina)
Special Grand Prix of the Jury	*Ce qu'il faut pour vivre* (*The Necessities of Life*) (Canada; director, Benoît Pilon)
Best screenplay	*Bienvenido a Farewell-Gutmann* (*Welcome to Farewell-Gutmann*) (Spain; writers, Jesús G. Vilda and Xavi Puebla); *Dare mo mamotte kurenai* (*Nobody to Watch over Me*; *The Guardian*) (Japan; writer, Ryoichi Kimizuka)
International film critics award	*Turneja* (*The Tour*) (Serbia/Bosnia and Herzegovina; director, Goran Markovic)

Venice Film Festival, awarded in September 2008

Golden Lion	*The Wrestler* (U.S.; director, Darren Aronofsky)
Special Jury Prize	*Teza* (Ethiopia/Germany/France; director, Haile Gerima)
Volpi Cup, best actress	Dominique Blanc (*L'Autre* [*Occupation; The Other One*], France)
Volpi Cup, best actor	Silvio Orlando (*Il papà di Giovanna* [*Giovanna's Father*], Italy)
Silver Lion, best director	Aleksey German, Jr. (*Bumaznyj soldat*, Russia)
Marcello Mastroianni Award (best young actor or actress)	Jennifer Lawrence (*The Burning Plain*, U.S.)
Luigi De Laurentiis Award (best first film)	*Pranzo di ferragosto* (*Mid-August Lunch*) (Italy; director, Gianni Di Gregorio)

Toronto International Film Festival, awarded in September 2008

Best Canadian feature film	*Lost Song* (director, Rodrigue Jean)
Best Canadian first feature	*Le Jour avant le lendemain* (*Before Tomorrow*) (directors, Marie-Hélène Cousineau and Madeline Ivalu)
Best Canadian short film	*Block B* (director, Christopher Chan Fui Chong)
International film critics award	*Lymelife* (U.S.; director, Derick Martini); *Disgrace* (Australia/South Africa; director, Steve Jacobs)
People's Choice Award	*Slumdog Millionaire* (U.K./U.S.; director, Danny Boyle)

San Sebastián International Film Festival, Spain, awarded in September 2008

Best film	*Pandoranin kutusu* (*Pandora's Box*) (Turkey/France/Germany/Belgium; director, Yesim Ustaoglu)
Special Jury Prize	*Asbe du-pa* (*Two-Legged Horse*) (Iran; director, Samira Makhmalbaf)
Best director	Michael Winterbottom (*Genova*, U.K.)
Best actress	Melissa Leo (*Frozen River*, U.S.); Tsilla Chelton (*Pandoranin kutusu* [*Pandora's Box*], Turkey/France/Germany/Belgium)
Best actor	Oscar Martínez (*El nido vacío* [*Empty Nest*], Argentina/Spain/France/Italy)
Best cinematography	Hugo Colace (*El nido vacío* [*Empty Nest*], Argentina/Spain/France/Italy)
New directors prize	Cao Baoping (*Li ni de cai xiang* [*The Equation of Love and Death*], Hong Kong/China)
International film critics award	*Tiro en la cabeza* (Spain/France; director, Jaime Rosales)

Vancouver International Film Festival, awarded in October 2008

People's Choice Award (most popular Canadian film)	*Mothers&Daughters* (director, Carl Bessai)
People's Choice Award (most popular international film)	*Il y a longtemps que je t'aime* (France/Germany; director, Philippe Claudel)
National Film Board Best Canadian Documentary Award	*Fiercelight: When Spirit Meets Action* (director, Velcrow Ripper)
Citytv Western Canada Feature Film Award	*Fifty Dead Men Walking* (director, Kari Skogland)
Kyoto Planet "Climate for Change" Award	*Blue Gold: World Water Wars* (U.S.; director, Sam Bozzo)
Dragons and Tigers Award for Young Cinema	*Perfect Life* (China/Hong Kong; director, Emily Tang)

Chicago International Film Festival, awarded in October 2008

Gold Hugo (best film)	*Hunger* (U.K./Ireland; director, Steve McQueen)
Silver Hugo (Special Jury Prize)	*Tokyo sonata* (*Tokyo Sonata*) (Japan/Netherlands/Hong Kong; director, Kiyoshi Kurosawa)
Best documentary	*Valentino: The Last Emperor* (U.S.; director, Matt Tyrnauer)

European Film Awards, awarded in Berlin in December 2008

Best European film	*Gomorra* (*Gomorrah*) (Italy; director, Matteo Garrone)
Best actress	Kristin Scott Thomas (*Il y a longtemps que je t'aime*, France/Germany)
Best actor	Toni Servillo (*Il divo*, Italy/France, and *Gomorra* [*Gomorrah*], Italy)

(PATRICIA BAUER)

(continued from page 285)
(*The Red Baron*), a biography of the World War I pilot Baron Manfred von Richthofen, looked good but suffered from a poor script. Dennis Gansel's *Die Welle* tracked the dangerous progress of a school course in fascist politics. In the thriller *Jerichow*, director Christian Petzold displayed his usual knack for tense psychological drama.

Two Spanish films treated Basque terrorism. Manuel Guitérrez Aragón's *Todos estamos invitados* painted a flawed but lively portrait of a society accustomed to violence; Jaime Rosales's more forbidding *Tiro en la cabeza* used formal experimentation to investigate politics in the abstract.

Among Scandinavian countries, Denmark scored with *Flammen & citronen* (*Flame & Citron*), Ole Christian Madsen's subtle treatment of life and intrigue during the Nazi occupation. The country's immigrant communities came under the spotlight in Omar Shargawi's intense thriller *Gå med fred Jamil* (*Go with Peace Jamil*) and Natasha Arthy's high-quality teenage drama *Fighter*, which featured a Turkish immigrant family and the martial art kung fu. Painstaking visual craftsmanship stamped the Swedish film *Maria Larssons eviga ögonblick* (*Everlasting Moments*), Jan Troell's true story of a dedicated family woman who gradually discovers her gift for photography. Lacerating relationships dominated *Himlens hjärta*, Simon Staho's raw drama about two couples led toward danger by a dinner-party discussion about adultery. In *O'Horten*, the slight story of a train engineer at a loss in retirement, Norwegian director Bent Hamer offered another of his offbeat humanistic comedies.

Eastern Europe. Turkey's cinema industry had a bustling year. Nuri Bilge Ceylan's family drama *Uc maymun* (*Three Monkeys*) offered little relief from the clouds of doom hovering over the characters, but the director's grip was impressive; the film won the Cannes Festival's best director prize. *Tatil kitabi* (*Summer Book*), from a new director, Seyfi Teoman, was a far friendlier film, deftly illuminating ordinary lives through its story of a family in the agricultural provinces. Another impressive talent emerged in Ozcan Alper's *Sonbahar* (*Autumn*), a searching drama about a political prisoner's return home. Veteran actress Tsilla Chelton lent backbone and humour to *Pandoranin kutusu* (*Pandora's Box*), Yesim Ustaoglu's film about a country matriarch with Alzheimer disease.

Serbia's biggest domestic hit was Uros Stojanovic's *Carlston za Ognjenku* (*Tears for Sale*), an engaging black comedy about two sisters from a war-devastated mountain village who are desperate to find a virile male. Gritty realism dominated the Russian *Vse umrut, a ya ostanus* (*Everybody Dies but Me*), Valeriya Gay Germanika's urgent portrait of troubled adolescents in the Moscow suburbs. In Kazakhstan documentary maker Sergey Dvortsevoy made a striking feature debut with *Tulpan*, a Cannes prizewinner that explored the lives of nomadic shepherds with a potent blend of landscape, humour, and ethnographic detail.

Little of note emerged from Hungary, though Bela Paczolay's *Kalandorok* ("Adventurers") sent three family members on a road trip with speed and a twist of personality. In the Czech Republic, Petr Zelenka's sophisticated *Karamazovi* (*The Karamazov Brothers*) viewed Dostoevsky's novel through various fancy mirrors, including scenes from a powerful stage production. The biggest hit in the Slovak language was *Muzika* ("Music") by Juraj Nvota, a sad-funny sex comedy set in the 1970s. Slovakia's (and the Czech Republic's) most commercially successful film was *Bathory* (Juraj Jakubisko), an unwieldy but colourful English-language co-production, featuring Anna Friel as the legendary Hungarian countess.

In Poland veteran director Andrzej Wajda returned after a five-year gap with *Katyn* (2007), a muted account of the Soviet massacre in 1940 of Polish army officers, intellectuals, and prisoners of war. More satisfying was *Cztery noce z Anna* (*Four Nights with Anna*), Jerzy Skolimowski's first work in 17 years; this small-scale film was nourished by the director's feeling for obsessive love and the oddities of human behaviour. Malgorzata Szumowska's German co-production *33 sceny z zycia* (*33 Scenes from Life*) peered into its heroine's troubled life with sometimes uncomfortable dedication.

Latin America. No Latin American product enjoyed a grander showcase than Brazilian director Fernando Meirelles's English-language production *Blindness*, which opened the Cannes Festival. A plainer visual style might have drawn audiences closer to the characters from José Saramago's novel, who are trapped in a degrading world and collectively going blind. Walter Salles and Daniela Thomas found an audience with *Linha de passe*, a slight but humane film about four brothers in São Paulo trying to make their way honestly. In *Os desafinados* Walter Lima, Jr., a veteran of Brazil's Cinema Novo movement, delivered an affectionate if messy tribute to the bossa nova music boom. No affection warmed José Padilha's *Tropa de elite*, a high-pressured and violent celebration of Brazil's military police. The film won the Berlin festival's top prize, the Golden Bear.

In Mexico Enrique Rivero made a notable directing debut with *Parque vía*, a low-key drama about a caretaker's fragile solitary life. Francisco Franco, from the theatre, was revealed as another director to watch with his sharply etched *Quemar las naves*, excellent in its depiction of a bourgeois family under pressure. In further signs of the region's health, impressive new directors also surfaced in Costa Rica (Ishtar Yasin Gutiérrez, with *El camino*), Uruguay (Federico Veiroj, with *Acné*, a vivid portrait of adolescent pangs), and Chile, where José Luis Torres Leiva displayed a master's hand in *El cielo, la tierra, y la lluvia*, a bracing mood piece about isolated lives.

In Argentina cult director Lisandro Alonso moved closer to mainstream tastes with *Liverpool*, a subtly textured drama about a returning sailor haunted by his past. Prison claustrophobia was vividly depicted in Pablo Trapero's *Leonera* (*Lion's Den*), and the film was further strengthened by Martina Gusman's performance as a university student fated to give birth in prison. Elegant reflections and regret dominated *La ventana* (*The Window*), Carlos Sorin's marvelously atmospheric film about an aged aristocrat who is waiting for the return of a long-lost son.

Middle East. No film from the region tested audiences' resolve more than *Asbe dū-pa* (*Two-Legged Horse*), from the young Iranian director Samira Makhmalbaf. Through stark images the film showed an Afghan youth hired to carry about on his back a crippled boy who is bent on humiliating him. Dramas featuring social issues, an Iranian specialty, included *3 zan* (*3 Women*), Manijeh Hekmat's naturalistic study of women searching for their roots and identities, and Majid Majidi's *Avaze gonjeshk-ha* ("The Song of Sparrows"), an imperfect but humane story that pits rural verities against Tehran's modern whirlwind. Shot with great care, Panahbarkhoda Rezaee's *Cheraghi dar oueh* ("A Light in the Fog") placed the hard life of a widow under a micro-

scope. Cult director Abbas Kiarostami experimented in *Shirin*, which consists of the reactions on 113 female faces—112 Iranian actresses, plus Juliette Binoche—to a 12th-century Persian play performed offscreen. The film was for connoisseurs only.

Israel generated the extraordinary and powerful animated film *Vals im Bashir* (*Waltz with Bashir*), Ari Folman's often hallucinatory recollection of his experiences as a soldier during Israel's invasion of Lebanon in 1982. In *Etz Limon* (*Lemon Tree*), Eran Riklis, director of the 1991 hit *Gmar Gavi'a* ("Cup Final"), renewed his ability to make intelligent entertainment out of the Israeli-Palestinian border conflict. Guy Nattiv and Erez Tadmor also scored well with *Zarim* (*Strangers*), a roving tale of star-crossed love.

Sony Pictures Classics/Everett Collection

Ari Folman's animated film Vals im Bashir (Waltz with Bashir), *related a soldier's experiences during Israel's invasion of Lebanon in 1982.*

India. Commerce rather than art continued to dominate India's teeming film industry. Among Hindi costume spectaculars, Ashutosh Gowariker's *Jodhaa Akbar* led the field in star power, with Hrithik Roshan and Aishwarya Rai Bachchan top-billed as a 16th-century Muslim emperor and a Hindu princess who are engaged in a legendary romance. For once, character portrayals mattered more than big battles. Veteran director Shyam Benegal also put characters first in *Mahadev ka Sajjanpur* (*Welcome to Sajjanpur*), a warmly textured kaleidoscope of life in a central Indian village. The year also brought *Roadside Romeo*, directed by Jugal Hansraj—the first installment of a proposed series of Indian animated features co-produced with Walt Disney Pictures. The film, about the street adventures of a spoiled Mumbai dog, broke no boundaries, but children left satisfied.

East and Southeast Asia. Costing $80 million, John Woo's Chinese production *Chi bi* (*Red Cliff*) entered the record books as the most expensive film made to date in the Chinese language. The first segment of a two-part historical epic set during the unstable ancient period of the Three Kingdoms, it balanced tough action scenes with convincing characters, a trick also managed by Peter Chan's *Tau ming chong* (*The Warlords*). Director Gao Qunshu showed a bright talent for realism in his thoughtful thriller *Qian jun yi fa* ("Old Fish"); Cao Baoping revealed promise with *Li mi de cai xiang* (*The Equation of Love and Death*), a teasing diversion that intertwines a drug crime with three strangers seeking love.

South Korea maintained its furious level of production. Director Kim Ji Woon outdid himself with a strenuous spaghetti western imitation, *Joheunnom nabbeunnom isanghannom* (*The Good, the Bad, and the Weird*). Na Hong Jin's *Chugyeogja* (*The Chaser*) supplied serial-killer thrills wrapped up in social criticism. Fans of subtler fare could enjoy Hong Sang Soo's *Bam gua nat* ("Night and Day"), a surreal-tinged disquisition on self-delusion and the play between the sexes.

Japan's art cinema jewel was Hirokazu Koreeda's *Aruitemo aruitemo* (*Even if You Walk and Walk*), a deceptively modest slice of life, alert to every criss-crossing dynamic inside a dysfunctional family. Cheerful and cheeky, Koji Hagiuda's *Kodomo no kodomo* ("Child by Children") spun a tale about a pregnant 11-year-old girl without giving in to sensationalism.

Africa. South Africa delivered three notable films. Ralph Ziman's *Jerusalema* used glossy packaging and directorial force to make something distinctive from a stereotyped underworld story. The strengths of Anthony Fabian's *Skin*, a co-production between South Africa and the United Kingdom, lay in the straightforward treatment of its true story about a girl with black skin who was born to white parents. Steve Jacobs's *Disgrace*, co-produced with Australia, carved sturdy drama from J.M. Coetzee's novel; the film featured John Malkovich as a dissolute Cape Town academic who confronts the upheavals of South Africa and of his own soul. (GEOFF BROWN)

Documentary Films. Several major documentaries of 2008 addressed topics related to the war in Iraq. Alex Gibney's Academy Award-winning *Taxi to the Dark Side* used a young Afghan's story to examine controversial techniques used to elicit confessions from prisoners. Errol Morris directed *Standard Operating Procedure*, which looked into the prisoner-abuse scandal of 2004 at Abu Ghraib prison in Iraq; the film received the Jury Grand Prize at the 2008 Berlin Film Festival.

Trouble the Water, directed by Tia Lessin and Carl Deal, won the Grand Jury Prize: Documentary at the 2008 Sundance Film Festival, among other awards. The film explored the aftermath of Hurricane Katrina. *Flow: For Love of Water*, directed by Irena Salina, examined the world's water crisis. Yung Chang's *Up the Yangtze* (2007) chronicled the effects on the populace of the massive Three Gorges Dam project. The film received the Golden Gate Award at the San Francisco International Film Festival.

The subject of *Nerdcore Rising*, by Iranian American comedian Negin Farsad, was a form of hip-hop whose lyrics centred on nerd culture. The film was screened at events across the United States.

British filmmaker James Marsh directed *Man on Wire*, a chronicle of tightrope walker Philippe Petit's infamous journey in 1974 between the two towers of the World Trade Center in New York City. The work won the Jury Prize for World Cinema and the World Cinema Audience Award at the Sundance Film Festival, where the Documentary Directing Award was received by Nanette Burstein for *American Teen*, a film about high-school seniors in Warsaw, Ind. (BEN LEVIN)

Physical Sciences

Scientists discovered a new family of SUPERCONDUCTING materials and obtained unique images of individual HYDROGEN ATOMS and of a MULTIPLE-EXOPLANET SYSTEM. Europe completed the LARGE HADRON COLLIDER, and China and India took new steps in SPACE EXPLORATION.

CHEMISTRY

Solid-State Chemistry. The discovery in early 2008 of superconductivity in a rare-earth iron-arsenide compound (an iron pnictide) touched off a wave of intense research that quickly produced a large new chemical family of superconductors based on iron. More than 20 years had passed since researchers last discovered a new collection of chemically related superconducting materials—the ceramic copper-oxide superconductors.

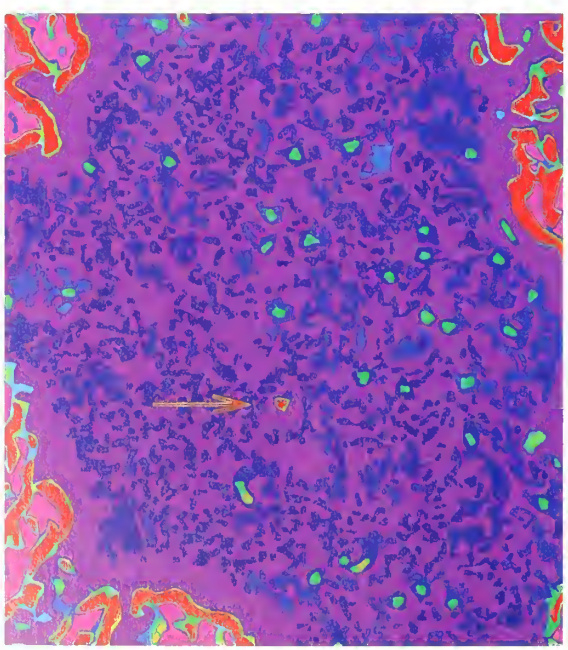
A superconductor loses all electrical resistance when cooled below a characteristic temperature called its critical temperature (T_c). Most superconductors, such as those used in the powerful electromagnets of magnetic-resonance devices, have a T_c close to absolute zero (0 K, −273.15 °C, or −459.67 °F). The identification of a new family of superconductors reawakened researchers' long-standing hope of finding materials with a critical temperature of room temperature (about 300 K) or above, which would open the door to many applications. (Among copper-oxide superconductors, the highest T_c that had been obtained was 138 K.)

Hideo Hosono and co-workers at the Tokyo Institute of Technology in February created the first-known iron-arsenide superconductor, lanthanum iron arsenide (LaOFeAs) doped with fluoride ions. The material, created through a combination of high-temperature and high-pressure methods, contained alternating layers of iron arsenide and lanthanum oxides and became superconducting at 26 K. Other laboratories soon began experimenting with similar compounds that used other rare-earth elements in place of lanthanum, and by late April researchers at laboratories in China had reported raising the T_c to 43 K by using samarium and to 52 K by using praseodymium. By late in the year, the highest T_c that had been established for the iron-arsenide family of superconductors was 56 K. It was reported by scientists at Zhejiang University, Hangzhou, China, in a material that contained gadolinium and thorium ($Gd_{0.8}Th_{0.2}FeAsO$).

Physical Chemistry. Individual heavy atoms—and single molecules made from those atoms—could be routinely examined in exquisite detail by means of a transmission electron microscope (TEM). The imaging of lower-mass atoms such as carbon by TEM continued to present a challenge, however, because they yielded extremely weak signals that were difficult to distinguish from instrument noise. For this reason the TEM imaging of atoms of hydrogen, the lightest element, had long been considered to be all but impossible. Nevertheless, in 2008 Alex Zettl and co-workers at the University of California, Berkeley, reported a technique for producing such images. They succeeded in part by developing methods for supporting hydrogen atoms on pristine films of graphene—one-atom-thick sheets of carbon—that were transparent under the team's imaging conditions. The researchers also utilized data-averaging techniques to boost their ability to extract high-resolution spatial data from directly imaged individual hydrogen and carbon atoms as well as carbon chains adsorbed on graphene.

The capabilities of TEMs were also broadened through the development of methods for capturing images and videos of single organic molecules in motion. The strategy used by Eiichi Nakamura and co-workers at the University of Tokyo was to trap molecules either inside or on the exterior of carbon nanotubes. For example, the group recorded rotational and bond-flexing changes in single molecules of aminopyrene derivatives that were fixed inside a nanotube. They also imaged a biotinylated triamide as it underwent a variety of shape-altering conformational changes while attached to a nanotube exterior. These studies captured the evolution of organic molecules in real time and might lead to new ways of directly observing reaction dynamics of complex molecules.

This transmission-electron-microscope image, coloured to add contrast, shows individual hydrogen atoms (green) and an individual carbon atom (red, with arrow).



Courtesy Zettl Research Group, Lawrence Berkeley National Laboratory and University of California at Berkeley

Organic Chemistry. Unexpected details of a classic reaction mechanism in organic chemistry were revealed by Roland Wester at the University of Freiburg, Ger., and colleagues. By using high-vacuum techniques to react beams of methyl iodide molecules and chloride ions, the team recorded direct evidence of a

reaction mechanism called bimolecular nucleophilic substitution (S_N2), but they found that the reaction did not always proceed in the way that had been taught for decades in introductory organic-chemistry courses.

According to the classic mechanism that depicted the interplay between reactants in this ubiquitous type of substitution reaction, the chloride ions should approach methyl iodide from the opposite side of the molecule's carbon-iodine bond. The "attacking" ion would cause the molecule to invert its tripod-shaped methyl radical (CH_3) and eject an iodide ion along the original carbon-iodine axis. The team found direct evidence of that mechanism when they collided molecular beams at low energy. In higher-energy collisions, however, they found that chloride slammed into the methyl iodide and imparted rotational energy that caused the molecule to tumble. After one rotation the chloride then displaced the iodide ion to complete the reaction.

Applied Chemistry. Solid catalysts lay at the heart of most of the chemical industry's production processes. Many of the factors critical to catalyst performance remained poorly understood, however, because of the difficulties in scrutinizing the inside of a working chemical reactor. For example, little was known about the way catalysts changed chemically and physically during the course of a reaction and the locations where reactions took place.

To learn about the way in which reactant gases flowed across a bed of powdered catalyst and where products were formed within the bed, Alexander Pines of the University of California, Berkeley, and co-workers developed a nuclear magnetic resonance (NMR) imaging method that enabled them to "see" inside a reactor. By reacting *para*-hydrogen (hydrogen molecules in which the two nuclei have opposite spin) with propylene in a microreactor, the team was able to monitor the highly enhanced NMR signals of the labeled propane-product molecules and thereby map their distribution throughout the reactor.

Another approach, used by a research team led by Bert M. Weckhuysen and Frank M.F. de Groot of the University of Utrecht, Neth., was based on scanning transmission X-ray spectroscopy. They showed that the X-ray method was well suited to probing the changing nature of solid catalysts during reaction. Demonstrating the method's strengths, the group mapped—with about 15-nm (nanometre; 1 nm = 10^{-9} m) spatial resolution—the locations of chemical species that formed on the surface of an iron catalyst while the solid was mediating Fischer-Tropsch synthesis. That carbon-coupling process was used commercially for making liquid (transportation) fuels from carbon sources such as natural gas and coal. A key feature of the customized microreactor used in the study was the device's ability to tolerate reaction conditions (atmospheric pressure and temperatures up to 350 °C [662 °F]) that were typical of industrial processes. The team found that as the reaction proceeded, the initial form of the catalyst, alpha ferric oxide (α-Fe_2O_3), changed to metallic iron and ferrosoferric oxide (Fe_3O_4). They also observed formation of an iron silicate (Fe_2SiO_4), a buildup of hydrocarbon products, and formation of other chemical species. This type of information could be used to design more effective and longer-lasting catalysts and more efficient chemical reactors. Further improvements to the system's X-ray optics were expected to increase the method's spatial resolution, with the goal of obtaining atomic-scale information.

Biochemistry. Changes in glycan (polysaccharide) structures in cell membranes accompanied the progression of disease and other key physiological cellular processes. As a result, glycans were attractive targets for biochemical imaging. Carolyn R. Bertozzi and co-workers at the University of California, Berkeley, described a method that made it possible to image carbohydrates as they were produced on the cell surfaces of living organisms. The researchers introduced an azide-tagged sugar (azide-derivatized *N*-acetylgalactosamine) into developing zebra-fish embryos in order to label their cell-surface glycans with azides. The group treated the embryos with a difluorinated cyclooctyne reagent to cause the labeled glycans to fluoresce. Then, by using a fluorescence microscopy method, the group imaged an increase in glycan biosynthesis in the jaw region, pectoral fins, and other organs of the living embryos. The researchers proposed that the technique could be generalized to other types of biomolecules.

Industrial Chemistry. DEET (*N*,*N*-diethyl-meta-toluamide) had been widely used around the world for decades as a potent repellent of blood-feeding insects. As the active component in commercial mosquito repellents, the compound had a reputation for effectively warding off mosquitoes and other annoying and disease-carrying pests. The molecular basis of DEET's effects, however, had not been clear. In experiments conducted with fruit flies and the mosquito that transmits malaria, Leslie B. Vosshall and co-workers at Rockefeller University, New York City, found that DEET blocked the electrophysiological responses of the insects' olfactory sensory neurons to attractive odour compounds, including lactic acid, a component of human sweat. Specifically, the repellent impeded the insects' ability to sniff out humans by inhibiting olfactory receptors that formed a complex with a coreceptor called OR83b. Knowing the way DEET worked and its molecular target, scientists could begin to use high-throughput screening methods to search for new insect repellents that would be even more effective and safer than DEET.

(MITCH JACOBY)

PHYSICS

Particle Physics. In 2008 the European Organization for Nuclear Research (CERN) near Geneva completed the construction of and inaugurated its new particle accelerator, the Large Hadron Collider, but full-scale operation was postponed until past the end of the year. (*See* Sidebar.) Meanwhile, experiments at two other research facilities produced surprising results.

Physicists at the Belle Collaboration, which was based at the High Energy Accelerator Research Organization (KEK) in Tsukuba, Japan, reported an unexpected asymmetry in the decay rates of exotic particles known as B mesons. The discovery suggested a possible solution to a major problem in particle physics: only tiny amounts of antimatter existed in the universe, but according to theoretical models, equal amounts of matter and antimatter would have been produced at the beginning of the universe in the big bang.

Yuri M. Litvinov and co-workers at Germany's Society for Heavy Ion Research in Darmstadt observed periodic oscillations in what should have been simple exponential decay curves of two radioactive isotopes (praesodymium-140 and promethium-142). The researchers concluded that this was caused by the oscillation between two different types of neutrinos emitted in the decay. Such oscillations had previously been observed only in solar neutrinos with experiments that had required the use of huge underground detection systems. If the findings were

The Large Hadron Collider—The World's Most Powerful Particle Accelerator

On Sept. 10, 2008, scientists of the European Organization for Nuclear Research (CERN), Geneva, ran the first test operation of what had been described as the largest machine and the most ambitious scientific experiment ever built—the Large Hadron Collider (LHC). For the test the scientists successfully guided beams of subatomic particles around a ringlike structure that was about 27 km (17 mi) in circumference and formed the heart of the collider. The structure was located in an underground circular tunnel that CERN had originally built for an earlier particle accelerator called the Large Electron-Positron Collider (1989–2000). The tunnel lay beneath the French-Swiss border near Geneva at a depth of 50–175 m (165–575 ft).

The LHC was designed to send two beams of hadrons (protons and other particles that are composed of quarks) in opposite directions around the ringlike structure. Initially, protons (hydrogen nuclei) would be used, but later experiments were planned with heavy ions such as lead nuclei, which consist of protons and neutrons. Within the LHC the particles traveled in channels evacuated to a higher vacuum than that of deep space and cooled to within two degrees of absolute zero. During full-scale operation, the particles would be accelerated to speeds within one-millionth of a percent of the speed of light. At four points in the tunnel, the paths of the particles intersected so that some of the particles would crash into each other and produce large numbers of new particles. Huge magnets weighing tens of thousands of tons and banks of detectors would collect and record the particles produced at each collision point. Under maximum power, collisions between protons would take place at a combined energy of up to 14 trillion electron volts—about seven times greater than had been achieved previously by any other particle accelerator.

The LHC project took a quarter of a century to realize. Planning began in 1984, and in 1994 CERN's governing body gave the final go-ahead for the project. Many thousands of scientists and engineers from dozens of countries were involved in designing, planning, and building the LHC, and the cost of its construction was more than $5 billion. The first full-scale operation of the LHC had been scheduled for late 2008 but was postponed in order to investigate and repair a leak that developed in the collider's helium cooling system because of an electrical malfunction.

One goal of the LHC project was to understand the fundamental structure of matter by re-creating the extreme conditions that, according to the big bang theory, occurred in the first few moments of the universe. (The high energy involved had led some critics to contend that the LHC might create a small black hole that could destroy the Earth, but safety reviews by scientists refuted such concerns and concluded that the collider would not produce anything that had not already been produced by high-energy cosmic-ray collisions in the atmosphere.) For decades physicists had used the so-called standard model to describe the fundamental particles that make up matter. The model had worked well but had weaknesses. First, and most important, it did not explain why some particles have mass. In the 1960s British physicist Peter Higgs postulated a type of particle that interacts with other particles to provide their mass. Higgs particles had never been observed, but it was expected that they could be produced in the very high energy collisions of the LHC. Second, the standard model required some arbitrary assumptions, which some physicists had suggested might be resolved by postulating a new class of supersymmetric particles—these particles might also be produced by the collisions in the LHC. Finally, examination of asymmetries between particles and their antiparticles might provide a clue to another mystery: the imbalance between matter and antimatter in the universe.

As with all groundbreaking experiments, the most exciting results might be unexpected ones. In British physicist Stephen Hawking's view, "It will be much more exciting if we don't find the Higgs. That will show that something is wrong and we need to think again."

(DAVID G.C. JONES)

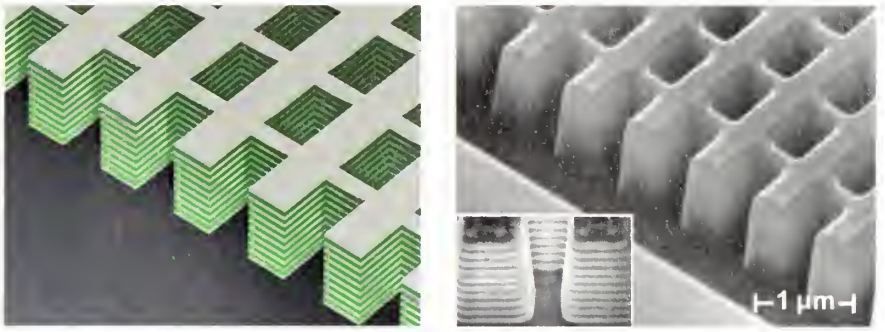
confirmed, it might be possible to examine the properties of neutrinos through the decay characteristics of heavy ions and would therefore be relatively easy to investigate.

Quantum Information Storage and Retrieval. Many research groups were studying structures called quantum dots, which might form the next generation of computers. Quantum dots could be made either from tiny groups of atoms (usually of semiconductor materials) that acted together as a single atom or from Bose-Einstein condensates (BECs), tiny clouds of atoms that shared the same quantum state. Information was transmitted in such structures as qubits—bits of information carried by individual quanta.

A major problem in developing quantum computers was the retention and storage of information over a long period of time. Brian D. Gerardot of Heriot-Watt University, Edinburgh, and colleagues demonstrated the storage of information via the two spin states of a valence hole in a semiconductor quantum dot that remained stable for about one millisecond. Using a different approach, Sylvain Bertaina and coworkers at the National Centre for Scientific Research at Grenoble, France, used a molecular magnet that consisted of a vanadium V^{IV}_{15} molecule about one nanometre in diameter. The molecule contained magnetic ions whose coupled spins were able to form collective-spin qubits. The researchers suggested that such systems might have a stability of about 100 microseconds.

An amazing feature of quantum-dot systems was that they might be able to teleport information from one quantum dot to another instantaneously by a phenomenon called quantum entanglement. Kwang Seong Choi and colleagues at the California Institute of Technology succeeded in storing two entangled photon states in separate atomic clouds and then retrieving the states after a short delay. Yu-Ao Chen and colleagues at the University of Heidelberg, Ger., went one step farther and demonstrated teleportation between photonic (light-based) and atomic qubits. The polarization state of a single photon was teleported over a distance of 7 m (23 ft) onto a remote atomic qubit that served as a quantum memory. The state was stored for up to eight microseconds. The researchers also produced a type of "quantum repeater" in which "entanglement swapping" with the storage and retrieval of light between two atomic ensembles was possible. This approach addressed

Jason Valentine/UC Berkeley



The schematic at left and inset at bottom of image at right show the layered structure of a three-dimensional fishnet metamaterial fabricated to have an optical property not known in nature—a negative refractive index. The scale bar in the scanning electron microscope image at right indicates one micrometre (0.00004 in).

the degradation of signals over long distances, which was a major problem in working with quantum-dot systems.

Condensed-Matter Physics. Physicists had begun to use BECs to produce bright coherent matter waves, called atom lasers, which held great promise for precision measurements and for fundamental tests of quantum mechanics. In 2008 Nicholas P. Robins and colleagues at the Australian National University in Acton claimed to be the first to have generated a continuous atom-laser beam from a rubidium BEC cloud that was continuously supplied with new atoms pumped in from a physically separate cloud.

Thorsten Schumm and associates at the Vienna University of Technology constructed so-called atom chips—blocks of material with microscopic wire structures to manipulate ultracold gases—that were able to perform BEC operations such as splitting one condensate into two parts that could then be held in place.

Superconductivity. Hideo Hosono and co-workers at the Tokyo Institute of Technology discovered an entirely new class of superconductor (a material that loses all electrical resistance when cooled below a characteristic temperature). The new material consisted of a layered iron-based compound and became superconducting at 26 K (−247 °C [−413 °F]). (See *Chemistry*, above.)

At the Argonne National Laboratory near Chicago, Valerii Vinokur and colleagues devised the inverse of a superconductor—a "superinsulator," which had zero electrical conductance. They used a film of titanium nitride, which was usually superconducting. It became a super insulator, however, when cooled below a certain critical temperature in the presence of a magnetic field. The conductive state of the material depended on the strength of the applied magnetic field and the thickness of the sample.

Solid-State Physics. In a move toward realizable technological devices, Alberto Politi and co-workers at the Centre for Quantum Photonics, University of Bristol, Eng., produced high-fidelity silica-on-silicon integrated optical realizations of key quantum-photonic circuits, including a two-photon quantum interference, a controlled-NOT gate, and a path-entangled state of two photons. These results showed that it was possible to form sophisticated photonic quantum circuits directly onto a silicon chip.

Helena Alves and co-workers at Delft (Neth.) University of Technology investigated interfaces between crystals of organic molecules. Transfer of charge on a molecular scale produced a highly conducting metal-like interface, and the results could point to a new class of electronic material.

As integrated circuits with ever-smaller components were developed, there would come a time when quantum-physical phenomena would prevent further size reduction. K. Nishiguchi and colleagues of the NTT Corp., Kanagawa, Japan, demonstrated a method of potentially circumventing this limitation by using the quantum-mechanical tunneling of single electrons in a transistor to carry out pattern-matching operations.

Lasers and Optics. The search continued for laser systems that generated radiation at new wavelengths. Harumasa Yoshida and colleagues at Hamamatsu (Japan) Photonics K.K. reported an aluminum-gallium-nitride laser diode that emitted ultraviolet light at 342 nanometres, the shortest wavelength reported for an electrically driven laser diode. Ying Yang and co-workers at the University of St. Andrews, Scot., described a laser that used an inorganic light-emitting diode (LED) to activate a polymer (organic) lasing material. Such a device could provide a cheap and compact source of radiation across the visible spectrum.

In other laser systems, Jan Schafer and colleagues at the University of Erlangen-Nürnberg (Ger.) observed multimode laser action in the red region of the spectrum from isolated spherical liquid microcavities that contained cadmium-selenide/zinc-sulfide nanocrystal quantum dots. S.I. Tsintzos and fellow workers at the University of Crete, Heraklion, Greece, produced a gallium-arsenide LED that involved quasiparticles called polaritons (a hybrid of light and matter). They were produced by the strong coupling between photons and excitons (another type of quasiparticle, formed by an electron and a positive hole) in semiconductor microcavities. The unique properties of polaritons might provide the basis for a new generation of polariton emitters and semiconductor lasers.

In the field of general optics, physicists continued work on negative-index metamaterials—artificially engineered structures with negative refractive indexes. Jason Valentine and co-workers at the University of California, Berkeley, produced a three-dimensional metamaterial with low energy loss and a negative refractive index in the optical region of the spectrum. Such materials opened up a vast field for new optical devices, which might possibly include "invisibility cloaks."

Fundamental Physics. Two research groups added to the knowledge of the reality underlying modern physics. A major feature of quantum mechanics was the property of entanglement, by which information appeared to be transported instantaneously between two quantum devices. In terms of classical physics, this would imply that the information traveled faster than the speed of light, which was explicitly disallowed by relativity theory. Daniel Salart and co-workers at the University of Geneva carried out an experiment to determine the lowest speed at which such a transfer of information, if it existed, would take place. Taking measurements of two-photon interference between detectors that were 18 km (11 mi) apart, the researchers concluded that any interaction would have to travel at a speed greater than 10,000 times the speed of light. A second

problem in modern physics was the apparent theoretical incompatibility of quantum mechanics with general relativity across very small distances. It had been suggested that this might be an indication that at such distances Newton's law of gravitational attraction broke down. Andrew Geraci and colleagues at Stanford University, however, showed that the law continued to hold down to a distance of 10 micrometres. (DAVID G.C. JONES)

ASTRONOMY

Solar System. A trio of spacecraft made a multitude of new discoveries about the planets Mercury, Mars, and Saturn in 2008. On January 14 and again on October 6, the NASA Messenger spacecraft flew within 200 km (125 mi) of the surface of Mercury, the solar system's innermost planet. This was the first mission to the planet since the Mariner 10 spacecraft made three flybys of Mercury in 1974–75. By the end of its October flyby, Messenger had photographed more than 90% of the planet, including most of the regions that had not been seen by Mariner 10. That mission had revealed that flat plains cover much of the planet, and a detailed analysis of the Messenger images showed that the plains were formed from lava flows rather than impact debris. Among new surface features that were detected was one, called "the spider," formed by more than 100 trenches that radiate outward from a central mass complex. Multicolour images of some of the craters on the planet suggested that they are no more than a few hundred million years old. Messenger data showed that Mercury's magnetic field is highly symmetrical, which supported the idea that the field is being generated by an active dynamo in a hot molten iron core. Messenger was to make another flyby of Mercury in 2009 before it settled into orbit around the planet in 2011.

NASA's Phoenix Mars Lander touched down on the surface of Mars on May 25. It was the first spacecraft to land on the northern polar regions of Mars. The main goal of the mission was for the lander to dig into the Martian surface and look for the presence of chemicals that could play a role in living organisms. Even before the analysis of the soil began, images of the Martian surface taken by cameras on the lander had revealed the presence of water ice. Analysis of scoops of Martian soil by the lander's miniature onboard laboratory—which included wet-chemistry labs and optical and atomic-force microscopes—revealed that the soil contained inorganic salts of chlorine, magnesium, sodium, and potassium. The soil was found to be slightly alkaline, with a pH of between 8 and 9. Although the lander was not designed to determine whether life had existed on Mars, its instruments could determine the presence or absence of organic molecules in the soil. The cold of the Martian winter brought an end to the mission in November. Also during the year observations by NASA's Mars Reconnaissance Orbiter revealed the presence of hydrated silica over large regions of the surface of Mars. These observations suggested that there had been liquid water on the surface of Mars as recently as two billion years ago.

The Cassini spacecraft in orbit around Saturn continued to report new discoveries about the large gaseous planet and its many satellites. Saturn's tiny moons Atlas and Pan, which lie just inside and outside Saturn's A ring, have the general appearance of fat pancakes. They, together with the moons Prometheus, Pandora, and Daphnis appear to have a very low density—between 0.38 and 0.45 g per cu cm, or less than one-half the density of water. The observations suggested that these moons accreted material from the nearby rings of Saturn. The Cassini spacecraft came within 500 km (310 mi) of Rhea, Saturn's second largest moon, in 2005, and it unexpectedly detected the presence of rocky debris in orbit around the moon. After scientific analysis the first reported discovery of rings around a moon of any planet in the solar system was announced in March 2008.

Stars. New discoveries of planets in orbit around stars other than the Sun continued to excite scientists. Since their initial detection in 1995, more than 300 extrasolar planets had been found, and they ranged in mass from about four Earth masses to about 20 times the mass of Jupiter. Thirty of the more than 200 stars known to have an extrasolar planet had been found to have more than one planet.

Although astronomers had found extrasolar planets mainly by indirect methods, such as by detecting tiny periodic motion in the stars they orbited, in 2008 two groups of astronomers succeeded in directly imaging extrasolar planets. Using a camera on the Hubble Space Telescope, a team of astronomers led by Paul Kalas of the University of California, Berkeley, took visible-light photographs of a planet in orbit around Fomalhaut, a relatively nearby star. Designated as Fomalhaut b, the planet was calculated to have a mass more than three times the mass of Jupiter and to orbit the star at a distance 10 times the distance between the Sun and Saturn. Because the planet appeared brighter than would be expected for an object of its size, however, some astronomers suggested that the body

Earth Perihelion and Aphelion, 2009

Jan. 4	Perihelion, approx. 15:00[1]
July 4	Aphelion, approx. 02:00[1]

Equinoxes and Solstices, 2009

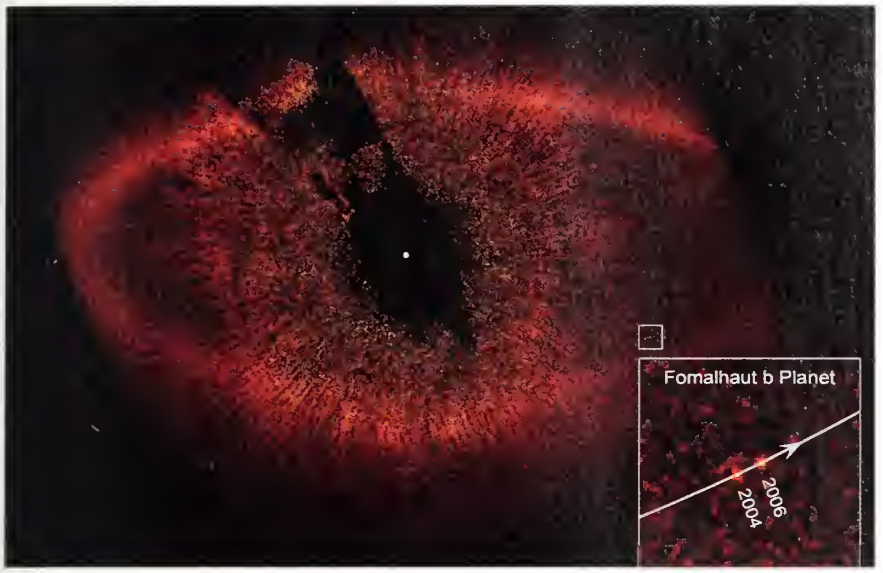
March 20	Vernal equinox, 11:44[1]
June 21	Summer solstice, 05:46[1]
Sept. 22	Autumnal equinox, 21:19[1]
Dec. 21	Winter solstice, 17:47[1]

Eclipses, 2009

Jan. 26	Sun, annular (begins 4:56[1]), visible along a path beginning in the southern Atlantic Ocean and extending across the Indian Ocean to Borneo; with a partial phase visible in the southeastern Atlantic Ocean, East Antarctica, southern Africa, the Indian Ocean, Southeast Asia, and Australia.
Feb. 9	Moon, penumbral (begins 12:36[1]), the beginning visible in North America (except the eastern part), the Pacific Ocean, Australia, and Asia (except the western part); the end visible in the western Pacific Ocean, Australia, Asia, the Indian Ocean, and the eastern parts of Europe and Africa.
July 7	Moon, penumbral (begins 8:32[1]), the beginning visible in North and South America, the Pacific Ocean, and eastern Australia; the end visible in western North and South America, the Pacific Ocean, and Australia.
July 21–22	Sun, total (begins 23:58[1]), visible along a path beginning in western India and extending through China to the south-central Pacific Ocean; with a partial phase visible in Asia (except the western and northern parts) and the western and central Pacific Ocean.
Aug. 5–6	Moon, penumbral (begins 23:01[1]), the beginning visible in western Asia, Europe, Africa, the Atlantic Ocean, and South America; the end visible in Europe, Africa, the Atlantic Ocean, South America, the southeastern Pacific Ocean, and eastern North America.
Dec. 31	Moon, partial (begins 17:15[1]), the beginning visible in the western Pacific Ocean, Australia, Asia, Europe, the Indian Ocean, and Africa (except for the western part); the end visible in Asia, the Indian Ocean, Europe, Africa, and the Atlantic Ocean.

[1] Universal time.
Source: *The Astronomical Almanac for the Year 2009* (2007).

NASA, ESA and P. Kalas (University of California, Berkeley, USA)



This Hubble Space Telescope colour-enhanced image shows the dust cloud around the star Fomalhaut. (The star, blocked out, is represented by the white dot at centre.) The inset at lower right is an enlargement of the small square area above it and combines images of a planetlike body (Fomalhaut b) taken in 2004 and 2006 as it moved in orbit around the star.

might be a clump of gas and dust in orbit around the planet. The second group of astronomers, led by Christian Marois of the Herzberg Institute of Astrophysics in Victoria, B.C., acquired infrared images for the first time of an extrasolar planet system with multiple planets. Using the Earth-based Gemini North and Keck telescopes in Hawaii, they found three planets orbiting star HR 8799, in the constellation Pegasus. Their respective distances from the star were about 25, 40, and 70 times that between the Earth and Sun.

A team of astronomers led by Michel Mayor of Geneva Observatory detected a planetary system around the star HD 40307 that resembles the solar system. The star is about 42 light years from Earth and has a mass of about eight-tenths that of the Sun. The star's three planets have masses of 4.2, 6.8, and 9.4 Earth masses and move in circular orbits around the star with periods of 4.3, 9.6, and 20.5 days, respectively. Since they are so close to the central star, they would have to be rocky objects like Mercury, Venus, and the Earth.

In March 2008 scientists announced the first discovery of an organic molecule in an extrasolar planet. Using the Hubble Space Telescope's Near Infrared Camera and Multi-Object Spectrometer, they detected methane in the atmosphere of a hot Jupiter-sized planet that orbits the star HD 189733b. Their observations also confirmed the existence of water in the atmosphere of the planet, which had been reported in 2007 from observations made with NASA's Spitzer Space Telescope. Together, these discoveries continued to reinforce the idea that the conditions for life might well exist on planets around many neighbouring stars.

On Jan. 9, 2008, scientists for the first time witnessed the earliest stages of the death of a massive star. Astronomers Alicia Soderberg and Edo Berger of Princeton University were using NASA's Swift X-Ray Observatory to study the X-ray emission from supernova 2007uy, which had exploded 10 days earlier in the galaxy NGC 2770. By happenstance, they witnessed a burst of X-rays that lasted seven minutes. They realized that the burst was being produced by an exploding supernova in the outer reaches of NGC 2770. According to well-established theory, supernova explosions occur when a massive star (5–10 times the mass of the Sun) depletes its nuclear fuel. The star's core then collapses rapidly and releases as much as 50% of the rest-mass energy of the core in a matter of seconds. This leads to the formation of a shock wave that propagates through the outer layers of the star and produces a burst of X-rays. Subsequently, the stellar remnant expands and cools and produces an optical-light emission, which is ordinarily detected from supernovae days and weeks after the initial core collapse. The new supernova, subsequently named SN 2008D, was the first ever observed during the X-ray-burst stage. Immediately following the report of the explosion, dozens of astronomical telescopes, including the Hubble Space Telescope, the Chandra X-ray Observatory, the 508-cm (200-in) telescope at Mt. Palomar (California), the Gemini North telescope, and the Very Large Array radio telescope (New Mexico), detected the supernova at radio and optical wavelengths. They confirmed that the observed phenomena represented the death of a massive star.

Galaxies and Cosmology. Some star deaths lead to another class of phenomena—gamma-ray bursts. Such bursts, which last from seconds to minutes, had been detected over the course of more than four decades. Many such bursts were thought to be produced in supernova explosions in which a part of the emitted energy is beamed into relativistic jets of particles and radiation. On March 19, 2008, NASA's Swift spacecraft alerted astronomers to the brightest gamma-ray burst observed to date. Named GRB080319B, the gamma-ray burst came from a galaxy 7.5 billion light years from the Milky Way Galaxy in the direction of the constellation of Boötes. For about a minute the object emitted as much radiation as 10 million galaxies. Such gamma-ray bursts are typically followed by an afterglow of visible light, and the brightness of the afterglow that followed this event reached about the fifth magnitude. Consequently, it was the most distant object ever recorded that was bright enough to be directly observable with the unaided eye.

In March scientists published a detailed analysis of the past five years of observations by NASA's Wilkinson Microwave Anisotropy Probe (WMAP), launched in 2001. According to the cosmological view supported by these observations, the universe began with a hot explosive event (the big bang), and as the universe expanded and cooled, it left behind radiation detectable at microwave wavelengths. The very small point-to-point fluctuations in the background radiation that remained amounted to only a few parts per million. The new analysis of the WMAP fluctuation data indicated that the universe is 13.73 billion years old with a precision of better than 1% and that the first stars formed only about 430 million years after the big bang. The data also implied that the universe is made up of only 4.5% ordinary matter (of the kind found in stars) and that the

rest of the universe appears to be made up of 23.4% dark matter and 72.1% dark energy. (KENNETH BRECHER)

SPACE EXPLORATION

Manned Spaceflight. A highlight of space exploration in 2008 was China's third manned space mission, on September 25–28. The Shenzhou 7 spacecraft carried three taikonauts (astronauts) into Earth orbit, and while in orbit taikonaut Zhai Zhigang conducted a 25-minute space walk—the program's first—to test a Chinese-built spacesuit. China said that a mission planned for 2010 would be the first step toward constructing a basic space station that would be composed of modules from two unmanned and one manned spacecraft.

The political turmoil triggered by Russia's invasion of Georgia in August called into question the planned retirement of the U.S. space shuttle in 2010. The U.S. was to rely on Russian Soyuz space launches for manned spaceflight capability for several years between the final mission of the shuttle and the first mission of its replacement, Orion. Although many space shuttle contracts were already being closed, some U.S. officials started to examine the possibility of continuing support of the shuttle until Orion was ready in about 2014.

In 2008 the space shuttle completed four flights to the International Space Station (ISS). The first, STS-122, delivered the European Space Agency's Columbus laboratory module. With a length of 7 m (23 ft) and diameter of 4.6 m (15 ft), it was larger than the American-built Destiny laboratory module, which was delivered to the ISS in 2001. Columbus could accommodate 10 laboratory racks for various types of gear for experiments. The third flight, STS-124, also delivered a new laboratory module—the Japanese Aerospace and Exploration Agency's Kibo (Hope). Kibo was Japan's first-ever component built for a manned space vehicle. About 11 m (36 ft) long, it barely fit inside the space shuttle's payload bay. Kibo could also hold up to 10 experiment racks, and it was equipped with two robotic arms that would be used with an external platform—to be delivered in 2009—for conducting experiments in the vacuum of space. Between the Columbus and Kibo missions, the STS-123 flight delivered the Canadian-built robot known as Dextre. The robot was designed to be attached to Canadarm 2 (a previously installed external manipulator arm), and it was to perform difficult tasks that would otherwise require a human to make a space walk. In addition, STS-123 carried a small Experiment Logistics Module that was stored on one of the station's nodes and later mounted atop Kibo. The STS-126 flight delivered equipment that included additional sleeping quarters, a new bathroom, and a water-recovery system to increase the crew capacity of the ISS to six persons. Members of the crew performed four space walks, including one to repair the jammed solar-array rotary joint that had severely restricted the power available on the station since September 2007.

STS-125, the final shuttle mission for servicing the Hubble Space Telescope (HST), was to have been the fourth shuttle flight in 2008. A few days before its scheduled launch in October, however, a device to format data on the HST failed. Within a short time the HST was switched over to a backup data formatter, but the mission was postponed until spring 2009 to allow NASA to ready a spare that would be carried aboard the flight.

The Soyuz TMA-12 mission took two new cosmonauts and a South Korean spaceflight participant to the ISS. The previous crew and the spaceflight participant returned on the Soyuz TMA-11 craft, which experienced a steep descent and rough landing about 400 km (250 mi) off target because the service module failed to separate from the descent module before their entry into the Earth's atmosphere. The previous Soyuz landing had experienced a similar incident, and Russia conducted a rigorous examination of the explosive bolts used to separate the Soyuz modules for entry into the atmosphere. Engineers determined that an electrical grounding problem was causing one of the bolts to malfunction, and in July cosmonauts removed the suspect bolt from the TMA-12 Soyuz while it was

Human Spaceflight Launches and Returns, 2008

Country	Flight	Crew[1]	Dates[2]	Mission/payload
U.S.	STS-122, *Atlantis*	Steve Frick Alan Poindexter Stanley Love Leland Melvin Rex Walheim Hans Schlegel Léopold Eyharts (u) Daniel Tani (d)	February 7–20	delivery of Columbus lab module
U.S.	STS-123, *Endeavour*	Dominic L. Gorie Gregory H. Johnson Richard M. Linnehan Takao Doi Robert L. Behnken Michael J. Foreman Garrett E. Reisman (u) Léopold Eyharts (d)	March 11–26	delivery of Dextre robotic system and of Kibo logistics module
Russia	TMA-12 (up)	Sergey Volkov Oleg Kononenko Yi So-yeon	April 8	transport of replacement crew to ISS
Russia	TMA-11 (down)	Yuri Malenchenko Peggy Whitson Yi So-yeon	April 19	return of departing ISS crew to Earth
U.S.	STS-124, *Discovery*	Mark E. Kelly Kenneth T. Ham Karen L. Nyberg Ronald J. Garan, Jr. Michael E. Fossum Akihiko Hoshide Gregory E. Chamitoff (u) Garrett E. Reisman (d)	May 31–June 14	delivery of Kibo lab module
China	Shenzhou 7	Zhai Zhigang Liu Boming Jing Haipeng	September 25–28	first space walk of Shenzhou program
Russia	TMA-13 (up)	Yury Lonchakov Michael Fincke Richard Garriott[3]	October 12	transport of replacement crew to ISS
Russia	TMA-12 (down)	Sergey Volkov Oleg Kononenko Richard Garriott[3]	October 23	return of departing ISS crew to Earth
U.S.	STS-126, *Endeavour*	Christopher J. Ferguson Eric A. Boe Stephen G. Bowen Robert S. Kimbrough Heidemarie M. Stefanyshyn-Piper Donald R. Pettit Sandra H. Magnus (u) Gregory E. Chamitoff (d)	November 14–30	delivery of crew equipment

[1] For shuttle flight, commander and pilot are listed first; for Soyuz flights, ISS commander is listed first.
[2] Flight dates for shuttle missions; Soyuz launch or return date for ISS missions.
[3] Flew as a paying passenger.
u = ISS crew member transported to station.
d = ISS crew member returned to Earth

docked to the ISS. In October the Soyuz craft returned to Earth and landed normally.

The European Space Agency launched its Autonomous Transfer Vehicle (ATV), an automatically piloted supply ship for the ISS. The first unit, dubbed Jules Verne, was launched on March 9. It made two test approaches by using the Global Positioning System and a laser tracking system, and then it performed an automated docking on April 3. After supplies were loaded onto the ISS and replaced with ISS waste, Jules Verne was undocked and sent into the atmosphere, where it burned up. Another three ATV missions were planned, and Japan was to introduce a similar transfer vehicle in 2009.

Space Probes. India joined the ranks of countries that had sent a spacecraft to the Moon when its Chandrayaan-1, launched on October 22, reached the Moon on November 8. (*Chandrayaan* is Hindi for "moon craft.") From an orbit only 100 km (60 mi) above the lunar surface, the spacecraft was to map the lunar terrain at high spectral and spatial resolution and with stereo images. A miniature synthetic aperture radar was designed to search for indications of any water hidden in the soil in the Moon's north and south polar regions.

NASA's Phoenix Mars Lander touched down in the north polar region of Mars on May 25. (Phoenix was constructed from a partially built spacecraft from the canceled Mars Surveyor 2001 program.) Its high-altitude landing site, on the plain Vastitas Borealis, permitted the lander's solar arrays to receive continuous summer daylight for its planned 90-day mission. Using a robotic arm, the spacecraft uncovered traces of water ice, and its equipment for chemical analysis showed that the surface-soil chemistry was highly alkaline. Phoenix continued to operate until early November.

More than four years after having landed on Mars and fulfilled their planned 90-day mission, the Opportunity and Spirit rovers continued exploring the planet. After completing a 24-month exploration of Victoria crater, Opportunity headed toward a 22-km (13.7-mi)-wide crater about 12 km (7.5 mi) away on a two-year trip that was to be made with the aid of imagery from the Mars Reconnaissance Orbiter. Spirit, in Gusev crater, was parked for the Martian winter and survived a dust storm that coated its solar panels with dust.

NASA

This false-colour mosaic image of Saturn's moon Enceladus from a 2008 Cassini flyby distinguishes areas thought to be boulders and coarse-grained ice (green) from those of finer-grained ice (white).

In 2008 the Messenger probe flew past Mercury on January 14 and October 6, and it was to make one additional flyby on Sept. 29, 2009. Each encounter reshaped the U.S. probe's solar orbit to target it for entry into Mercury orbit on March 18, 2011. Images obtained during the flybys revealed that Mercury's craters were only half as deep, proportionally, as those of the Moon.

NASA's New Horizons probe crossed the orbit of Saturn (though the planet was on the other side of the solar system) as it continued on its way to a flyby of Pluto in 2015. The Ulysses solar polar mission formally ended on June 30, a few months after having completed its third pass over the northern hemisphere of the Sun. Ulysses had studied the solar wind at higher solar latitudes than had previously been possible.

The Lunar Reconnaissance Orbiter was to be launched by NASA in early 2009 to scout potential landing sites for robotic and manned missions and for possible resources, including water. One instrument would measure the ambient radiation, data that were crucial for the safety of future crews. In an effort to determine the rate at which craters were being formed, cameras and other instruments would remap areas that had been studied during Project Apollo. The orbiter would also release a small probe that would impact the Moon.

Unmanned Satellites. Several science satellites were launched during the year. NASA's Gamma-ray Large Area Space Telescope, launched June 11, carried a large-area telescope for high-resolution studies of gamma-ray bursts. A burst monitor would immediately alert the spacecraft to any new gamma-ray bursts so that it could point the telescope at them within minutes and identify their source. On August 26, after completing a checkout of the onboard instruments, NASA renamed the spacecraft the Fermi Gamma Ray Space Telescope.

The Interstellar Boundary Explorer (IBEX) was carried into space on October 19 aboard an aircraft-launched Pegasus rocket. IBEX's propulsion motor was then used to form a high-apogee orbit from which the satellite was to map where the solar wind formed a shock wave as it collided with the interstellar medium at the far reaches of the solar system.

Launch Vehicles. The Sea Launch Zenit launch vehicles returned to service in January 2008 following repairs to fix damage caused to its floating ocean launch platform by the explosion of a Zenit rocket about one year earlier. Development of the Ares launch vehicle, derived from the space shuttle solid-rocket booster, encountered problems with unexpected vibrations that could affect crew performance during the first-stage burn. A shock-absorbing system was to be added to alleviate the problem. The first unmanned Ares I-X test launch was scheduled for mid-2009.

Success finally came to the SpaceX venture of hotel magnate Elon Musk. SpaceX had experienced three failures of its Falcon 1 launch vehicle in as many tries—the latest on Aug. 2, 2008, when the first and second stages failed to separate. On September 28 a fourth Falcon 1 was launched from the Kwajalein Atoll in the central Pacific Ocean. Although the satellite it carried failed to separate from the second stage, the rocket launch was rated as a success. SpaceX was planning on providing unmanned and manned missions to the ISS in the period between the discontinuance of the space shuttle and the start of Orion operations. (DAVE DOOLING)

Religion

The world's religions were plagued in 2008 by DIVISION AND STRIFE—including clashes between CHRISTIANS, HINDUS, AND MUSLIMS in India and further moves toward the REALIGNMENT of the worldwide Anglican Communion—yet ECUMENICAL EFFORTS continued; and the INFLUENCE OF RELIGION ON POLITICS was demonstrated in France, Turkey, South Korea, and the United States.

ISSUES AND EVENTS

Religious Violence. In March Asma Jahangir, the UN special rapporteur on freedom of religion, warned that renewed communal violence was a possibility in India unless authorities took preventative action. She declared that "institutionalized impunity for those who exploit religion and impose their religious intolerance on others has made peaceful citizens, particularly the minorities, vulnerable and fearful." Three months after her warning, the Indian government's plans to transfer land adjoining a Hindu shrine in Kashmir, India's only state with a Muslim majority, led to unrest that left five people dead and hundreds wounded. The government argued that the transfer of 40 ha (99 ac) of land to the Shri Amarnath Shrine Board was necessary to accommodate pilgrims to the Amarnath cave, one of the holiest shrines in Hinduism, but Muslim protesters said that the move was part of a conspiracy to settle Hindus in the valley and reduce Muslims to a minority. Authorities reversed the land transfer in late June, which in turn touched off Hindu protests and demonstrations by Muslim separatists who called for independence for Kashmir.

At least 35 people were killed in Orissa state, India, after the August 23 deaths of Swami Laxmanananda Saraswati, a Hindu leader, and four of his followers. The police declared that Maoist rebels had killed the swami, who had been trying to reconvert Christians to Hinduism, but many Hindu groups blamed the slayings on Christians. In subsequent weeks more than 4,000 Christian homes and 115 churches were destroyed in Orissa, and Hindus attacked Christians in the states of Karnataka, Tamil Nadu, Kerala, and Madhya Pradesh. In separate violence, an Islamic group called the Indian Mujahideen claimed responsibility for bomb blasts in Jaipur, Bangalore, Ahmedabad, and New Delhi in which more than 100 people were killed, saying that the violence was in revenge for attacks on Muslims.

Hindu holy men on July 12 protest the government's revocation of a previous land transfer to the Shri Amarnath Shrine in India's Muslim-majority state of Jammu and Kashmir. The original transfer had triggered demonstrations by Muslims who opposed expanding the Hindu shrine.

Channi Anand/AP

A series of terrorist attacks in Mumbai (Bombay) in late November that killed more than 174 people was attributed to Lashkar-e-Taiba, a Pakistani-based Islamic terrorist organization. (*See* Special Report on page 192.) Six of the victims died at the Nariman House, where an outreach centre run by Chabad-Lubavitch, an ultra-Orthodox Jewish Hasidic movement, was located. Indian Muslim leaders refused to allow the bodies of the nine attackers killed in the assaults to be buried in Islamic cemeteries.

A spokesman for the Dalai Lama said that 80 people were killed when more than 500 Buddhist monks participated in independence demonstrations in March in Lhasa, capital of the Tibet Autonomous Region of China. The Buddhist leader accused Chinese officials of having promulgated a rule of terror and cultural genocide, but the government-controlled New China News Agency reported that police had exercised "great restraint" while mobs stoned, stabbed, and clubbed them.

Anglican Rifts. The worldwide Anglican Communion faced renewed pressures in 2008 that could lead to a major realignment within its 38 national churches, which comprise about 77 million members. (*See* Special Report on page 188.) In June more than 1,000 conservative Anglicans, including 291 bishops, met in Jerusalem for what they called the Global Anglican Future Conference (GAFCON). The delegates issued a statement saying that although they were not breaking away from the communion, they "do not accept that Anglican identity is determined necessarily through recognition by the Archbishop of Canterbury." The GAFCON statement announced plans to form a new council of archbishops to oversee Anglicans who upheld traditional theological tenets and opposed moves to ordain homosexual clergy and bless same-sex unions. In response, Archbishop of Canterbury Rowan Williams countered that a self-appointed council "will not pass the test of legitimacy in the communion."

In July more than 650 bishops attended the decennial Lambeth Conference and acknowledged that the issue

of homosexuality "has challenged us and our churches on what it might mean to be a communion." The bishops added, "Confidence in the validity of the Anglican Communion, the bonds of affection and our mutual interdependence is severely damaged." Archbishop Williams warned that the communion would "continue to be in grave peril" if its churches in the United States and Canada were to refuse to accept moratoriums on the consecration of gay bishops and same-sex unions.

Bishop Robert Duncan of Pittsburgh was deposed in September from ministry in the Episcopal Church by a vote of the House of Bishops, which declared that Duncan's attempts to persuade his diocese to leave the church constituted abandonment of communion. (A similar action in 2007 by the diocese of San Joaquin, based in Fresno, Calif., had led to the deposition of its bishop, John-David Schofield, in January 2008.) In the fall the Pittsburgh diocese became the second to leave the Episcopal Church, aligning with the Anglican Province of the Southern Cone, and the dioceses of Quincy, Ill., and Fort Worth, Texas, also voted to leave. The Common Cause Partnership, a federation of more than 100,000 North American Anglicans, announced the formation of the Anglican Church in North America in December and appealed for its recognition as the 39th Anglican province. Meanwhile, American churches and dioceses that broke with the Episcopal Church were embroiled in litigation with the denomination over ownership of parish properties.

In early July the General Synod of the Church of England voted in London to approve a process by which women could be consecrated as bishops. The vote called for church officials to draw up a code of practice to govern the change, and further enabling legislation was to go before the synod in February 2009. Church officials said that the first female bishops would not be appointed before 2014. The July vote spurred threats of a walkout by conservatives who opposed such a move, and proponents of adding female bishops warned against a compromise that would permit some dioceses to keep an all-male episcopacy. In April a similar measure had failed to garner the required two-thirds majority of clergy in the Church of Wales, although consecration of women bishops had been endorsed by the House of Bishops and the House of Laity.

Orthodox Christian Conflicts. Russia's conflicts with Ukraine and Georgia tested relations between the Russian Orthodox Church and its counterparts in the other two countries during 2008. In July, during celebrations in Kiev of the 1,020th anniversary of the advent of Christianity in the Slavic kingdom that predated Ukraine and Russia, Ukrainian Pres. Viktor Yushchenko called on Orthodox Ecumenical Patriarch Bartholomew to bless the creation of an independent Ukrainian church. Bartholomew, the spiritual leader of the world's 250 million Orthodox Christians, stopped short of taking sides but said that divisions in the church would have "problematic consequences for Ukraine's future."

In August, when fighting broke out between Russia and Georgia, Russian Orthodox Patriarch Aleksey II and Georgian Orthodox Patriarch Ilia II issued statements lamenting the warfare between Orthodox Christians. Aleksey conveyed letters of appeal from Ilia to Russian Pres. Dmitry Medvedev and Prime Minister Vladimir Putin. Aleksey died in December at the age of 79. (*See* OBITUARIES.)

American Controversies. Gay rights issues occupied the Presbyterian Church (USA) during 2008. In February the denomination's high court, the General Assembly Permanent Judicial Commission, ruled that candidates for ordination must practice fidelity if married and chastity if single. The court said that the standard was mandatory but could be changed by amending the denomination's constitution; moreover, presbyteries and congregations were not allowed to create their own standards for ordination, as some had done. In June delegates to the church's General Assembly in San Jose, Calif., voted to reinterpret the constitutional provision regarding chastity, but the action awaited votes for approval by a majority of the 173 presbyteries.

In Washington, D.C., in April, Pope Benedict XVI held an unprecedented meeting with five victims of clergy sex abuse. In an address to American bishops, he said that the crisis was "sometimes very badly handled" and pledged that the church would pursue healing and reconciliation with those "so seriously wronged." In late October the Vatican issued guidelines that recommended the use of psychological testing to help evaluate candidates for the priesthood and to screen out those with "psychopathic disturbances."

A committee conducting an internal investigation of financial improprieties in the Orthodox Church in America found that church leaders had either spent millions of dollars on personal expenses or taken part in a cover-up of the diversion of the money. The report prompted the resignation of the church's top leader, Metropolitan Herman, one of the leaders for whom the commission had recommended discipline. The church spokesman, the Rev. Andrew Jarmus, said that it had appointed a management team to provide more supervision and more effective checks and balances. In November Metropolitan Jonah, who had recently been named bishop of Fort Worth, was elected to succeed Metropolitan Herman as leader of the church.

Sergei Chuzavkov/AP

Orthodox Ecumenical Patriarch Bartholomew I (left) and Ukrainian Pres. Viktor Yushchenko officiate at a ceremony on July 26 to commemorate the 1,020th anniversary of the advent of Christianity in the region.

Ecumenical Gestures. In March, King Abdullah of Saudi Arabia called for dialogue between representatives of all monotheistic religions. The appeal was the first of its kind by an Arab leader and was especially significant because of Saudi Arabia's ban on non-Muslim worship services and imposition of the death penalty on Muslims who had converted to another religion. In *Les Versets douloureux*, a book published in June, a rabbi, an imam, and a Roman Catholic

Alessandro Bianchi/Reuters/Landov

Shear-Yashuv Cohen, the chief rabbi of Haifa, Israel, on October 6 became the first non-Christian to address an international synod of Roman Catholic bishops.

priest each explain passages from the holy book of his faith that others have found objectionable. In October at the Vatican, the grand rabbi of Haifa, Israel, Shear-Yashuv Cohen, became the first non-Christian to address an international synod of Catholic bishops. He said that the event was a signal of hope in the wake of "a long, hard, and painful history" between Catholics and Jews.

Pope Benedict marked the 50th anniversary of the death of Pope Pius XII by saying that his predecessor "often acted in a secret and silent way" to help Jews during the Holocaust because he sensed that by doing so he could save the greatest possible number. The Rev. Peter Gumpel, the official advocate for the canonization of Pius, said that Benedict was delaying the signing of a decree to recognize Pius's "heroic virtue" because of interfaith disagreements on whether Pius had done enough to save Jews. Gumpel also said that Benedict would not visit Israel unless the Yad Vashem Holocaust museum removed a plaque suggesting that Pius had been indifferent to the survival of the Jews. Israeli Pres. Shimon Peres responded that a papal visit "should not be tied to controversy over Pius XII."

The World Council of Churches (WCC), which encompassed more than 560 million Christians in 349 church bodies, in March urged its members to open a dialogue with Muslim scholars. The WCC noted that the two faiths have several major differences, including Christians' difficulty appreciating Muhammad as a prophet and Muslims' difficulty appreciating Jesus as God incarnate. Jean-Louis Cardinal Tauran, head of the Pontifical Council of Inter-Religious Dialogue, said that his group did not focus on Islam during a meeting in June because "we are being held hostage by Islam a little bit." He added, "Islam is very important, but there are also other great Asiatic religious traditions." Despite those comments, the Vatican hosted a three-day forum of Catholic and Muslim scholars in November. The group called on Catholics and Muslims to renounce "oppression, aggressive violence and terrorism" and affirming the rights of religious minorities to their own places of worship. Anglican Archbishop Williams stirred controversy in January when he told the BBC that the introduction in Britain of some aspects of Islamic Shari'ah law seemed unavoidable. A spokesperson for Prime Minister Gordon Brown said in response that Shari'ah law could not be used in a civilian court, and Williams clarified that he was not talking about establishing parallel jurisdictions.

Church-State Relations. Critics accused French Pres. Nicolas Sarkozy of having violated the country's tradition of church-state separation by making several positive references to religious faith, including his description of Islam as "one of the greatest and most beautiful civilizations the world has ever known" during a visit in January to Saudi Arabia. A month later he told the Representative Council of Jewish Institutions in France that the violence and wars of the 20th century were caused by an "absence of God." In response to criticism by French secularists, Sarkozy, who had described himself as a lapsed Catholic, declared, "I never said that secular morality is inferior to religious morality." In September, during a four-day visit to France, Pope Benedict met with the French president at the Elysée Palace and called for "a new reflection on the true meaning and importance of laïcité," a term usually translated into English as secularism. In response, Sarkozy said that it was "legitimate for democracy and respectful of secularism to have a dialogue with religions."

In June Turkey's constitutional court overturned constitutional amendments passed by the parliament in February to permit the wearing of Islamic head scarves in universities, ruling that the amendments violated some articles of the constitution, including one describing the Turkish Republic as a secular state. (*See* Special Report on page 190.) In a related matter, leaders of the Turkish Religious Affairs Directorate denied that the country was attempting to reform Islamic teachings. Reports to that effect were based on a project at Ankara University's divinity school to reinterpret the Hadith, a collection of the words and deeds of the Prophet Muhammad. Mehmet Gormez, deputy head of the Religious Affairs Directorate, said that the project "does not aim to change the theological fundamentals of the religion. It is a study aimed at interpreting and understanding these theological fundamentals." Ali Baradkoglu, head of the directorate, said later, "We have continually noted that there can be no reform in Islam because there is no need for that."

In August tens of thousands of Buddhists rallied in Seoul against what they described as South Korean Pres. Lee Myung-bak's favouritism toward Christians in his government appointments. Lee, a Presbyterian, later expressed regret for any offense his government might have caused, and the government revised the code of conduct for public officials to instruct them to maintain religious neutrality when carrying out official duties.

Social Trends. A survey conducted by the Pew Research Center in Washington, D.C., found that the prevalence of

Pope Benedict XVI (right) welcomes Muslim and Roman Catholic scholars to a three-day ecumenical forum held at the Vatican in November.

L'Osservatore Romano, HO/AP

At Bongeunsa temple in Seoul, Buddhists hold a prayer ceremony on August 31 to protest perceived religious bias in appointments to government posts by South Korean Pres. Lee Myung-bak, a Christian.

Ahn Young-joon/AP

anti-Muslim and anti-Jewish sentiments was increasing in several European countries. Only the United Kingdom did not show a substantial increase in anti-Semitic attitudes; there only 9% of those surveyed rated Jews unfavourably. An international survey by Germany's Bertelsmann Foundation found that religious belief was strong among young people aged 18–29: 85% described themselves as religious believers, and 44% were defined as deeply religious because they often prayed and based their everyday behaviour on their beliefs. Martin Rieger, head of the Religion Monitor project, said, "The notion that religion continuously declines from generation to generation can be clearly disproved, even in some of the industrialized nations."

In the U.S. presidential election in November, support for President-elect Barack Obama among religious groups equaled or exceeded that for John Kerry, the 2004 Democratic nominee. The shift was particularly notable among Catholics, who supported Obama over Republican nominee John McCain by a nine-point margin (54% to 45%); in 2004 Catholics had favoured Republican incumbent George W. Bush over Kerry by a five-point margin (52% to 47%). Obama also increased the percentage of white evangelicals who voted Democratic, winning 26% of this vote, compared with Kerry's 21%. At the same time, among religious categories Obama's biggest percentage of support came from religiously unaffiliated voters. He won 75% of their votes, compared with 67% for Kerry.

In December the Vatican released a new document that addressed an array of bioethical questions. Among other issues, the document described the church's opposition to human cloning and embryonic stem cell research.

In the News. The Rev. Michael Heller received the Templeton Prize for Progress Toward Research or Discoveries About Spiritual Realities. (*See* BIOGRAPHIES.) Fernando Lugo (*see* BIOGRAPHIES) received a dispensation from the pope allowing him to step down as a bishop before he assumed office in August as president of Paraguay. The Rev. Orlando Antonini, the papal nuncio to Paraguay, said that it was the first instance in which a member of the Catholic hierarchy had been given papal permission to return to lay status. In April, Cable News Network founder Ted Turner, who once called Christianity a "religion for losers," apologized for his past criticisms of religion as he launched a $200 million partnership with Lutheran and Methodist groups to fight malaria in Africa. Thomas S. Monson (*see* BIOGRAPHIES) became president of the Church of Jesus Christ of Latter-day Saints in February following the death of Gordon B. Hinckley at age 97. (*See* OBITUARIES.)

Other prominent religious figures who died in 2008 included Archbishop Christodoulos, head of the Greek Orthodox Church; Chiara Lubich, founder of the Catholic Focolare spiritual renewal movement; Avery Cardinal Dulles, a prominent scholar who had never served as a bishop before being appointed a cardinal; Maharishi Mahesh Yogi, the Transcendental Meditation leader; Warith Deen Mohammed, who moved thousands of black Americans into mainstream Islam after breaking with his father's Nation of Islam organization; Sir John Marks Templeton, founder of the Templeton Foundation and creator of the Templeton Prize; Alfonso Cardinal Lopez Trujillo, president of the Pontifical Council for the Family; Metropolitan Laurus, who worked to reconcile the Russian Orthodox Church with the Russian Orthodox Church Outside Russia; and the Rev. Marcial Maciel Degollado, founder of the Catholic Legionaries of Christ congregation, who was disciplined by the Vatican for alleged sexual abuse. (*See* OBITUARIES.)

Among the other losses were Bible scholar David Noel Freedman, who oversaw the Anchor Bible Series; Thich Huyen Quang, supreme patriarch of the Unified Buddhist Church of Vietnam; and Taktser Rinpoche, eldest brother of the Dalai Lama and himself revered as a reincarnate lama.

(DARRELL J. TURNER)

ANALYZING THE MEGACENSUS OF RELIGIONS, 1900–2008

Each year since 1750, churches and religions around the world have generated increasing volumes of new statistical data. Much of this information is uncovered in decennial governmental censuses; half the countries of the world have long asked their populations to state their religions if any, and they still do today. The other major source of data each year consists of the decentralized censuses undertaken by many religious headquarters. Each year almost all Christian denominations ask and answer statistical questions on major religious subjects. A third annual source is the total of 27,000 new books each on the religious situation in a single country, as well as some 9,000

Worldwide Adherents of All Religions by Six Continental Areas, Mid-2008

	Africa	Asia	Europe	Latin America	Northern America	Oceania	World	%	Change Rate (%)	Number of Countries
Christians	465,880,000	364,106,000	583,802,000	536,162,000	277,089,000	27,496,000	2,254,535,000	33.4	1.23	240
Affiliated	439,561,000	359,186,000	559,099,000	530,146,000	221,643,000	23,068,000	2,132,703,000	31.6	1.27	240
Roman Catholics	159,776,000	128,901,000	275,209,000	474,595,000	83,210,000	8,727,000	1,130,418,000	16.7	1.14	237
Independents	92,928,000	179,166,000	21,104,000	42,381,000	74,085,000	1,478,000	411,142,000	6.1	1.88	223
Protestants	130,376,000	61,598,000	67,829,000	56,214,000	61,119,000	8,185,000	385,321,000	5.7	1.48	234
Orthodox	42,220,000	13,951,000	190,031,000	895,000	6,679,000	776,000	254,552,000	3.8	0.36	137
Anglicans	47,655,000	838,000	26,241,000	875,000	2,867,000	5,046,000	83,522,000	1.2	1.63	165
Marginal Christians	3,377,000	3,062,000	4,127,000	10,825,000	11,577,000	650,000	33,618,000	0.5	1.87	218
Doubly affiliated	-36,771,000	-28,330,000	-25,442,000	-55,639,000	-17,894,000	-1,794,000	-165,870,000	-2.5	1.29	174
Unaffiliated	26,319,000	4,920,000	24,703,000	6,016,000	55,446,000	4,428,000	121,832,000	1.8	0.64	232
Muslims	392,636,100	992,850,000	40,749,000	1,830,000	5,556,000	460,000	1,434,081,100	21.2	1.80	211
Hindus	2,813,000	906,190,000	1,681,000	760,000	1,756,000	471,000	913,671,000	13.5	1.46	126
Nonreligious	6,012,000	619,845,000	82,658,000	16,958,000	39,847,000	4,294,000	769,614,000	11.4	0.30	239
Chinese universists	38,500	385,861,000	312,000	186,000	747,000	150,000	387,294,500	5.7	0.65	96
Buddhists	165,000	377,515,000	1,792,000	767,000	3,504,000	575,000	384,318,000	5.7	0.71	136
Ethnoreligionists	116,125,000	147,571,000	1,153,000	3,654,000	1,567,000	343,000	270,413,000	4.0	1.15	145
Atheists	614,000	126,914,000	15,676,000	2,839,000	1,852,000	427,000	148,322,000	2.2	0.05	221
Neoreligionists	126,000	104,208,000	393,000	819,000	1,633,000	90,100	107,269,100	1.6	0.70	107
Sikhs	65,100	22,592,000	475,000	6,500	647,000	49,700	23,835,300	0.4	1.52	44
Jews	130,000	5,750,000	1,850,000	1,046,000	6,212,000	108,000	15,096,000	0.2	0.98	135
Spiritists	3,500	0	143,000	13,348,000	168,000	7,400	13,669,900	0.2	1.11	56
Baha'is	2,229,000	3,786,000	142,000	910,000	660,000	141,000	7,868,000	0.1	1.92	219
Confucianists	300	6,346,000	18,300	500	0	53,300	6,418,400	0.1	0.22	15
Jains	86,600	5,378,000	18,000	0	95,700	800	5,579,100	0.1	1.43	13
Taoists	0	3,365,000	0	0	12,200	0	3,377,200	0.1	-0.04	5
Shintoists	0	2,715,000	0	8,000	61,500	0	2,784,500	0.0	0.52	8
Zoroastrians	900	152,000	5,700	0	20,600	1,700	180,900	0.0	-0.33	25
Other religionists	80,000	217,000	259,000	110,000	670,000	10,000	1,346,000	0.0	1.31	79
Total population	**987,005,000**	**4,075,361,000**	**731,127,000**	**579,404,000**	**342,098,000**	**34,678,000**	**6,749,673,000**	**100.0**	**1.17**	**240**

Continents. These follow current UN demographic terminology, which now divides the world into the six major areas shown above. See United Nations, *World Population Prospects: The 2006 Revision* (New York: UN, 2007), with populations of all continents, regions, and countries covering the period 1950-2050, with 100 variables for every country each year. Note that "Asia" includes the former Soviet Central Asian states, and "Europe" includes all of Russia eastward to the Pacific.

Change Rate. This column documents the annual change in 2008 (calculated as an average annual change from 2005 to 2010) in worldwide religious and nonreligious adherents.

Countries. The last column enumerates sovereign and nonsovereign countries in which each religion or religious grouping has a numerically significant and organized following.

Adherents. As defined in the 1948 Universal Declaration of Human Rights, a person's religion is what he or she professes, confesses, or states that it is. Totals are enumerated for each of the world's 240 countries following the methodology of the *World Christian Encyclopedia*, 2nd ed. (2001), and *World Christian Trends* (2001), using recent censuses, polls, surveys, yearbooks, reports, Web sites, literature, and other data. See the World Christian Database (www.worldchristiandatabase.org) for more detail. Religions (including nonreligious and atheists) are ranked in order of worldwide size in mid-2008.

Christians. Followers of Jesus Christ, enumerated here under **Affiliated**, those affiliated with Christian churches (church members, with names written on church rolls, usually total number of baptized persons including children baptized, dedicated, or undedicated): total in 2008 being 2,132,703,000, shown above divided among the six standardized ecclesiastical megablocs and with (negative and italicized) figures for those **Doubly affiliated** persons (all who are baptized members of two denominations) and **Unaffiliated**, who are persons professing or confessing in censuses or polls to be Christians though not so affiliated. **Independents.** This term here denotes members of Christian churches and networks that regard themselves as postdenominationalist and neoapostolic and thus independent of historical, mainstream, organized, institutionalized, confessional, denominationalist Christianity. **Marginal Christians.** Members of denominations who define themselves as Christians but on the margins of organized mainstream Christianity (e.g., Unitarians, Mormons, Jehovah's Witnesses, Christian Science, and Religious Science).

Muslims. 84% Sunnis, 14% Shi'ites, 2% other schools.

Hindus. 68% Vaishnavites, 27% Shaivites, 2% neo-Hindus and reform Hindus.

Nonreligious. Persons professing no religion, nonbelievers, agnostics, freethinkers, uninterested, or dereligionized secularists indifferent to all religion but not militantly so.

Chinese universists. Followers of a unique complex of beliefs and practices that may include: universism (yin/yang cosmology with dualities earth/heaven, evil/good, darkness/light), ancestor cult, Confucian ethics, divination, festivals, folk religion, goddess worship, household gods, local deities, mediums, metaphysics, monasteries, neo-Confucianism, popular religion, sacrifices, shamans, spirit writing, and Taoist and Buddhist elements.

Buddhists. 56% Mahayana, 38% Theravada (Hinayana), 6% Tantrayana (Lamaism).

Ethnoreligionists. Followers of local, tribal, animistic, or shamanistic religions, with members restricted to one ethnic group.

Atheists. Persons professing atheism, skepticism, disbelief, or irreligion, including the militantly antireligious (opposed to all religion). In recent years a flurry of books have outlined the Western philosophical and scientific basis for atheism. Ironically, the vast majority of atheists today are found in Asia (primarily Chinese communists).

Neoreligionists. Followers of Asian 20th-century neoreligions, neoreligious movements, radical new crisis religions, and non-Christian syncretistic mass religions.

Jews. Adherents of Judaism. For detailed data on "core" Jewish population, see the annual "World Jewish Populations" article in the American Jewish Committee's *American Jewish Year Book*

Confucianists. Non-Chinese followers of Confucius and Confucianism, mostly Koreans in Korea.

Other religionists. Including a handful of religions, quasi-religions, pseudoreligions, parareligions, religious or mystic systems, and religious and semireligious brotherhoods of numerous varieties.

Total population. UN medium variant figures for mid-2008, as given in *World Population Prospects: The 2006 Revision*.

printed annual yearbooks or official handbooks. Together, these three major sources of data constitute a massive annual megacensus, although decentralized and uncoordinated. The two tables below combine all these available data on religious affiliation. The first table summarizes worldwide adherents by religion. The second goes into more detail for the United States of America. This year one column has been added to the worldwide table: annual change as a growth rate. This allows comparisons between religious traditions: this year the world's two largest religious communities, Christians and Muslims, increased by 27,473,000 and 25,350,200, respectively, but Christians grew at 1.23%, while Muslims grew at 1.8%.

(DAVID B. BARRETT, TODD M. JOHNSON, PETER F. CROSSING)

Religious Adherents in the United States of America, 1900–2005

	1900	%	mid-1970	%	mid-1990	%	mid-2000	%	mid-2005	%	Annual Change, 2000–2005 Natural	Conversion	Total	Rate (%)
Christians	73,260,000	96.4	190,520,000	90.7	218,720,600	85.4	235,268,500	82.6	244,828,200	81.7	2,475,900	-564,000	1,911,900	0.80
Affiliated	54,425,000	71.6	152,304,000	72.5	175,885,600	68.7	188,174,800	66.1	195,982,500	65.4	1,980,300	-418,800	1,561,500	0.82
Independents	5,850,000	7.7	35,108,000	16.7	66,900,000	26.1	67,128,000	23.6	70,389,000	23.5	706,400	-54,200	652,200	0.95
Roman Catholics	10,775,000	14.2	48,305,000	23.0	56,500,000	22.1	62,970,000	22.1	67,902,000	22.6	662,700	323,700	986,400	1.52
Protestants	35,000,000	46.1	58,568,000	27.9	60,216,000	23.5	57,544,000	20.2	57,105,000	19.0	605,600	-693,400	-87,800	-0.15
Marginal Christians	800,000	1.1	6,114,000	2.9	8,940,000	3.5	10,087,000	3.5	10,680,000	3.6	106,200	12,400	118,600	1.15
Orthodox	400,000	0.5	4,189,000	2.0	5,150,000	2.0	5,331,000	1.9	5,677,000	1.9	56,100	13,100	69,200	1.27
Anglicans	1,600,000	2.1	3,196,000	1.5	2,450,000	1.0	2,300,000	0.8	2,248,000	0.7	24,200	-34,600	-10,400	-0.46
Doubly affiliated	*0*	*0.0*	*-3,176,000*	*-1.5*	*-24,270,400*	*-9.5*	*-17,185,200*	*-6.0*	*-18,018,500*	*-6.0*	*-180,900*	*14,200*	*-166,700*	*0.95*
Evangelicals	*32,068,000*	*42.2*	*35,137,000*	*16.7*	*38,400,000*	*15.0*	*39,938,000*	*14.0*	*40,633,000*	*13.6*	*420,300*	*-281,300*	*139,000*	*0.35*
evangelicals	*11,000,000*	*14.5*	*45,500,000*	*21.7*	*90,656,000*	*35.4*	*95,900,000*	*33.7*	*101,603,000*	*33.9*	*1,009,200*	*131,400*	*1,140,600*	*1.16*
Unaffiliated	18,835,000	24.8	38,216,000	18.2	42,835,000	16.7	47,093,700	16.5	48,845,700	16.3	495,600	-145,200	350,400	0.73
Nonreligious	1,000,000	1.3	10,270,000	4.9	21,442,000	8.4	30,127,000	10.6	34,401,000	11.5	317,100	537,700	854,800	2.69
Jews	1,500,000	2.0	6,700,000	3.2	5,535,000	2.2	5,656,000	2.0	5,761,000	1.9	59,500	-38,500	21,000	0.37
Muslims	10,000	0.0	800,000	0.4	3,500,000	1.4	4,322,000	1.5	4,750,000	1.6	45,500	40,100	85,600	1.91
Black Muslims	0	0.0	200,000	0.1	1,250,000	0.5	1,650,000	0.6	1,850,000	0.6	17,400	22,600	40,000	2.31
Buddhists	30,000	0.0	200,000	0.1	1,880,000	0.7	2,594,000	0.9	2,811,000	0.9	27,300	16,100	43,400	1.62
Neoreligionists	10,000	0.0	560,000	0.3	1,155,000	0.5	1,418,000	0.5	1,498,000	0.5	14,900	1,100	16,000	1.10
Ethnoreligionists	100,000	0.1	70,000	0.0	780,000	0.3	1,336,000	0.5	1,424,000	0.5	14,100	3,500	17,600	1.28
Hindus	1,000	0.0	100,000	0.0	750,000	0.3	1,238,000	0.4	1,338,000	0.4	13,000	7,000	20,000	1.57
Atheists	1,000	0.0	200,000	0.1	770,000	0.3	1,148,000	0.4	1,167,000	0.4	12,100	-8,300	3,800	0.33
Baha'is	2,800	0.0	138,000	0.1	600,000	0.2	552,000	0.2	593,000	0.2	5,800	2,400	8,200	1.44
Sikhs	0	0.0	10,000	0.0	160,000	0.1	239,000	0.1	270,000	0.1	2,500	3,700	6,200	2.47
Spiritists	0	0.0	0	0.0	120,000	0.0	142,000	0.0	149,000	0.0	1,500	-100	1,400	0.97
Chinese universists	70,000	0.1	90,000	0.0	76,000	0.0	80,300	0.0	86,700	0.0	800	500	1,300	1.55
Shintoists	0	0.0	0	0.0	50,000	0.0	57,500	0.0	60,600	0.0	600	0	600	1.06
Zoroastrians	0	0.0	0	0.0	14,400	0.0	16,200	0.0	17,000	0.0	200	0	200	0.97
Taoists	0	0.0	0	0.0	10,000	0.0	11,400	0.0	12,000	0.0	100	0	100	1.03
Jains	0	0.0	3,000	0.0	5,000	0.0	74,100	0.0	79,500	0.0	800	300	1,100	1.42
Other religionists	10,200	0.0	450,000	0.2	530,000	0.2	577,000	0.2	600,000	0.2	6,100	-1,500	4,600	0.78
U.S. population	**75,995,000**	**100.0**	**210,111,000**	**100.0**	**256,098,000**	**100.0**	**284,857,000**	**100.0**	**299,846,000**	**100.0**	**2,998,000**	**0**	**2,998,000**	**1.03**

Methodology. This table extracts and analyzes a microcosm of the world religion table. It depicts the United States, the country with the largest number of adherents to Christianity, the world's largest religion. Statistics at five points in time from 1900 to 2005 are presented. Each religion's **Annual Change** for 2000-05 is also analyzed by **Natural** increase (births minus deaths, plus immigrants minus emigrants) per year and **Conversion** increase (new converts minus new defectors) per year, which together constitute the **Total** increase per year. **Rate** increase is then computed as percentage per year.

Structure. Vertically the table lists 30 major religious categories. The major categories (including nonreligious) in the U.S. are listed, with largest (Christians) first. Indented names of groups in the "Adherents" column are subcategories of the groups above them and are also counted in these unindented totals, so they should not be added twice into the column total. Figures in italics draw adherents from all categories of Christians above and so cannot be added together with them. Figures for Christians are built upon detailed head counts by churches, often to the last digit. Totals are then rounded to the nearest 1,000. Because of rounding, the corresponding percentage figures may sometimes not total exactly to 100%. Religions are ranked in order of size in 2005.

Christians. All persons who profess publicly to follow Jesus Christ as God and Savior. This category is subdivided into **Affiliated** (church members) and **Unaffiliated** (nominal) Christians (professing Christians not affiliated with any church). See also the note on Christians to the world religion table. The first six lines under "Affiliated" Christians are ranked by size in 2005 of each of the six megablocs (Anglican, Independent, Marginal Christian, Orthodox, Protestant, Roman Catholic).

Evangelicals/evangelicals. These two designations—italicized and enumerated separately here—cut across all of the six Christian traditions or ecclesiastical blocs listed above and should be considered separately from them. The **Evangelicals** (capitalized "E") are mainly Protestant churches, agencies, and individuals who call themselves by this term (for example, members of the National Association of Evangelicals); they usually emphasize 5 or more of 7, 9, or 21 fundamental doctrines (salvation by faith, personal acceptance, verbal inspiration of Scripture, depravity of man, Virgin Birth, miracles of Christ, atonement, evangelism, Second Advent, et al.). The **evangelicals** (lowercase "e") are Christians of evangelical conviction from all traditions who are committed to the evangel (gospel) and involved in personal witness and mission in the world.

Jews. Core Jewish population relating to Judaism, excluding Jewish persons professing a different religion.

Other categories. Definitions are as given under the world religion table.

Sports and Games

The OLYMPIC Games and PARALYMPIC Games in Beijing dominated most of the sports year in 2008, with spectacular Olympic performances by swimmer Michael PHELPS and sprinter Usain BOLT. Non-Olympic highlights of the year included the association football (soccer) EURO 2008 tournament and the inauguration of cricket's INDIA PREMIER LEAGUE, but the global recession triggered CUTS by corporate sponsors in several sports and pushed others to REDUCE their 2009 schedules.

AUTOMOBILE RACING

Grand Prix Racing. In 2008 the Fédération Internationale de l'Automobile (FIA) Formula 1 (F1) world drivers' championship was won by the U.K.'s Lewis Hamilton (McLaren) by a single point. Many found it to be a fitting result, considering the way the 2007 season ended when Hamilton blew a 12-point lead with only two races to go and lost out on the title by one point in his rookie season. Ferrari's Felipe Massa of Brazil won six races during the 2008 season compared with five for Hamilton, but on November 2 Hamilton passed Toyota's Timo Glock of Germany on the final turn of the season-ending Brazilian Grand Prix to secure a fifth-place finish in the race and thus deny Massa the overall title by a single point, 98–97. The 2007 champion, Kimi Räikkönen (Ferrari) of Finland, finished in third place with 75 points. Ferrari won the constructors' championship with 172 points, beating out McLaren-Mercedes (151) and BMW Sauber (135).

Hamilton started 2008 with a victory at the Australian Grand Prix on March 16, but he did not win again until taking the Monaco Grand Prix in rainy conditions on May 25. That victory started a stretch of three wins in five races for Hamilton, including consecutive victories in July at the British Grand Prix and the German Grand Prix. On September 7 Hamilton took the checkered flag in the Belgian Grand Prix, but the stewards added a 25-second penalty to his time for cutting through the final chicane, and the victory was awarded to Massa. After a 12th-place finish at the Japanese Grand Prix on October 12, Hamilton's lead in the standings was cut from seven points to five with two races remaining, but he won the Chinese Grand Prix the following week before securing the overall title with his fifth-place result in Brazil. The 23-year-old Hamilton was F1's youngest-ever season champion, the first black driver to top the F1 rankings, and the first British champion since Damon Hill in 1996.

During the 2007 season Hamilton, Fernando Alonso of Spain, and Räikkönen all had a chance to win the title heading into the last race of the season, which made it the tightest battle for the championship in 21 years. In 2008, however, seven drivers and five teams captured races, while four drivers led the championship, six took pole positions, and 15 led races. Two-time world champion Alonso, back with Renault after a turbulent season as Hamilton's teammate at McLaren, earned the most points over the last six races. He won in Japan and in Singapore, F1's first-ever night race. Three drivers won for the first time: Germany's Sebastian Vettel (Toro Rosso) took the Italian Grand Prix at age 21 to become F1's youngest-ever winner, Robert Kubica (BMW Sauber) of Poland won the Canadian Grand Prix, and McLaren's Heikki Kovalainen of Finland captured the Hungarian Grand Prix. Scotland's David Coulthard (Red Bull–Renault), 37, announced his retirement after earning 13 wins in 15 years.

The focus on the sport again shifted to news off the racetrack as FIA Pres. Max Mosley became entangled in a scandal after a British tabloid newspaper exposed his involvement in what was described as a Nazi-themed orgy with prostitutes. A video showed Mosley engaging in sex acts while speaking German, and although he admitted to hiring the women, he said there were no Nazi overtones. Mosley, who had been FIA president since 1994, refused to resign after the *News of the World* report surfaced, and in June he won a vote of confidence to remain in his position through October 2009. In July he won an invasion of privacy lawsuit against the tabloid.

Hamilton was the target of racist abuse leading up to the final race of the season in Brazil. Racist messages about Hamilton were written on a Spanish Web site, he was insulted by two Brazilian comedians, and he was

Formula 1 (F1) race car driver Lewis Hamilton of the U.K. waves to the crowd on July 6 after his victory in the British Grand Prix, one of five races that he won en route to securing his first F1 drivers' championship.

Rui Vieira—PA Photos/Landov

handed a black cat—a symbol of bad luck in Brazil—at a sponsor's function. This occurred despite the efforts of the FIA, which launched an antiracism campaign after Spanish fans, who blamed Hamilton for Alonso's troubles at McLaren, taunted the British driver during testing in Spain in February.

F1 was a victim of the global economic downturn in late 2008, as Honda Motor Co. announced in December that it was pulling out of the sport, which reduced the starting grid to 18 cars. The Honda team finished in ninth place, or next to last, in the constructors' standings after Japanese team Super Aguri, which was backed by Honda, pulled out in April after four races. Japan's largest automaker, Toyota, said that it would scale back costs on F1 racing after finishing fifth in the season standings. The Honda withdrawal meant that 2008 could be the last season for Brazilian driver Rubens Barrichello, who had competed in a record 271 Grand Prix races. The FIA in December announced a series of changes for the 2009 season, hoping that the measures would help teams cut costs and reduce F1's combined $1.6 billion annual spending.

(PAUL DIGIACOMO)

U.S. Auto Racing. In 2008 American Jimmie Johnson (*see* BIOGRAPHIES) of Hendrick Chevrolet Racing won his third straight National Association for Stock Car Auto Racing (NASCAR) driving crown, a feat accomplished only once before in the 60-year history of NASCAR, by Cale Yarborough in 1976–78. Johnson won $15,170,464 for the season and made the title runoff, the Chase for the Championship, his private preserve, winning three races and finishing 10th or better eight times. Carl Edwards of the Roush Fenway Ford stable won nine times, the most of any driver in the 36-event Sprint Cup series, but only the 10 Chase races counted in the drivers' championship, and Edwards finished 69 points behind Johnson. Kyle Busch, in a Joe Gibbs team Toyota, won 8 of the first 26 races and at one time led Johnson by 40 points, but Busch, who also won 10 times in 20 Nationwide Cup starts and 5 times in 16 Craftsman Truck appearances, was never a factor in the Chase. Johnson's feat was accomplished in a season buffeted by a gas crisis that hit NASCAR with falling attendance and diminishing sponsor support.

The 35-event Nationwide Series, contested in a different kind of stock car, was won by Childress Chevrolet's Clint Bowyer by 21 points over Edwards, who actually had seven victories to Bowyer's one. In the 25-race Craftsman Truck Series, Johnny Benson, in a Bill Davis Toyota, beat Ron Hornaday, Jr., of Chevrolet.

NASCAR's $18,689,258 Daytona (Fla.) 500, the richest race in the Americas, celebrated its 50th year with an improbable 1–2 finish for the Roger Penske Dodge team. Ryan Newman won the $1,506,045 first prize when teammate Kurt Busch pushed him over the finish line ahead of Toyota's Tony Stewart. This was the first victory in the jewel of stock car racing for Penske, whose Indy cars had won the Indianapolis 500 classic 14 times.

In open-wheel competition, the Indy Racing League (IRL) and rival Champ Car World Series merged after 13 years of a rivalry that was said to have caused both sparse fields. Nine Champ Car teams were permitted to lease Honda engines and Dallara chassis, which thus increased the number of participants per race to 26 and, according to the newly combined IRL, added attendance and sponsorship money. Two Champ Car events, the Grand Prix of Long Beach, Calif., and of Edmonton, Alta., were added to the IndyCar championship, and a third, in Surfers Paradise, Australia, became a posttitle exhibition event. Long Beach, won by Justin Wilson, was contested at the same time as the Firestone 300 at the Twin Ring Motegi circuit in Japan, where Danica Patrick (*see* BIOGRAPHIES) became the first female driver to win a major single-seater race.

New Zealander Scott Dixon, of Target Chip Ganassi Racing, won both the IRL season drivers' championship and the 92nd running of the Indianapolis 500. For his overall honours, he fended off a late-season charge by Brazilian Helio Castroneves of the Penske stable by 17 points. Tony Kanaan, another Brazilian, was third, and Englishman Dan Wheldon ranked fourth. All drove Dallara-Hondas. Dixon, the eighth non-American to win the Indy 500 in 10 years, earned the pole position with an average 226.366 mph and led 115 of the 200 laps. Second-place Vitor Meira of Panther Racing, who was 1.7498 seconds behind, led only 12 laps, while 21-year-old Marco Andretti of Andretti Green, whose third-place finish was the highest for an American, led 15. Dixon won $2,988,065 of the $14,400,000 million purse. His winning speed was 143.567 mph. (ROBERT J. FENDELL)

Rallies and Other Races. Sébastien Loeb (Citroën) of France dominated the 2008 world rally championship (WRC) season en route to a record fifth consecutive drivers' title. After winning his fifth Monte Carlo Rally in January, Loeb (with co-driver Daniel Elena of Monaco) took the checkered flag in 10 more of the 15 WRC races. He secured the title on November 2 with a third-place finish behind Mikko Hirvonen (Ford) of Finland in the penultimate Rally of Japan. In the season-ending Wales Rally GB on December 7, Loeb scored a narrow come-from-behind victory. He finished the season with 122 points, well ahead of Hirvonen (103 points), who won three times. Finland's Jari-Matti Latvala (Ford), age 22, became the youngest driver to have won a WRC race (Sweden), but he ended the season ranked fourth behind Spaniard Dani Sordo (Citroën), whose second place in Spain was his best finish. Citroën, with 191 points, overtook Ford (173 points) to take the manufacturers' title, with Subaru (98 points) again in third place.

Denmark's Tom Kristensen claimed a record eighth personal victory in the 24-Hour Le Mans Grand Prix d'Endurance on June 15. He and co-drivers Allan McNish of Scotland and Rinaldo Capello of Italy covered 381 laps in their Audi R10 for Audi's eighth win in nine years. The second-place Peugeot team—Jacques Villeneuve of Canada, Marc Gene of Spain, and Nicolas Minassian of France—also completed 381 laps but crossed the finish line 4 min 31.094 sec behind the winners.

Professional sports car racing in the U.S. remained split, with the Grand-Am series centred on the 24 Hours of Daytona and the 11-race American LeMans countering with the 12 Hours of Sebring. The 24 Hours of Daytona, the most important of the 12-event series, was won by a Chip Ganassi Lexus-Riley Prototype driven by American Scott Pruett and Memo Rojas of Mexico, with turns by Juan Pablo Montoya of Colombia and Dario Franchitti of Scotland. The Lexus finished two laps ahead of Americans John Fogarty and Alex Gurney, in a GAINSCO-Stallings Pontiac-Riley, averaging 103.057 mph. A Penske team Pontiac-Riley driven by Brazil's Helio Castroneves and Australian Ryan Briscoe, both of the IRL, and Kurt Busch of NASCAR was third, four laps back.

In the 56th running of the 12 Hours of Sebring, a P2 Class Team Penske Porsche RS Spyder driven by Timo Bernhard of Germany and Romain Dumas of France, with fellow Frenchman Emmanuel Collard, broke the eight-year dominance of the diesel-powered Audi sport prototypes, covering 351 laps. In

second place, 1 min 2.084 sec behind, was another P2 Porsche driven by Americans Butch Leitzinger and Andy Lally, with Marino Franchitti of Scotland. The eventual season titlists, Germans Marco Werner and Lucas Luhr, drove an Audi Sport of North America prototype. (ROBERT J. FENDELL; MELINDA C. SHEPHERD)

BASEBALL

North America. *Major League Baseball.* In an unusual conclusion to Major League Baseball's (MLB's) 2008 season, the Philadelphia Phillies beat the visiting Tampa Bay Rays 4–3 before 45,940 spectators in Citizens Bank Park on October 29 to win the best-of-seven World Series by four games to one. The fifth game of the Series began on October 27 in Philadelphia, but it was halted by rain in the middle of the sixth inning with the score tied 2–2. MLB Commissioner Bud Selig declared that the game would be suspended—the first such ruling in Series history—and be completed when the weather permitted. After the game was postponed again the next evening, play was resumed in the bottom of the sixth inning, and the Phillies scored to take a 3–2 lead. Rocco Baldelli hit a home run for Tampa Bay in the seventh, but in the bottom of that inning, Pedro Feliz singled home the eventual winning run as the Phillies claimed their first championship since 1980 and the second in franchise history. Pitcher J.C. Romero earned the victory for Philadelphia, and reliever Brad Lidge recorded the save, his 48th in as many relief appearances during the season. Cole Hamels, who won the opening game and pitched six innings on the original date, was voted the Series' Most Valuable Player (MVP).

The Series opened on October 22 in Tropicana Field in St. Petersburg, Fla., where the Phillies defeated the Rays 3–2 on a two-run first-inning home run by Chase Utley and the pitching of Hamels, a 24-year-old left-hander who yielded just five hits over seven innings. In game two on October 23, the Rays scored twice in the first inning and went on to win 4–2. James Shields pitched 5⅔ innings for the Rays and earned the victory with a save by rookie David Price as the Phillies left 11 men on base.

When the Series moved to Philadelphia on October 25, the Phillies won game three 5–4 on a bases-loaded infield single by Carlos Ruiz in the ninth inning. The Phillies hit three home runs, but Tampa rallied to a 4–4 tie in the eighth inning of a game that was delayed by rain and did not finish until 1:47 AM local time. The Phillies routed the Rays 10–2 in game four on October 26. Joe Blanton, the winning pitcher, hit the first home run of his career and the first by a pitcher in a World Series since Ken Holtzman of the Oakland A's in 1974.

On September 21, Derek Jeter of the New York Yankees waves farewell to the fans after being taken out of the game in the ninth inning. It was the last game for historic Yankee Stadium, which opened on April 18, 1923.

Gary Hershorn—Reuters/Landov

Play-offs. The Phillies registered their first National League (NL) pennant since 1993 by defeating the Los Angeles Dodgers four games to one in the best-of-seven National League Championship Series (NLCS). The Phillies clinched by beating the Dodgers 5–1 in Los Angeles on October 15 behind Hamels, who was voted MVP of the NLCS. A home run by Manny Ramirez (*see* BIOGRAPHIES) accounted for the lone Los Angeles run in game five. The Phillies advanced to the NLCS by defeating the Milwaukee Brewers three games to one in the NL Division Series (NLDS); the Dodgers swept the Chicago Cubs in three games in the other NLDS.

The Rays won the American League (AL) pennant by defeating the defending champion Boston Red Sox four games to three in the best-of-seven American League Championship Series (ALCS). The Rays clinched with a 3–1 victory in St. Petersburg on October 19. After yielding a first-inning home run to Dustin Pedroia, Matt Garza pitched seven innings, yielding only one other hit. Four pitchers followed him, with Price earning the save. Garza was voted ALCS MVP with a 2–0 record, having also won game three. The Rays scored on a fourth-inning double by AL Rookie of the Year Evan Longoria, who hit home runs in a record four consecutive ALCS games, and Baldelli's run-scoring single in the fifth. In the AL Division Series, the Rays defeated the Chicago White Sox three games to one, and the Red Sox downed the Los Angeles Angels of Anaheim three games to one.

Regular Season. The Angels (100–62) achieved the best record in either league and won the AL West division by 21 games. The Rays (97–65) won the AL East by two games over Boston (95–67), which secured the wild-card berth with the best record of any second-place team. The White Sox won the AL Central by defeating the Minnesota Twins 1–0 in a play-off game to break a regular-season tie for first place. Both teams had records of 88–74 before that extra game, which was played in Chicago on September 30.

Philadelphia (92–70) captured the NL East by three games over the New York Mets. The Dodgers (84–78) won the NL West by two games over the Arizona Diamondbacks. The Cubs (97–64) took the NL Central by 7½ games over the Brewers, whose 90–72 record secured the NL wild-card berth.

Individual Accomplishments. Chipper Jones of the Atlanta Braves won the NL batting title with a .364 average, and Philadelphia's Ryan Howard led the league with 48 home runs and 146 runs batted in (RBIs), but Albert Pujols of the St. Louis Cardinals—with 37 home runs, 116 RBIs, and a .357 average—was named the NL regular-season MVP. Pedroia—with a .326 average and a league-leading 54 doubles—was voted AL MVP. Minnesota's Joe Mauer led the AL with a .328 average; Miguel Cabrera of the Detroit Tigers scored 37 home runs; and Josh Hamilton of the Texas Rangers topped the AL with 130 RBIs. Arizona pitcher Brandon Webb registered the most victories, 22, but lost to Tim Lincecum (18–5) of the San Francisco Giants in the NL Cy Young balloting. AL Cy Young winner Cliff Lee of

the Cleveland Indians led the AL with 22 victories. Relief pitcher Francisco Rodriguez of the Angels amassed 62 saves, surpassing the record held by Bobby Thigpen, who had 57 for the White Sox in 1990. Geovany Soto of the Cubs was the first catcher to be named NL Rookie of the Year since the Dodgers' Mike Piazza in 1993.

On June 9 Ken Griffey, Jr., then with the Cincinnati Reds (later traded to the White Sox), became the sixth batter in history to record his 600th home run. Ramirez, playing with the Red Sox before he was traded to the Dodgers, became the 24th player to reach the 500 mark. Jon Lester of the Red Sox pitched a 7–0 no-hitter against the Kansas City Royals on May 19. Carlos Zambrano of the Cubs pitched a 5–0 no-hitter on September 14 against Houston. The game, originally scheduled to be played in Texas, was moved to Milwaukee because of Hurricane Ike.

The American League beat the National League 4–3 in 15 innings in the annual All-Star Game, held on July 15 at Yankee Stadium, in that venerable ballpark's last season. The game consumed 4 hours 50 minutes, the longest All-Star Game by time in history, and extended the AL's unbeaten streak to 12. J.D. Drew of the Red Sox hit a two-run game-tying home run in the seventh inning and was voted MVP.

Little League World Series. A team from Waipahu, Hawaii, defeated one from Matamoros, Mex., 12–3 to capture the Little League World Series on August 24 at Williamsport, Pa. Tanner Tokunaga hit two home runs, and Iolana Akau hit one for Hawaii, which became the fourth consecutive representative from the U.S. to win the title. Hawaii scored in each of the six innings in which it batted, the first time since 1974 that such a feat had been accomplished. Hawaii scored twice on passed balls and once on a bases-loaded walk against Mexico, which committed three errors. Hawaii advanced to the championship game by rallying to defeat Lake Charles, La., and Mexico qualified by beating Tokyo. (ROBERT VERDI)

Latin America. The 2008 Caribbean Series was held in Santiago, Dom.Rep., on February 2–7. Because the Puerto Rican Winter League canceled its 2007–08 season because of financial problems, the Dominican Republic was represented by two teams in the series, the Cibao Eagles (Águilas Cibaeñas) and the Licey Tigers (Tigres). Licey won the series title with a 5–1 record, while Cibao finished second with a 3–3 mark. The Aragua Tigers (Tigres) from Venezuela and the Obregón Yaquis, representing Mexico, each finished with a 2–4 record.

In Cuba, Santiago de Cuba swept Pinar del Rio four games to none to win the 47th Serie Nacional (National Series) championship. Santiago had defeated Las Tunas three games to none in the quarterfinals and Villa Clara four games to two in the semifinals to advance. It was Santiago's second consecutive title. Havana Province featured the series' top two pitchers; right-hander Jonder Martínez went 13–2, with a league-leading 1.55 earned run average, while left-hander Yulieski González was 15–0—the best record in the history of the Serie Nacional—with a 2.25 earned run average.

The Mexico City Red Devils (Diablos Rojos) beat the Monterrey Sultanes four games to one to win the Mexican League championship series. It was the Red Devils' 15th league title and their first since 2003.

At the Olympic Games in Beijing, South Korea defeated the Cuban national team 3–2 in the championship game to capture the gold medal. The U.S. bested Japan 8–4 to win the bronze. (MILTON JAMAIL)

Japan. The Seibu Lions defeated the Yomiuri Giants four games to three to win the 2008 Japan Series under rookie manager Hisanobu Watanabe. The Lions came back from a three-games-to-two series deficit for their first championship in four years and 13th overall. In game seven Hiroshi Hirao hit a go-ahead single to cap a two-run eighth-inning rally, and four relievers combined for seven perfect innings, leading the Lions to a 3–2 victory. Seibu right-hander Takayuki Kishi was named the Series' Most Valuable Player after pitching a complete-game shutout in game four and 5⅔ scoreless innings in relief in game six. In the Pacific League (PL) Climax Series playoffs for a Japan Series berth, the Nippon Ham Fighters, who finished third in the regular season, eliminated the second-place Orix Buffaloes two games to none in the first stage only to lose to the Lions four games to two in the second stage. The Giants made the biggest comeback in Central League history after falling behind the eventual second-place Hanshin Tigers by as many as 13 games. They beat the 2007 Japan Series champion Chunichi Dragons in the Climax Series' second stage. Rakuten Eagles right-hander Hisashi Iwakuma won the Sawamura Award for the most outstanding pitcher after leading the PL with 21 wins, a 1.87 earned run average, and an .840 winning percentage.

Legendary home-run king Sadaharu Oh, who retired in 1980 with 868 career homers, ended his managing career. Buffaloes slugger Kazuhiro Kiyohara, fifth on the all-time home-run list with 525, retired at the end of the season. (HIROKI NODA)

BASKETBALL

Professional. In June 2008 the Boston Celtics, who accounted for more National Basketball Association (NBA) championships than any other franchise, won their record 17th title by thoroughly dominating and dismantling the generally favoured Los Angeles Lakers, closing out the best-of-seven series in six games. Forward Paul Pierce, the unanimous choice of a nine-member media panel as the Finals' Most Valuable Player (MVP), led the Celtics to a 131–92 deciding victory in game six—the largest margin of victory in a clinching game in the history of the championship series. With the title in hand, the Celtics could boast that they had defeated the Lakers 9 of the 11 times that the two storied teams had faced each other in the Finals. Celtics coach Glenn ("Doc") Rivers was the franchise's sixth head coach to win an NBA championship. (*See* BIOGRAPHIES.)

The Celtics set a record for the most victories at home in an NBA play-off season, finishing 13–1. They also completed the single-best win–loss turnaround in league history, having gone from winning only 24 of 82 regular-season games in 2006–07 to winning a league-leading 66 games during the 2007–08 season. The Celtics were just the third team ever to win the title after missing the previous postseason (the others were the 1974–75 Golden State Warriors and the 1976–77 Portland Trail Blazers). The Celtics' 2008 title was, among other things, a tribute to the team's veteran players. Forward Kevin Garnett and guard Ray Allen had joined the squad in off-season trades from the Minnesota Timberwolves and the Seattle SuperSonics, respectively. Garnett (in his 13th season in the NBA), Allen (in his12th), and Pierce (in his 10th) acquired championship rings for the first time in their playing careers; backup forward P.J. Brown, who joined the team in midseason as a free agent, won a ring for the first time in his 15th season in the league.

Winslow Townson/AP

On June 17, longtime NBA stars Kevin Garnett, Ray Allen, and Paul Pierce (from left to right) of the Boston Celtics show off the championship trophy that they captured when the Celtics defeated the Los Angeles Lakers in the NBA Finals.

The game-six crowd in Boston's TD Banknorth Garden lustily chanted "Beat L.A." and "Seventeen" as Garnett scored 26 points and grabbed 14 rebounds. Allen scored 26 points and tied a Finals single-game record by hitting seven three-point field goals, and Pierce contributed 17 points and 10 assists. Pierce averaged 21.8 points in the series' six games despite having suffered a sprained knee in game one that required him to use a wheelchair to get to the locker room for examination and treatment before returning to play.

Aside from the star trio of Pierce, Garnett, and Allen, the Celtics had other significant contributors. Rookie point guard Rajon Rondo, fighting off a foot injury, had 21 points, 8 assists, and 6 steals in the deciding game, and centre Kendrick Perkins, who missed game five because of a shoulder injury, returned as a starter to play more than 13 minutes. On top of their potent offensive game, the Celtics displayed a stifling defense in putting the Lakers away. The five Lakers starters—Kobe Bryant, Derek Fisher, Vladimir Radmanovic, Lamar Odom, and Pau Gasol—collectively shot just 36.2% from the floor (17 for 47) in game six. Bryant, the NBA's regular-season MVP, hit 4 of his first 5 shots but only 3 of his last 17.

In the Women's National Basketball Association (WNBA), the San Antonio Silver Stars and the Detroit Shock met in the best-of-five championship series in October. The Shock prevailed, winning its third title in six years, by a score of 76–60 in game three to sweep the series. Detroit forward Katie Smith scored 18 points in the last game, and she was named MVP of the Finals.

(PHIL JASNER)

College. Regarded by many observers as the best team throughout the entire 2007–08 college basketball season, the Memphis Tigers held a commanding 60–51 lead over the Kansas Jayhawks with just two minutes left in the National Collegiate Athletic Association (NCAA) championship game. Kansas played those final two minutes so well, however, that the two teams were forced to play five minutes of overtime to conclude the tournament. Kansas decisively won that overtime to clinch the game by a score of 75–68 and capture the school's third national title. Memphis, which finished the season with a 38–2 overall record, would be remembered by some observers as the team that gave away the title. Others, however, would regard the Tigers as one of the best teams not to win an NCAA championship.

In the final game, Kansas forward Darrell Arthur was brilliant with 20 points and 10 rebounds. It was his play that gave Kansas a chance at the end, but it was Mario Chalmers who made the most important shot in Kansas basketball history—a game-tying three pointer in the final seconds of regulation. Memphis, a poor free-throw shooting team all season, had nevertheless hit an impressive 59 of 71 foul shots during the regional final, the national semifinal, and the first 38 minutes 45 seconds of the championship game, but the Tigers missed four of five foul shots in the final 75 seconds. Notwithstanding the Tigers' struggles at the foul line, the Memphis guards were sensational. Chris Douglas-Roberts had 22 points. Freshman point guard Derrick Rose, with 18 points, 8 assists, and 6 rebounds, looked like he had won the game for his team with a dominating second-half performance. (The season was Rose's first and last. In June he became the first pick in the National Basketball Association draft.) Kansas, which scored just 51 points in the championship matchup's first 38 minutes, put up 24 more points on the scoreboard in the final 7 minutes and was a very deserving winner in the end, proving that some games were not over even when it appeared that they were.

The women's 2008 NCAA championship subplot was Candace versus Candice. Tennessee had Candace Parker, the star player for the Lady Vols, the 2007 defending champions. Stanford had Candice Wiggins, who won the 2008 Wade Trophy, given annually to the women's college basketball player of the year. (Parker won the Wade Trophy in 2007.) In the championship game, Tennessee won easily, defeating Stanford by a score of 64–48. For the Lady Vols, who finished the season 36–2, it was a record eighth national championship. Stanford finished with a 35–4 season record.

Parker, playing her final college game before heading to the Women's National Basketball Association to play professionally, scored 17 points. Wiggins became the first woman to have two 40-point games in the same NCAA tournament and finished her six tournament games with an amazing 151 points. Meanwhile, Tennessee's Hall of Fame coach Pat Summitt set a new standard each time her team won a game. With a record 983 victories, she was almost certain to get her 1,000th win during the 2008–09 season.

(DICK JERARDI)

International. From the moment the Americans strode onto the court at the 2008 Olympic Games in Beijing to open the men's basketball tournament against host China, it was clear that only one team would be leaving with the gold medal. Because the U.S. men's basketball team had stumbled through international tournaments since the turn of the 21st century, securing no better than bronze medals in two world championships and one Olympics, the media had dubbed this squad the "Redeem Team."

In the preliminary round in Beijing, LeBron James and Dwayne Wade were team leaders as the U.S. cruised through its group with an average winning margin of 32 points. In the quarterfinals the U.S. swept aside Australia by a score of 116–85, and defending Olympic champion Argentina edged Greece 80–78. China's bid ended in a 94–68 quarterfinal loss to Lithuania, while Spain, the reigning world champion, dispatched Croatia 72–59. In semifinal action the U.S. beat Argentina 101–81, avenging the Ameri-

cans' loss to the Argentines in the Olympic semifinals in 2004. Spain reached only its second Olympic final with a hard-fought 91–86 win over Lithuania.

Despite the fact that Spain had lost to the U.S. by 37 points in the preliminary round of the tournament, the final was majestic as the Spanish team pushed the Americans to their limit before succumbing by a score of 118–107. "We should be proud," said Spanish centre Pau Gasol. "We never backed down." Wade led the U.S. with 27 points in the gold-medal game. Argentina topped Lithuania 87–75 to take the bronze.

While the U.S. men were regaining the summit of international basketball, the U.S. women continued their dominance. With a resounding 92–65 win over Australia, the Americans earned their fourth consecutive Olympic gold medal. The victory brought redemption for U.S. coach Anne Donovan, whose team had settled for the bronze at the 2006 world championships. "That drove me every day from 2006," she commented. "Now I can have a good night's sleep." The U.S. benefited from a well-balanced attack in the final, with four players—Kara Lawson, Candace Parker, Lisa Leslie, and Sylvia Fowles—each scoring in double figures. The bronze medal went to the Russian women, who downed China 94–81.

Great Britain was already looking forward to the 2012 Olympic Games in London. The Fédération Internationale de Basketball had warned Great Britain that it would be barred from competing as host unless it improved its international ranking by qualifying for the 2009 EuroBasket finals, to be held in Poland. In September, Sudanese-born Luol Deng, a star for the Chicago Bulls of the National Basketball Association and a British citizen since 2006, helped his adopted country cruise through the qualifying round of play to reach the EuroBasket finals for the first time since 1981. Although a final decision may wait until 2010, it seemed certain that Great Britain's women would be watching from the sidelines after their failure to qualify for the European finals. (RICHARD TAYLOR)

BOBSLEIGH, SKELETON, AND LUGE

Bobsleigh. German bobsleigh pilot André Lange (*see* BIOGRAPHIES) claimed the 2007–08 World Cup overall titles in both two- and four-man racing, driving to the medals podium at each of the venues on the circuit. Lange amassed a total of 11 medals en route to the world championships in Altenberg, Ger., where he took the gold in both events. In Altenberg, Russian Aleksandr Zubkov also earned podium finishes in both disciplines, winning silver in four-man and bronze in two-man. German driver Matthias Höpfner finished third in four-man, and teammate Thomas Florschütz claimed second in the two-man event.

Germany's female bobsledders dominated the World Cup circuit, collecting 15 of the overall 24 possible medals. Sandra Kiriasis was clearly the dominant German pilot and won five gold, one silver, and two bronze medals. In addition, Kiriasis won her fifth straight overall World Cup title and her fourth consecutive world championship gold medal. Fellow German pilots Cathleen Martini and Claudia Schramm finished in second and third, respectively, at the world championships.

Skeleton. American Katie Uhlaender finished atop the World Cup overall rankings for the second consecutive season in 2007–08. Following up from her six-medal performance in 2006–07, Uhlaender again collected six World Cup medals—four gold, one silver, and one bronze. At the world championships in Altenberg, Uhlaender finished in second place; the gold medal went to Anja Huber of Germany. Fellow German Kerstin Jürgens took third place at the event. Canadian Michelle Kelly was consistent throughout the season, earning a place on the podium five times and finishing second overall in the World Cup standings.

In men's racing, Kristan Bromley of Great Britain took the top mark in the overall World Cup standings. He won the gold medal at the world championships, ahead of silver medalist Jon Montgomery of Canada, who also trailed behind Bromley in the overall standings. American Zach Lund finished third in the overall rankings. (JULIE PARRY)

Luge. Germany's dominance on the women's singles circuit continued throughout the 2007–08 luge season. During the eight-race season, there were only two instances in which Germany did not sweep the medal podium. Germany's Tatjana Hüfner showed her individual dominance as well. Following a disappointing 10th-place finish in the first race at Lake Placid, N.Y., Hüfner won every single World Cup race for the remainder of the season, finishing first in the overall World Cup standings and capturing gold at the world championships. Aiding in Germany's dominance during the season were veteran Silke Kraushaar-Pielach and breakthrough slider Natalie Geisenberger.

In men's doubles action, Germany's dynamic duo of Patric Leitner and Alexander Resch finished the season on top of the overall World Cup rankings,

American Katie Uhlaender takes off on a run at the skeleton world championships in Altenberg, Ger., on February 23. Uhlaender claimed her second consecutive World Cup overall title in 2008 but had to settle for the silver medal in Altenberg.

Norbert Millauer—AFP/Getty Images

but the pair failed to medal at the world championships. They were beaten by German teammates André Florschütz and Torsten Wustlich, who won the gold, and Tobias Wendl and Tobias Arlt, who claimed the silver medal. Austrian cousins Tobias and Markus Schiegl took the bronze.

Italian Armin Zöggeler topped the World Cup circuit in men's singles, finishing first or second in every World Cup race except one—a third-place finish in Calgary, Alta.—but he also failed to medal at the world championships, where he placed fifth. Instead, it was the German team that completed a podium sweep; Felix Loch led the charge, followed by David Möller in second and Andi Langenhan in third.

(JANELE M. MAREK)

BOXING

The long, highly successful boxing career of Oscar De La Hoya (U.S.) appeared to be at an end following his technical knockout defeat at the hands of Manny Pacquiao (Philippines) in a nontitle welterweight bout held on Dec. 6, 2008, at the MGM Grand in Las Vegas. The 35-year-old De La Hoya took the worst beating of his career before the fight was stopped between the eighth and ninth rounds. De La Hoya went into the bout as the betting favourite, mainly owing to the fact that he was a naturally larger man, while Pacquiao, who began his career as a flyweight, had never before fought above the lightweight division. Once the fight began, however, the left-handed Pacquiao dominated with speed, precision punching, and nimble footwork. The match—the largest-grossing fight of the year—drew a live crowd of more than 15,000, paying a gate in excess of $17 million, and sold pay-per-view television packages to approximately 1.25 million customers, which generated another $70 million in revenue.

Pacquiao, widely considered the best boxer in the world, fought three times during the year, in three different weight classes. On March 15 he won a narrow 12-round decision over Juan Manuel Márquez (Mexico) to win *The Ring* junior lightweight championship and World Boxing Council (WBC) super featherweight title. In his next bout, on June 28, Pacquiao moved up to the lightweight division and knocked out David Diaz (U.S.) in the ninth round to capture the WBC belt. Both bouts were held in Las Vegas. His accomplishments earned him *The Ring* magazine's Fighter of the Year award. Márquez rebounded from his close loss, annexing *The Ring* lightweight championship on September 13 with an 11th-round knockout of Joel Casamayor (Cuba) in Las Vegas.

The already confusing heavyweight picture became even more complicated when former WBC champion Vitaly Klitschko (Ukraine) returned to action for the first time since December 2004, after which he retired owing to a series of injuries. In his first comeback bout, on October 11, Klitschko took the WBC title with an eighth-round technical knockout of Samuel Peter (Nigeria) in Berlin. Peter had won the title on March 8 when he stopped Oleg Maskayev (Russia) in Cancun, Mex. The fact that Vitaly Klitschko and his younger brother, International Boxing Federation (IBF) titleholder Wladimir Klitschko (Ukraine), had refused to fight each other meant that a unification bout was unlikely. Wladimir Klitschko successfully defended the IBF title three times in 2008, winning a boring 12-round decision on February 23 over Sultan Ibragimov (Russia) at New York City's Madison Square Garden, scoring an 11th-round knockout of Tony Thompson (U.S.) on July 12 in Hamburg, and stopping former champion Hasim Rahman (U.S.) in the seventh round on December 15 in Mannheim.

Undefeated World Boxing Association (WBA) heavyweight titleholder Ruslan Chagaev (Uzbekistan) successfully defended his belt on January 19, winning a 12-round decision over Matt Skelton (U.K.) in Düsseldorf, Ger. Injuries and illness, however, sidelined Chagaev for the remainder of the year, and Nicolay Valuyev (Russia) won the so-called interim WBA title on August 30 with a 12-round decision over John Ruiz (U.S.) in Berlin. In the final heavyweight title fight of the year, on December 20, Valuyev scored a controversial majority decision over 46-year-old former champion Evander Holyfield (U.S.) in Zürich.

In his first bout in the U.S., "unified" super middleweight champion Joe Calzaghe (U.K.) took *The Ring* and linear light heavyweight championship from Bernard Hopkins (U.S.) on April 19 via a 12-round split decision in Las Vegas. Calzaghe, undefeated in 46 professional bouts, returned to the U.S. and tallied a one-sided 12-round decision on November 8 over Roy Jones, Jr. (U.S.), at Madison Square Garden.

The 43-year-old Hopkins, considered close to retirement after losing to Calzaghe, returned on October 18 to score a stunning upset in a nontitle bout in Atlantic City, N.J., dominating reigning WBC middleweight champion Kelly Pavlik (U.S.) to win a 12-round decision and drawing rave reviews for his performance. Prior to his unexpected loss to Hopkins, Pavlik had won a 12-round decision on February 16 over former champion Jermain Taylor

Defending WBC lightweight champion David Diaz struggles to rise after being knocked out by Manny Pacquiao in the ninth round of their June 28 title bout. Pacquiao's knockout win earned him his fourth belt in four different weight divisions.

Eric Jamison/AP

(U.S.) in a nontitle bout in Las Vegas and knocked out Gary Lockett (U.K.) on June 7 in the third round of a title defense in Atlantic City.

The retirement of welterweight champion and crossover star Floyd Mayweather, Jr. (U.S.), was a serious setback for the sport. A number of quality fighters battled to fill the void at welterweight: Antonio Margarito (Mexico) knocked out Kermit Cintrón (Puerto Rico) on April 12 in the sixth round of their bout in Atlantic City to win the IBF welterweight title. Next, in one of the year's most thrilling fights, held on July 26 at the MGM Grand, Margarito came from behind to stop previously undefeated Miguel Cotto (Puerto Rico) in the 11th round to capture the WBA title; the bout generated approximately 450,000 pay-per-view sales. In order to fight Cotto, Margarito was forced to relinquish the IBF title, and that vacancy was filled on August 2 when Joshua Clottey (Ghana) won a ninth-round technical decision over Zab Judah (U.S.) in Las Vegas. Andre Berto (U.S.) won the vacant WBC welterweight title on June 21 by stopping Miguel Rodríguez (Mexico) in the seventh round in Memphis, Tenn. Berto made his first successful defense on September 27, winning a 12-round decision over Steve Forbes (U.S.) in Carson, Calif.

After having failed to take the welterweight championship from Mayweather in 2007, Ricky Hatton (U.K.) dropped back down in weight and on May 24 defended *The Ring* junior welterweight championship with a 12-round decision over Juan Lazcano (Mexico) at City of Manchester (Eng.) Stadium. Hatton retained the title again on November 22, stopping Paul Malignaggi (U.S.) in the 11th round in Las Vegas.

The best action fight of the year was the third bout of a junior featherweight trilogy between champion Israel Vázquez (Mexico) and former champion Rafael Márquez (Mexico), won on March 1 by Vázquez via a 12-round decision in Carson. The riveting blood-splattered slugfest was up for grabs going into the final round, when Vázquez knocked down Márquez in the closing moments of the bout to win the decision and retain *The Ring* and WBC super bantamweight titles. (NIGEL COLLINS)

CRICKET

International cricket reached a turning point in 2008 as the top cricketers saw wealth beyond belief flow into the game and into their pockets. The main agent of change was the Indian Premier League (IPL), a city-based competition for 20/20 cricket (the shortened 20-overs-a-side version of the game). The new IPL attracted rich owners, massive television revenue, and the majority of the world's best players to the 45-day tournament held across India in April and May.

The year also witnessed the strange spectacle of Allen Stanford, a cricket-loving Antigua-based American billionaire, arriving at Lord's Cricket Ground by helicopter on June 12 to offer the England Cricket Board (ECB) a "winner take all" 20/20 match between England and a West Indian All Stars XI for prize money of £10 million (£1 = about $2). For some, notably the players, the influx of big money was welcomed, but others were fearful of the impact of 20/20 on the future of Test cricket. The rest of the world rushed to tap into the new audiences and potential new markets opened up by the success of the IPL. A Champions League tournament for the 20/20 champions of England and Wales, India, South Africa, and Australia was launched, also with vast prize money. For the 2010 season England created its own version of the IPL, based on counties rather than cities, and there was even talk of 20/20 cricket's becoming an Olympic sport by 2020.

In a frenetic 10-hour bidding contest, held at the Hilton Towers Hotel in Mumbai (Bombay) on February 20, the world's top players were auctioned to bidders from the eight franchises. There were several surprises. The top price was the £770,095 paid by the Chennai (Madras) Super Kings (owned by India Cements) for the big-hitting Indian wicketkeeper Mahendra Singh Dhoni. In contrast, the Australian captain, Ricky Ponting, by common consent the best batsman in the world, commanded a fee of only £205,610. To add to the Hollywood-style glamour, owners, who paid between £34 million and £57 million for their franchises, included Bollywood star Shah Rukh Khan (the Kolkata [Calcutta] Knight Riders) and actress Preity Zinta (the Mohali Kings). Broadcast rights for the IPL commanded the highest fee of all: £500 million for 10 years. In the end, the tournament was won—in a three-wicket victory over Chennai on June 1—by the Rajasthan Royals (captained by Australian bowler Shane Warne), which was, at a mere £34 million, the least expensive of the eight franchises.

The IPL presented problems to the cricketing authorities elsewhere in the world. England's players, all centrally contracted to the ECB, were not allowed to play in the inaugural IPL because of other international commitments. New Zealand banned fast bowler Shane Bond for having taken part in another 20/20 tournament in India. It soon became clear, however, that money would talk louder than national pride, and by year's end attempts were being made to regularize the international calendar to allow players to take part in the IPL in 2009. The long-term danger for the game was that the next generation of young cricketers, particularly in Asia, would grow up playing only 20/20 cricket and the subtle skills of Test cricket, which had survived for more than a century, would be lost.

The contrast between the IPL, with packed crowds and glitzy presentation, and some of the year's Test cricket was depressing for the purists. Australia and West Indies played out an enthralling Test series in front of empty stands, and even in India and Pakistan, the new financial powerhouses of the game, Test cricket was in danger of becoming an irrelevant sideshow. Australia completed a record-tying 16th consecutive Test victory, against India in Sydney in a four-match Test series marred by ill feeling. Indian spin bowler Harbhajan Singh was banned for three matches for allegedly having made a racist comment to Australian batsman Andrew Symonds; the ban was later overturned and the penalty reduced to a fine. The Indian players were so incensed by the punishment that they threatened to go home without finishing the tour. Common sense prevailed, however, and Australia won the series 2–1 to maintain its standing at the top of the game, even without Warne and Glenn McGrath, both of whom had retired from Test play in 2007. South Africa, strongly led by Graeme Smith and with two emerging pace bowlers in Dale Steyn and Morne Morkel, recorded its first victory in a Test series in England since 1965. After the defeat in the Third Test, Michael Vaughan, the England captain, resigned and was replaced by South African-born batsman Kevin Pietersen, who led England to victory in the final Test of the series and to a resounding 5–0 win in the one-day internationals.

High points during the 2007–08 season included the return of Test cricket to Galle, an area of southern Sri Lanka devastated by the December 2004 tsunami. Sri Lankan spin bowler Muttiah Muralitharan took a record 709th

Test wicket, and Anil Kumble of India passed 600 Test wickets. In a match for South Africa against Bangladesh, Smith and Neil McKenzie shared a world-record opening stand of 415. Kumar Sangakkara of Sri Lanka became the first batsman in Test history to record innings of more than 150 runs in four consecutive Tests. Meanwhile, two great international players, Adam Gilchrist of Australia and Shaun Pollock of South Africa, retired.

(ANDREW LONGMORE)

CURLING

In 2008 Canada won both the men's and women's world curling championships for the second straight year. Kevin Martin's team doubled Scotland's David Murdoch by a score of 6–3 in the men's final in Grand Forks, N.D. Norwegian skip Thomas Ulsrud defeated China's Fengchun Wang 8–3 for the bronze. The order of the rest of the men's field was France, Australia, the U.S., Germany, Denmark, Sweden, Switzerland, and the Czech Republic. At the women's world championship in Vernon, B.C., skip Jennifer Jones downed China's Bingyu Wang 7–4 for the gold. Switzerland's Mirjam Ott beat Moe Meguro of Japan 9–7 for the bronze medal. Denmark, Sweden, the U.S., Russia, Germany, Scotland, Italy, and the Czech Republic completed the women's standings.

In the first world mixed doubles event, held in Vierumäki, Fin., Irene Schori and Toni Müller of Switzerland edged Finland's Anne Malmi and Jussi Uusipaavalniemi 5–4 for the title. Sweden's Marie Persson and Göran Carlsson won the bronze in a field that included 24 countries.

Eve Muirhead's Scottish team scored a decisive 12–3 win over Sweden's Cecilia Östlund in the world junior women's final in Östersund, Swed. Canada's Kaitlyn Lawes settled for the bronze. The U.S. captured the world junior men's title, with Chris Plys scoring a 7–5 victory over Sweden's Oskar Eriksson. William Dion of Canada took the bronze medal. Canada swept the men's and women's world senior championships. Pat Ryan shut out Sweden's Per Linderman 8–0 in the men's final in Vierumäki. David Russell of the U.S. was third. Diane Foster took the women's title with a 10–2 win over Scotland's Kirsty Letton. Renate Nedkoff of Switzerland was the bronze medalist.

Rune Lorentsen skipped Norway to a second consecutive world wheelchair championship. Norway won 5–3 over South Korea's Hak Sung Kim in the final in Sursee, Switz. Jim Pierce of the U.S. took the bronze medal.

(DONNA SPENCER)

CYCLING

The drive to eliminate drugs from cycling continued to gain momentum in 2008, with encouraging success. The premier event on the road-race calendar, the Tour de France, produced seven positive tests, including six for continuous erythropoiesis receptor activator (CERA), a slow-release blood-boosting drug developed to help people with kidney problems or anemia. The manufacturers of CERA, an advanced version of erythropoietin (EPO), had worked closely with the World Anti-Doping Agency (WADA) over a four-year development period before the drug was marketed in January 2008. There were three racers who tested positive during the Tour, notably Italian rider Riccardo Ricco, the winner of two mountain stages. Postrace testing of frozen blood samples, using a newly developed test, later produced three more positives: from stage winners Leonardo Piepoli of Italy and Stefan Schumacher of Germany, as well as Austrian Bernard Kohl, who had finished third overall and won the competition for the best climber.

The Tour de France, which began in Brest on July 5 and ended on the Champs-Élysées in Paris on July 27, was won by Carlos Sastre of Spain. Six different riders wore the leader's yellow jersey before Sastre took over at the end of the 17th stage. He reached Paris with a final margin of 58 seconds over Australian Cadel Evans after 21 stages and 3,559 km (2,210 mi) of racing. The Tour of Italy (Giro d'Italia) and Tour of Spain (Vuelta a España) were both won by Spanish rider Alberto Contador, who was unable to defend his 2007 Tour de France title after his new team was excluded for doping offenses committed at the 2007 race.

Host Great Britain dominated the Union Cycliste Internationale (UCI) world track championships, held in Manchester in March, winning 9 of the 18 events. By taking gold in the individual sprint, Chris Hoy (*see* BIOGRAPHIES) became the first rider to win all four men's world sprint-discipline titles, adding to previous victories in the keirin (which he retained in Manchester), 1-km time trial (known as the kilo), and team sprint. Marianne Vos of The Netherlands won the women's 20-km points race to make her the first person to win senior world cycling titles in road racing, mountain biking, and track racing.

Hoy later secured three gold medals at the Olympic Games in Beijing, where Great Britain won 7 of the 10 track disciplines. Hoy, Jamie Staff, and Jason Kenny set an unofficial world record of 42.950 sec for the 750-m team sprint. The British 4,000-m pursuit quartet of Ed Clancy, Paul Manning, Geraint Thomas, and Bradley Wiggins twice broke the world record, lowering it to 3 min 53.314 sec in the final. In addition, Britain's Nicole Cooke won both the world and Olympic women's road race titles. (JOHN R. WILKINSON)

EQUESTRIAN SPORTS

Thoroughbred Racing. *United States.* A seemingly invincible three-year-old colt named Big Brown took American Thoroughbred racing by storm during the 2008 spring classic season. In the 134th Kentucky Derby on May 3, Big Brown, making only his fourth career start, teamed up with jockey Kent Desormeaux to score a dominating 4¾-length victory over Eight Belles before 157,770 spectators, the second largest crowd in the event's history. Tragedy marred the race when Eight Belles, the lone filly in the field of 20 three-year-olds, suffered catastrophic fractures in both front ankles while pulling up and had to be euthanized on the track.

Two weeks later Big Brown prevailed effortlessly in the 133rd Preakness Stakes, winning by 5¼ lengths over Macho Again and leading most observers to believe that his quest to become the 12th American Triple Crown winner and the first since Affirmed in 1978 was a forgone conclusion. When Big Brown was sent off as the heavy 3–10 favourite in the 140th Belmont Stakes on June 7, the only concern was the fact that he was racing with a patched quarter crack in his left front foot. In spite of running prominently in third position for a mile, however, the colt failed to exhibit the flair that he had shown in his previous tests and finished last after being eased during the stretch run by Desormeaux. Da'Tara, the longest shot in the field of nine at 38–1, led all the way under jockey Alan Garcia to prevail by 5¼ lengths over Denis of Cork.

Big Brown came back to win the $1 million Haskell Invitational Stakes on August 3 and the ungraded $500,000 Monmouth Stakes on the turf on Sep-

tember 13, both at Monmouth Park in Oceanport, N.J. The colt suffered a career-ending injury to his right front heel during an October 13 workout at Aqueduct in Queens, N.Y., while preparing for a start in the Breeders' Cup Classic. He was scheduled to begin stud duty in 2009 at Three Chimneys Farm in Midway, Ky.

The growing use of anabolic steroids in American Thoroughbred racing was thrust into the spotlight after Big Brown's trainer, Dick Dutrow, Jr., spoke about regularly administering doses of the drug to the colt during the lead-up to the Triple Crown races. Industry leaders began calling for anabolic steroid regulations, which all horse-racing states were expected to have in place in 2009. The trainers of horses entered in the 2008 Breeders' Cup World Championships were subject to a one-year suspension from the event for any tests that were returned positive for the drug.

The 25th anniversary running of the Breeders' Cup World Championships, held October 24–25 at Santa Anita Park in Arcadia, Calif., was dominated by European-based horses, which accounted for five victories and five second-place finishes. The impressive showing included long shots Raven's Pass and Henrythenavigator, which finished one-two in the $4.58 million Classic. Odds-on favourite Curlin ran fourth, which damaged the colt's chances for a second straight Horse of the Year title. Four-year-old filly Zenyatta kept her record unblemished in seven starts while staking claim to Horse of the Year honours with a powerful come-from-behind victory in the Ladies' Classic. The addition of three new events (Marathon, Turf Sprint, and Juvenile Fillies Turf) expanded the two-day Breeders' Cup program to 14 races, which generated a worldwide handle of $155,474,553. Garrett Gomez made history by winning four races, the first jockey to ride more than two winners on a Breeders' Cup program.

It was the first time that the Classic and the other main track Breeders' Cup races had been held on a synthetic racing surface rather than on dirt. The Cushion Track surface installed at Santa Anita in 2007 proved to have drainage problems, however, which forced the track to cancel 11 live racing dates during its winter-spring season. It was replaced with a Pro-Ride synthetic surface during the summer months. Santa Anita filed suit against the manufacturers of Cushion Track.

Curlin's September 27 victory in the $750,000 Jockey Club Gold Cup Stakes at Belmont Park made him the all-time leading money-winning American Thoroughbred. The $450,000 winner's purse sent his career total to $10,246,800, eclipsing Cigar, which was retired in 1996 after earning $9,999,815.

The New York Racing Association emerged from bankruptcy in 2008 and on September 12 received a 25-year extension on its franchise to operate Belmont Park, Aqueduct, and Saratoga Race Course. Bay Meadows Race Course in San Mateo, Calif., which first opened in 1934, closed on August 17.

Jockey Earlie Fires, 61, announced his retirement on September 21 after a 44-year career. The Hall of Famer ranked ninth all-time among North American jockeys, with 6,470 victories. Legendary trainers D. Wayne Lukas, Nick Zito, and Bob Baffert joined forces in June to create the Thoroughbred Legends Racing Stable. Trainer Frank Whiteley, Jr., died on May 2 at the age of 93. (*See* OBITUARIES.) Genuine Risk, one of only three fillies to have won the Kentucky Derby, died on August 18 at age 31.

(JOHN G. BROKOPP)

International. In 2008 Aidan O'Brien was champion Thoroughbred horse trainer in Britain, as well as at home in Ireland. Hopes that he could beat Bobby Frankel's world record of 25 Group (or Grade) 1 victories in a season were disappointed, however, as his stable form declined in the autumn. He added only three more victories after September 14 and ended the year with 23. O'Brien's Duke of Marmalade won five times, and Henrythenavigator achieved four victories in Group 1 races, including the 2,000 Guineas in May. Both horses were retired to stud at season's end. Coolmore Stud, for which O'Brien trained, announced the retirement of its most influential stallion, Sadler's Wells, in May due to declining fertility.

Johnny Murtagh, who replaced Kieren Fallon as stable jockey in January, rode most of O'Brien's winners. Fallon was acquitted at a race-fixing trial in December 2007, but it was later announced that he had tested positive for a banned substance while riding in France the previous August. Fallon had already served a six-month ban for an earlier positive result there. In January 2008 the six-time British champion was banned until Aug. 7, 2009.

Godolphin was no match for Coolmore in 2008, but Sheikh Muhammad al-Maktoum did make several significant purchases. He bought Australia's Woodlands Stud, with some 1,000 horses, in March. In August he added the main yard at the Chantilly (France) stables of André Fabre and sent 35 two-year-olds and 70 yearlings there in the autumn. In September he purchased the Kentucky farm and 250 horses belonging to Stonerside. One of the Stonerside horses, Raven's Pass, defeated Henrythenavigator and the American defending champion, Curlin, in the Breeders' Cup Classic. The first English-trained winner of the Classic, Raven's Pass carried the colours of Sheikh Muhammad's wife, Princess Haya of Jordan, who was also successful with New Approach in the Epsom Derby.

Horses from the U.S. and South Africa divided the six races at Nad al Sheba on Dubai (U.A.E.) World Cup day in March. Curlin, already a winner at Nad al Sheba that month, beat the South African-trained Asiatic Boy in the World Cup. The South Africans had dominated the preceding International Festival, often, as in the case of Asiatic Boy, with horses bought in South America.

Alain de Royer-Dupre broke a sequence of 21 consecutive years in which Fabre had been champion trainer in France. The new champion owed his success to the Aga Khan's horse Zarkava, winner of the 2008 Prix de l'Arc de Triomphe, which was worth twice as much as in 2007 thanks to Qatar, which sponsored all 11 Group races on the Arc weekend. Zarkava retired unbeaten in seven races, five of them in 2008.

Bad weather in August and September disrupted several important meetings in England. York was washed out, but all of the most significant races were redistributed between Newmarket, Newbury, and Goodwood at the end of the same week. Haydock's Group 1 Sprint Cup was run at Doncaster. A strike halted both Thoroughbred and harness racing in Italy between October 7 and November 8. Many big races were lost, but the action achieved its objective of persuading the government to give more money to the sport.

Kerrin McEvoy, who had been second jockey for Godolphin, returned home to Australia as a consequence of the Woodlands sale. He rode Godolphin's England-based All the Good to victory in the Caulfield Cup in October. All the Good missed the Melbourne Cup in November because of an injury, but the race still attracted a record seven European runners. Bauer, already winner of the Geelong Cup, was the best of them. In the event, however, he failed by a

nose to catch 40-1 long shot Viewed, which gave his Australian trainer Bart Cummings, at almost 81 years old, a record 12th winner of the great race.

Not Bourbon was trainer Roger Attfield's eighth winner of the Queen's Plate, the first leg of the Canadian Triple Crown. The colt arrived for the second leg, the Prince of Wales Stakes, as the overwhelming favourite, but he finished sixth (behind winner Harlem Rocker), after which he required throat surgery. Marlang captured the third leg, the Breeders' Stakes, in August. Marsh Side was a surprise winner of the Canadian International in October. It was the first victory since December 2006 for the California-trained Marsh Side, which finished last in the same race in 2007. (ROBERT W. CARTER)

Harness Racing. Two three-year-old colts with long run-on names captivated harness racing fans in North America in 2008. The pacer Somebeachsomewhere and the trotter Deweycheatumnhowe dominated their divisions during the season, and by the end of the year, each had earned a future in the breeding ranks.

Somebeachsomewhere was truly a hero to many in harness racing because of his grassroots ties. He was foaled in Ohio at a small farm and then sold as a yearling to a group of enthusiasts from Nova Scotia. One of the Canadian owners, auto dealer Brent MacGrath, handled the training duties and turned the promising colt into a champion. After having been unbeaten in six starts as a two-year-old, Somebeachsomewhere won the first four starts of his sophomore season, including the $1.5 million North America Cup in Ontario, before being upset by Art Official in the $1.1 million Meadowlands Pace. In that race Somebeachsomewhere was beaten by a neck in a time of 1 min 47 sec for the mile. Later in the season, at the Red Mile track in Kentucky, Somebeachsomewhere paced a mile in 1 min 46.4 sec, the fastest ever by a three-year-old. He also paced the fastest mile ever by a three-year-old on a half-mile track with a 1-min 49.2-sec clocking. Somebeachsomewhere ended the season with 14 wins in 15 starts and earnings of $2,448,003.

MacGrath created some controversy when he deliberately skipped racing Somebeachsomewhere in the Little Brown Jug, the traditional big prize for three-year-old pacers. The format of the Little Brown Jug, which could require a horse to race three heats in one afternoon, was deemed to be too grueling by MacGrath, who was concerned about the toll that a demanding race in the Jug might take on his horse. With the expected star absent, the Little Brown Jug went to Shadow Play, driven to victory by Ohio native David Miller.

Bill Kostroun/AP

Three-year-old trotter Deweycheatumnhowe, driven by trainer and co-owner Ray Schnittker, charges to victory in the $1.5 million Hambletonian on August 2.

Deweycheatumnhowe was also unbeaten as a two-year-old in 2007, winning all 10 of his starts. He continued winning as a three-year-old, dominating his trotting foes and extending his streak to 15 straight wins in capturing the $1.5 million Hambletonian at the Meadowlands. In early September "Dewey" tasted defeat for the first time when his rival Crazed trotted past to win in the stretch in an elimination for the Canadian Trotting Classic, but he rebounded to win the final. In early October Dewey was beaten by Celebrity Secret in a heat of the prestigious Kentucky Futurity but came back to win the event in a third-heat race-off. He also lost his final race and thus had 12 wins in 15 starts and earnings of $2,218,987.

In Europe French trotter Offshore Dream captured the grueling Prix d'Amerique for the second consecutive year. The small six-year-old bay rallied in the stretch to win the 2.7-km (1.67-mi) race, held at the Vincennes racecourse near Paris in late January. He was driven by his trainer, Pierre Levesque. Four months later in Sweden, the Italian star Exploit Caf won the coveted Elitlopp for French driving ace Jean-Michel Bazire. Oiseau de Feux of France finished second, and American trotter Enough Talk was third.

In Australia, Blacks A Fake and trainer-driver Natalie Rasmussen won the Inter-Dominion Pacing Championship series, considered the greatest prize in Southern Hemisphere harness racing, for the third consecutive year. The eight-year-old pacer earned the trophy at the Moonee Valley track in Melbourne. (DEAN A. HOFFMAN)

Steeplechasing. High winds forced the abandonment of the second day of the Cheltenham Festival in March 2008, but the lost races were redistributed between the remaining two days. Paul Nicholls took the first three places in the Gold Cup Chase as Denman beat the 2007 winner, Kauto Star, and Neptune Collonges. All three horses were also big race winners in Ireland's steeplechase season. Nicholls, who was British champion trainer for the third season, also won Cheltenham's Champion Chase with Master Minded and the Triumph Hurdle with Celestial Halo.

Princesse d'Anjou won the Grand Steeple-Chase de Paris for the second time. Maruka Rascal, Japan's Steeplechase Horse of the Year in 2006, took that country's Nakayama Grand Jump. That race was supplanted as the world's richest over obstacles by the English Grand National, which was won by Comply or Die for trainer David Pipe. (ROBERT W. CARTER)

FOOTBALL

Association Football (Soccer). *Europe.* Euro 2008, the latest installment of the quadrennial European association foot-

ball (soccer) championship, was decided in favour of Spain, which defeated Germany 1–0 in the final, held on June 29 in Vienna. The Spanish team's free-flowing attack swarmed a rather static German defense. Despite the absence of injured David Villa—the tournament's top scorer, with four goals—Spain continued its offensive pressure and was rewarded in the 33rd minute by the sheer persistence of striker Fernando Torres. Fastening onto a shrewd pass by Spanish midfielder Xavi, Torres blew past hesitant German defender Philipp Lahm, skipped over the advancing goalkeeper, and clipped in the crucial goal. Spain, led by veteran coach Luis Aragonés, maintained this swift and effective style of play, though it produced no further goals. Xavi was named the Player of the Tournament.

The tournament was held jointly in Austria and Switzerland, but neither of the host countries managed to survive the group stage. Though there was exactly the same number of goals scored as in 2004, far more attacking enterprise was shown by many of the competing teams. Discipline was much improved too, with just three red cards shown in the 31 matches. Greece, the reigning Euro champion, lost all three group games. Portugal, The Netherlands, and Croatia were group winners, along with unbeaten Spain. Noticeably absent from the tournament was the nonqualifying contingent from the British Isles—England, Scotland, Ireland, Northern Ireland, and Wales. In addition, France—the World Cup runner-up in 2006—failed to win a match, while reigning World Cup champion Italy merely scraped into the knockout round by beating a French team suffering from injury and reduced to 10 players by a penalty.

The Netherlands showed form reminiscent of the flair that had characterized its 1988 Euro championship success. Its 3–0 win over Italy produced the finest goal of the tournament, as well as the most controversial. Ruud Van Nistelrooy, though seemingly offside, scored the opening goal; the referee allowed it despite the Dutch striker's apparently being played onside only by virtue of a defender lying injured outside the playing area. Other notable displays came from Croatia, which surprised Germany in a 2–1 win, and Turkey, which turned a 2–0 deficit into a 3–2 victory over the Czech Republic. Two of the quarterfinal ties were decided in shoot-outs. Spain won 4–2 after a goalless draw with Italy, and Turkey emerged with a 3–1 victory over Croatia after a 1–1 draw. In the semifinals the Russians were given a lesson in relentless pressure by Spain, which achieved a convincing 3–0 win, while Germany just edged Turkey 3–2 with a dramatic winning goal in the 90th minute.

In the wake of the failure of any team from the British Isles to qualify for the Euro—and as attention switched to qualifying for the 2010 World Cup in South Africa—England axed its coach, Steve McClaren, replacing him with Fabio Capello of Italy, and Ireland appointed another Italian, Giovanni Trapattoni, to replace coach Steve Staunton. Scotland also accepted the resignation of its coach, Alex McLeish, and gave the position to fellow Scot George Burley.

There was consolation for English fans in the Union des Associations Européennes de Football (UEFA) Champions League. On May 21 in Moscow, Manchester United met Chelsea in an all-English final, with United securing a 6–5 victory on penalties after a 1–1 draw. United had taken the lead in the 26th minute as Portuguese international Cristiano Ronaldo headed a goal past Chelsea's Czech goalkeeper, Petr Cech, but Chelsea tied the game just before halftime when Ghanaian midfielder Michael Essien's shot was deflected by two United defenders, putting Dutch goalkeeper Edwin Van der Sar on the wrong foot and allowing Frank Lampard an easy score. Chelsea was denied twice in the second half. Extra time arrived, and tempers frayed. Didier Drogba (of Côte d'Ivoire) was sent off for Chelsea, only the second player in Champions League history to have been dismissed in the final. In the shoot-out, Chelsea's John Terry slipped as he was about to take what could have been the winning kick and merely hit the post. Then Van der Sar saved French striker Nicolas Anelka's effort to clinch United's third Champions League crown.

Spanish midfielder Xabi Alonso jumps for the ball during the association football (soccer) Euro 2008 final in Vienna on June 29. Spain was undefeated in the tournament and beat Germany 1–0 in the final.

Alberto Pizzoli—AFP/Getty Images

In UEFA Cup competition, there had been high hopes for the Rangers, the Scottish Premier League runners-up, who on May 14 competed in the Cup final against Zenit St. Petersburg. The Glasgow club, however, entered the final having been forced to play 12 competitive matches in the previous six weeks, in contrast to its fresher opponent, which the Russian Premier League had given permission to postpone several games on its domestic schedule until after the final. A tired Rangers team nevertheless managed to hold Zenit St. Petersburg to a scoreless tie until the 72nd minute, when Igor Denisov, after exchanging passes with teammate Andrey Arshavin, netted the breakthrough goal. Konstantin Zyryanov added a second goal in the dying seconds of the match to give Zenit St. Petersburg a 2–0 victory.

Under its new president, Michel Platini, the UEFA—with support from the Fédération Internationale de Football Association (FIFA)—was eager to introduce a system of quotas restricting the use of foreign players, especially in the English Premier League. Attempts were made to persuade the European Union to allow the move in contravention of the free movement of labour within its membership. That did not prevent English Premier League clubs from continuing to spend freely on trades. By the end of the summer trade deadline, a record £500 million (about $890 million) had been spent, with 12 clubs breaking their previous record deals. Sulaiman al-Fahim, the new co-owner of the Premier League football club Manchester City, was happy to pay a British record £32.5 million (more than $58 million) to sign Robinho, a Brazilian striker from the Spanish team Real Madrid.

The UEFA took the unprecedented step of banning CSKA Solia from participating in the Champions League for 2008–09 because of the Bulgarian club's financial debt. The move was all the more surprising since the club had just completed one of the most successful seasons in its 60-year history, winning its record 31st Bulgarian league title. Other European champions included Anorthosis, which took the title in Greek Cyprus en route to becoming the first Cypriot club to advance to the Champions League group stage; Partizan Belgrade, winners of the Serbian crown; and Dinamo Zagreb, the best of the Croatian league. In addition, Bayern Munich dominated the Bundesliga, Germany's top league, while Lyon, seemingly untouchable in France, racked up its seventh consecutive title. Despite having 6 points deducted for corruption dating back to the 2003–04 season, Porto still managed to win the Portuguese title by 14 points. Internazionale repeated in Italy's Serie A as former champion AC Milan slipped to fifth place, despite the presence of 2007 FIFA Player of the Year Kaká. (*See* BIOGRAPHIES.) In Scotland the fairy-tale rise of Gretna from the obscurity of English nonleague football to the Scottish Premier League ended in disaster after its owner and financial benefactor, Brookes Mileson, fell ill, which plunged the team's finances into disarray. The club was eventually dissolved in August. (JACK ROLLIN)

The Americas. While Argentina and Brazil had most of South America's star association football (soccer) players, including Brazil's formidable playmaker Kaká (*see* BIOGRAPHIES), those countries had not performed well in their Fédération Internationale de Football Association (FIFA) World Cup qualifying group. While neither was in danger of failing to qualify for the 2010 finals, they were easily topped in the rankings by Paraguay. With the competition just past the halfway stage, unfancied Ecuador was also well placed to gain a spot. Ecuador's advantage was playing home games at Quito's high altitude. In World Cup qualifying matches farther north, the U.S. beat Cuba both at home (3–1) and away (1–0) in the first meetings between those countries' teams in Cuba in 61 years.

Quito's Liga Deportiva Universitaria (LDU) in 2008 became the first Ecuadoran club to win the Libertadores de América Cup. LDU also won the vice-championship of Ecuador's domestic league behind cross-town rival Deportivo and qualified for the FIFA Club World Cup but lost to Manchester (Eng.) United 1–0 in the final on December 21. São Paulo FC secured the Brazilian national championship for the third straight year as the team's goalkeeper, Rogerio Ceni, reached a total of 83 career goals from penalties and free kicks. Meanwhile, Mexico's Pachuca retained the CONCACAF club championship, and Libertad took the Paraguayan title for the third straight year. Porto Alegre's Internacional became the first Brazilian club to win the South American Cup, but the country continued to put its top four teams only into the Libertadores competition.

In Argentina, River Plate won the 2007–08 season's closing championship but then unexpectedly finished at the bottom of the 2008–09 opening championship, which was tied by three clubs (Boca Juniors, San Lorenzo, and Tigre) for the first time since 1968. Boca Juniors gained the club's 23rd professional title by scoring one more goal in the play-offs. Another big event in Argentina was the naming of the controversial former star player Diego Maradona as the coach of the national team.

In the U.S. the Columbus Crew was a first-time winner of the Major League Soccer (MLS) Cup. The sport appeared to be gaining in popularity. The MLS intended to expand from 14 to 16 clubs by 2010, and requests had been received from seven other cities seeking franchises. (ERIC WEIL)

Africa and Asia. Egypt retained its African Nations Cup title with a 1–0 win over Cameroon in the final, held on Feb. 10, 2008, in Accra, Ghana. Muhammad Aboutrika scored the game's only goal in the 77th minute. The Egyptians were able to contain Cameroon's prolific goalkicker Samuel Eto'o, who ended the tournament as the competition's all-time leading scorer, with 16 goals.

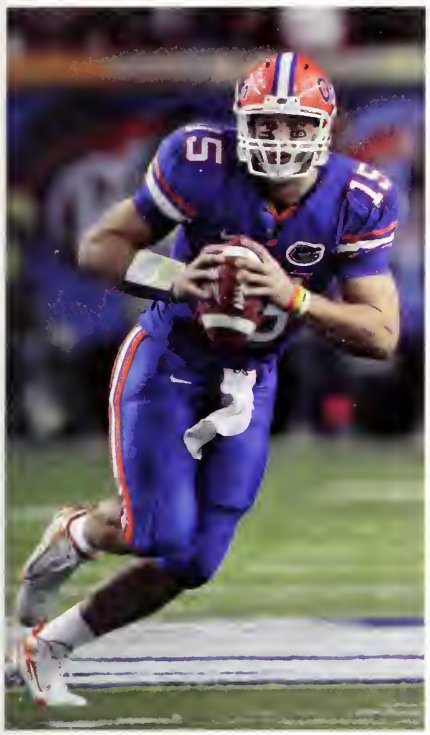
In the East Asian championship, staged in Chongqing, China, three of the six games played in the group final ended in draws. Although the deciding match, between South Korea and Japan, was played to a 1–1 tie, the South Koreans were declared the champions, since they had scored more goals overall in the tournament. China placed third, and North Korea was fourth. (JACK ROLLIN)

U.S. Football. *College.* Florida won its second top college football ranking in three years by defeating Oklahoma 24–14 in the 2008–09 Bowl Championship Series (BCS) championship game on Jan. 8, 2009, in Miami Gardens, Fla. Quarterback Tim Tebow was the game's Most Outstanding Player with 109 yd rushing and 231 yd and two touchdowns on passes for the Southeastern Conference (SEC) champion Gators. Florida's (13–1) defense held Big 12 champion Oklahoma (12–2) 40 points below its regular-season average of 54.0 (the Sooners had scored a record 702 points during the season and more than 60 in their last five games). It was fifth-ranked Oklahoma's fifth BCS bowl-game loss in six years and the fifth defeat in six years for the top-ranked team entering the BCS championship game.

Mountain West Conference winner Utah (13–0), Pacific-10 winner Southern California (12–1), and Texas (12–1) ranked second through fourth in the final reporters' Associated Press (AP) poll, with the coaches' *USA Today* poll placing Utah behind the others. Each school made a reasonable claim for the top ranking, however. Utah, the only undefeated team in the big-budget Football Bowl Subdivision (FBS), won the Sugar Bowl 31–17 over Alabama (12–2), which had been ranked first for five weeks before losing the SEC championship game to Florida. Southern California allowed FBS-low averages of 9.0 points and 134.4 yd passing per game and defeated Big Ten winner Penn State (11–2) by a score of 38–24 in the Rose Bowl. Texas won the Fiesta Bowl 24–21 over Ohio State (10–3) after having been denied a spot in the Big 12 championship game despite having beaten Oklahoma, ranking ahead of the Sooners in the AP poll, and having identical conference and overall records as Oklahoma and Texas Tech (11–2). Oklahoma played North Division winner Missouri (10–4) for the Big 12 title because it ranked higher in the BCS formula (which includes polls and computer rankings).

Atlantic Coast Conference champion Virginia Tech (10–4) won the Orange Bowl 20–7 over Big East champion Cincinnati (11–3), and Western Athletic Conference winner Boise State (12–1) lost 17–16 to Texas Christian (TCU; 11–2) in the Poinsettia Bowl. With Jerry Hughes's FBS-leading 15 sacks, TCU allowed per-game lows of 217.8 yd and 47.1 yd rushing over the season. Both polls ranked Alabama, TCU, and Penn State sixth, seventh, and eighth, respectively. The season had six different top-ranked teams, which was more than in 2007–08, although that year had fewer undefeated and one-loss teams, as well as bigger swings in the rankings.

Dave Martin/AP



Florida quarterback Tim Tebow prepares to pass against SEC rival Alabama on December 6. Florida's victory earned the Gators the conference title and a place in the BCS national championship game.

Quarterback Sam Bradford of Oklahoma became the only sophomore besides Tebow in 2007 to have won the Heisman Trophy for the best overall player. Bradford, who also won the Davey O'Brien Award as best quarterback, led the FBS with 50 touchdown passes and 180.8 rating points but threw two of his eight interceptions against Florida in the BCS final. Honours also went to Tebow, the second player with two consecutive Maxwell Awards, after Notre Dame's Johnny Lattner in 1952–53, and to Texas quarterback Colt McCoy, the Walter Camp Player of the Year. Tebow also received the Disney Spirit Award for being inspirational and the Danny Wuerffel Trophy for community service.

McCoy had the highest completion percentage, and Texas Tech's Graham Harrell had the most passing yards with 5,111, as his team led the FBS with 413.2 yd passing per game. Oklahoma, Texas Tech, and Texas ranked first, third, and fifth, respectively, in scoring, with top-10 passers in yards, touchdowns, and efficiency rating. Oklahoma State and Missouri gave the Big 12 Conference 5 teams among the top 10 in total offense and passing efficiency. The other leading offenses were Tulsa, with 569.9 yd per game behind quarterback David Johnson's FBS-high 10.15 yd per pass attempt, and Navy, with 292.4 yd rushing per game.

Rushing leader Donald Brown of Connecticut gained 2,083 yd, 18 per game more than runner-up Shonn Greene of Iowa, the Doak Walker Award winner as the best running back. The top receivers were North Texas's Casey Fitzgerald with 113 catches, Brigham Young's Austin Collie with 1,538 yd, and Texas Tech sophomore Michael Crabtree with 18 touchdowns and his second straight Fred Biletnikoff Award. Scoring leader Javon Ringer of Michigan State had 132 points on 22 rushing touchdowns. Honoured as the top defensive players were Southern California middle linebacker Rey Maualuga with the Chuck Bednarik Award and Texas defensive end Brian Orakpo with both the Bronko Nagurski Trophy and the Lombardi Award for best lineman or linebacker. Alabama's Nick Saban was named Coach of the Year. Alabama offensive tackle Andre Smith won the Outland Trophy for interior linemen.

Professional. The New York Giants of the National Football Conference (NFC) defeated the New England Patriots of the American Football Conference (AFC) 17–14 in Super Bowl XLII in Glendale, Ariz., on Feb. 3, 2008, winning the National Football League's (NFL's) 2007–08 championship and denying the Patriots the league's first 19–0 record. Quarterback Eli Manning (*see* BIOGRAPHIES) won the Super Bowl Most Valuable Player (MVP) award, which had gone to his older brother Peyton the previous year. Eli Manning completed 19 of 34 passes for 255 yd and two touchdowns, including the 13-yd game winner with 35 seconds to play, but he was best remembered for escaping three tacklers on a third-and-five completion 24 seconds earlier, a move that many called the greatest Super Bowl play ever. David Tyree made a jumping one-handed grab against his helmet while being tackled and gained 32 yd to the Patriots' 24-yard line.

The Patriots' disappointment continued in the 2008–09 season when they became the only 11–5 team to miss a 12-team play-off field and the seventh Super Bowl loser in eight years to miss the play-offs the next season. The NFC East champion Giants (12–4) were the only NFC play-off team to repeat from 2007, when they had qualified as a wild card. The Giants led the league with 157.4 yd rushing behind the NFL's fourth pair of 1,000-yd runners, Brandon Jacobs and Derrick Ward; Ward also led the league with 5.6 yd per carry.

Only three of the eight 2007–08 division champions returned to the play-offs. Pittsburgh (12–4) and San Diego (8–8) repeated in the AFC North and AFC West, respectively, and Indianapolis (12–4) was a wild card. Four of the other six division champions had gone more than five years without a title: Tennessee (13–3; AFC South), Miami (11–5; AFC East), Minnesota (10–6; NFC North), and Arizona (9–7; NFC West), which had waited for 33 years. Carolina (12–4) won the NFC South. The other wild-card play-off teams were the NFC's Atlanta (11–5) and Philadelphia (9–6–1) and the AFC's Baltimore (11–5). Indianapolis quarterback Peyton Manning won the league MVP award after taking the Colts to victory in their last nine regular-season games.

Denver (8–8) became the first NFL team to miss the play-offs after leading its division by three games with three to play. Tampa Bay (9–7) lost its last four games when just tying one would have given it a play-off berth. Detroit experienced the most complete futility, however, as it finished with the NFL's first 0–16 record, eclipsing Tampa Bay's 1976 squad, which went winless in a 14-game season as a first-year expansion team.

Miami quarterback Chad Pennington, with the league's best pass completion rate, was Comeback Player of the Year for the second time in three years after a sequence of events that began in August when Brett Favre rescinded his March 4 retirement announcement. Green Bay, Favre's team in 1992–2007, had planned its roster without him and traded him for a fourth-round draft pick to the New York Jets, which then cut Pennington, who signed with Miami one day later. Favre's passer rating finished more than 12 points behind those of both Pennington and Favre's Packers replacement, Aaron Rodgers, although Green Bay fell to a 6–10 record.

The Arena Football League (AFL) championship went to the Philadelphia Soul, which had a league-best 13–3 record. Philadelphia defeated the defending champion San Jose SaberCats 59–56 in the July 27 title game in New Orleans. In December the AFL Board of Directors voted to suspend the 2009 season and reevaluate the league's future in light of the global financial crisis.

Canadian Football. The Calgary Stampeders won the 2008 Canadian Football League (CFL) championship with a

22–14 Grey Cup victory over the Montreal Alouettes on November 25 in Montreal. Sandro DeAngelis was the game's top Canadian with five field goals for Calgary after regular-season CFL highs of 217 points and 50 field goals. Henry Burris, the game's Most Valuable Player, threw for 328 yd, including a touchdown, and rushed for a game-high 79 yd.

Calgary (13–5) won the West Division with league yardage leaders in both rushing (Joffrey Reynolds with 1,310) and receiving (Ken-Yon Rambo with 1,473), while its defense allowed league lows of 23.3 points and 89.7 yd rushing per game. East Division winner Montreal (11–7) led CFL offenses with 33.9 points and 428.8 yd per game behind the CFL bests of Most Outstanding Player Anthony Calvillo's 43 touchdown passes and 107.2 passer rating, Ben Cahoon's 107 catches, and Jamel Richardson's 16 touchdowns, all on catches. The top-passing Edmonton Eskimos (10–8) gained 335.1 yd per game, as quarterback Ricky Ray led the CFL with 5,661 yd passing and 9.4 yd per attempt, and Most Outstanding Canadian Kamau Peterson ranked second in catches and third in yards.

The Saskatchewan Roughriders (12–6) allowed 354.1 yd per game, while the British Columbia Lions (11–7) had the Most Outstanding Defensive Player, defensive end Cameron Wake, with league bests of 23 sacks and five forced fumbles. Most Outstanding Special Teams Player Dominique Dorsey of the Toronto Argonauts (4–14) led in both punt and kickoff return averages with a league-high 2,892 combined yards on runs, catches, and returns. Other top-player awards went to Montreal guard Scott Flory for offensive linemen and Saskatchewan slotback Weston Dressler for rookies.

(MELINDA C. SHEPHERD)

Australian Football. Hawthorn won the Australian Football League (AFL) Grand Final on Sept. 27, 2008, by upstaging solidly favoured Geelong in front of more than 100,000 spectators at the Melbourne Cricket Ground. It was Hawthorn's 10th premiership flag and its first since 1991. Geelong, the reigning champion, cruised into the Grand Final, having lost only one game all year, whereas Hawthorn had lost five games. At halftime Hawthorn held a slender 3-point lead, but the team turned on the power in the second half to win by 26 points, with a final score of 18.7 (115)–11.23 (89). The loss was a bitter blow for Geelong, which was attempting to equal the club's feat of winning successive flags in 1951–52. Among the standouts for Hawthorn was Luke Hodge, who was awarded the Norm Smith Medal as best player in the Grand Final.

Hawthorn's ace goal kicker, Lance Franklin, received the Coleman Medal for most goals (102) during the AFL's 22-game home-and-away season. Two goals in the Grand Final brought his year's total to 113. The AFL's most prestigious individual award, the Brownlow Medal, which recognized the season's best and fairest player, went to Western Bulldog Adam Cooney. The Rising Star Award, for best young player, was given to Fremantle's Rhys Palmer, and Carlton's Chris Judd was named captain of the All-Australian team. (GREG HOBBS)

Rugby Football. New Zealand Rugby Union entered 2008 in disarray after having been knocked out of the 2007 Rugby World Cup in a stunning quarterfinal loss to France, but the All Blacks ended the year on top of the world again, on and off the field. The All Blacks kicked off 2008 with five straight wins against Ireland, England, and South Africa, and although they lost two times in the Tri-Nations championship tournament, they still finished on top of the standings table for the fourth successive year. The New Zealanders demonstrated their true brilliance in November, when they completed their second home nations Grand Slam in three years, recording successive victories over Scotland, Ireland, Wales, and England. In all four matches they failed to concede a try and conceded only three points in the second half in all four matches put together. With their success assured, New Zealand swept the honours board as Graham Henry was named Coach of the Year and the All Blacks were confirmed as Team of the Year.

Earlier in the year, Wales continued its ascendancy by gaining a Six Nations Grand Slam; Welshman Shane Williams's superb form in that tournament led to his being named International Rugby Board (IRB) Player of the Year. The development of a number of new IRB tournaments continued at a strong pace. An Emerging South Africa side beat Romania in the IRB Nations Cup; Canada West won the North America 4 title; Tonga's Tautahi Gold won the Pacific Rugby Cup; and a powerful New Zealand Maori side took home the Pacific Nations Cup. Japan was the champion in the inaugural Asian Five Nations event.

Bids went out in 2008 for the right to host the 2015 and 2019 Rugby Union World Cups. A record eight countries—England, Wales, Scotland, Ireland, Japan, Australia, Italy, and South Africa—made bids to hold the 2015 tournament, and Australia, Ireland, Italy, Russia, Japan, Scotland, South Africa, and Wales were looking ahead to the 2019 event. The 2011 World Cup draw was completed in December.

On the domestic scene, Munster was crowned champion of the Heineken Cup for the second time, beating Toulouse 16–13 in the final in Cardiff, Wales. Bath continued the English domination of the European Challenge Cup, beating Worcester 24–16. The London Wasps were crowned English champions—in Lawrence Dallaglio's last game for the club—after beating archrival Leicester 26–16 in the Guinness Premiership final, and Leinster ended the season five points clear of Cardiff at the top of the Magners League. In the Southern Hemisphere, the Canterbury (N.Z.) Crusaders gave coach Robbie Deans a fitting send-off—before he became Australia's coach—by winning another Super 14 title in a 20–12 victory over Australia's New South Wales Waratahs.

The 2008 Rugby League (RL) World Cup, the first RL World Cup to be staged since 2000, took place in Australia, with 10 national teams participating—Australia, England, Fiji, France, Ireland, New Zealand, Papua New Guinea, Samoa, Scotland, and Tonga. The Australia Kangaroos, who had not lost a match since 2006, topped the standings and then crushed Fiji 52–0 in one semifinal, and the New Zealand Kiwis defeated England 32–22 in the other. In the final, held in Brisbane on November 22, New Zealand "pulled off the biggest upset in World Cup history," overturning Australia (winner of 9 of the previous 12 tournaments, including the last 6) by 34–20 to take New Zealand's first RL World Cup title. (PAUL MORGAN)

GOLF

The introduction of drug testing was one big change for golf during 2008, and another came when the world's number-one-ranked player, Eldrick ("Tiger") Woods, was out of action for the last six months of the season following a knee operation. Between August 2007 and March 2008, the remarkable Woods had won eight out of nine events and was runner-up in the other. After another

second-place finish in the Masters Tournament at the Augusta (Ga.) National Golf Club in April 2008, however, the 32-year-old American underwent arthroscopic surgery on his left knee.

His one-tournament comeback in June was a truly memorable reappearance. In the U.S. Open at the Torrey Pines South golf course in San Diego (where he had triumphed in the last four stagings of the Buick Invitational), Woods, clearly in serious pain after many of his shots, holed a 4-m (13-ft) putt on the final green to tie 45-year-old Rocco Mediate of the U.S. with a one-under-par total of 283. Woods then birdied the same par-five hole again to stay alive in the 18-hole play-off the following day and won with a par at the first extra hole of sudden death. That gave him his 14th major title, only 4 short of fellow American Jack Nicklaus's record, but three days later it was announced that Woods would be undergoing reconstructive surgery on his anterior cruciate ligament and that he had played the tournament with a double stress fracture in his left leg. It made his victory—achieved after a 91-hole marathon—all the more staggering.

The first "Tiger-less" majors in more than a decade were the British Open at Royal Birkdale in Southport, Eng., and the Professional Golfers' Association (PGA) championship at Oakland Hills in Bloomfield, Mich. His absence created an opportunity for someone to seize the spotlight, and the player to do it was Ireland's Padraig Harrington.

Harrington won his first major at the 2007 British Open, but his defense in 2008 was in doubt because of a wrist injury. Nevertheless, a brilliant back-nine 32 on the final day—highlighted by a five-wood approach to the long 17th hole, which finished little more than a metre from the flag and led to an eagle three—swept him to a four-stroke victory over England's Ian Poulter with a three-over-par total of 283. He thus became the first European to retain the title since Britain's James Braid in 1906. The week was also memorable for the performance of 1986 and 1993 champion Greg Norman of Australia, who, less than a month after his marriage to former American tennis star Chris Evert, came out of semiretirement to hold the lead with one round to go. The 53-year-old Norman had the chance to become easily the oldest-ever winner of a major, but his closing round 77 dropped him into a tie for third place.

The PGA championship was only three weeks later, and Harrington, six behind at the halfway point, stormed to another victory with two brilliant closing rounds of 66. He beat Spain's Sergio Garcia and American Ben Curtis by two strokes, with the three-under-par aggregate of 277, and became the first European to win the event since Scotland's Tommy Armour in 1930.

Although Harrington was the winner of three of golf's last six majors, he finished fifth in the Masters in April, where the star of the show was South Africa's Trevor Immelman. Less than four months after he had undergone surgery to remove a benign tumour on his diaphragm, Immelman held at least a share of the lead after each round and could afford a closing 75, which matched the highest last round by a champion in the event's history. With an eight-under total of 280, he finished three clear of Woods. It was a first major title for the 28-year-old Immelman, the first South African to win at Augusta since Gary Player in 1978, and he did it in the week when Player set a record of 51 appearances in the tournament.

Without Woods, the United States was underdog for the Ryder Cup at Valhalla in Louisville, Ky., but Europe under the captaincy of Nick Faldo failed to achieve an unprecedented fourth successive European victory. Harrington, Garcia, and England's Lee Westwood (three players of whom the most was expected) did not manage one win between them, whereas the six American newcomers, three of them chosen by captain Paul Azinger, all played their part in a stunning 16½–11½ success.

The PGA Tour again culminated in the FedEx Cup play-offs. Fiji's Vijay Singh won the first two events, and Colombian Camilo Villegas took the second two, but it was Singh who claimed the $10 million bonus; the 45-year-old also finished as leading money winner on the circuit, with $6,601,094. On the European Tour, Robert Karlsson became the first Swede to claim the Order of Merit, with £2,171,087 (about $3,425,000), and then combined with Henrik Stenson to win the World Cup at Mission Hills, China.

Peter Morrison/AP

In the 2008 Curtis Cup, American Tiffany Joh tees off on the 18th hole of the Old Course at St. Andrews, Fife, Scot. The U.S. defeated Britain and Ireland in the biennial amateur women's golf tournament for the sixth straight time.

After three Ladies Professional Golf Association (LPGA) wins in her first eight events of the year, Sweden's Annika Sörenstam appeared to be mounting a challenge to women's world number one Lorena Ochoa of Mexico. In May, however, the 37-year-old Sörenstam announced that she was retiring from competitive golf at the end of the season.

Sörenstam hoped that she might bow out with an 11th major title, but it was not to be. The nearest she came was joint second place in the Kraft Nabisco Championship at Mission Hills Country Club in Rancho Mirage, Calif., five strokes behind Ochoa. It was the Mexican's second successive major win and came in the middle of a run of six victories in seven tournaments. The other three women's majors were all won by Asian players. The McDonald's LPGA Championship at Bulle Rock in Havre de Grace, Md., saw Yani Tseng beat Maria Hjorth of Sweden at the fourth play-off hole to become Taiwan's first major champion. Nineteen-year-old Park Inbee of South Korea beat yet another Swede, Helen Alfredsson, by four strokes in the U.S. Women's Open at Interlachen in Edina, Minn., and at the Ricoh Women's British Open at Sunningdale Old, Berkshire, Eng., her compatriot Shin Ji Yai defeated Tseng by three. Ochoa topped the LPGA Tour

money list for the third straight season, with earnings of $2,763,193.

The LPGA Tour, with 121 non-Americans (including 45 South Koreans) in its ranks, caused a huge furor when it announced its intention to introduce a rule whereby anyone not reaching a certain standard of English could face suspension. In what was believed to be the first such move by a sports governing body, Deputy Commissioner Libba Galloway said, "For an athlete to be successful in the sports entertainment world we live in they need to be great performers on and off the course. Being able to communicate effectively with sponsors and fans is a big part of this." Under increasing criticism, claims of discrimination, and possible legal action, the LPGA Tour backed off from its proposed ban, and non-English-speaking players would continue to be offered tutors and translators.

In the amateur game, 18-year-old New Zealander Danny Lee eclipsed Woods as the youngest-ever winner of the men's U.S. Amateur, and Reinier Saxton of The Netherlands became British Amateur champion. Another Swede, Anna Nordqvist, won the Ladies British Amateur, and American Amanda Blumenherst took the U.S. version. In the men's and women's world team championships, held in Adelaide, Australia, in October, the victories went to Scotland and Sweden, respectively. The United States retained the Curtis Cup with a 13–7 triumph over Britain and Ireland's top women players at St. Andrews, Scot.

As well as implementing a drug-testing program in 2008, golf's governing bodies came together under the umbrella of the International Golf Federation to formulate a strategy that they hoped would result in the sport's inclusion in the 2016 Olympic Games. Golf had not been part of the Games since 1904. Spaniard Seve Ballesteros, who retired from competition in 2007 at the age of 50, was admitted to a Madrid hospital in October and after the discovery of a brain tumour needed four major operations. (MARK GARROD)

GYMNASTICS

At the 2008 Olympic Games in Beijing, the Chinese women gymnasts captured their first Olympic team gold medal with a score of 188.90 points. The team—Cheng Fei, He Kexin, Jiang Yuyuan, Li Shanshan, Yang Yilin, and Deng Linlin—defeated a strong U.S. squad that had bested the Chinese at the world championships the previous year. The U.S. team, which included Nastia Liukin (*see* BIOGRAPHIES), Shawn Johnson, Chellsie Memmel, Samantha Peszek, Alicia Sacramone, and Bridget Sloan, ended with 186.525 points to take its second consecutive Olympic silver medal. Romania (181.525 points) finished third. Although questions regarding the ages of the Chinese gymnasts were raised both before and during the Olympics, the Fédération Internationale de Gymnastique eventually ruled that all six members of the Chinese women's team met the minimum age requirement (16 in the year of the competition), and the International Olympic Committee indicated that it considered the matter "closed."

Liukin and Johnson battled for the gold in the all-around finals. Liukin came out on top owing in part to her outstanding bar routine, finishing with a leading score of 63.325 points. Johnson, the defending world all-around champion, won the silver medal with 62.725 points, and Yang (62.650 points) took the bronze. North Korea's Hong Un Jong won the gold medal in the vault. Germany's Oksana Chusovitina, who at age 33 was competing in her fifth Olympics, won the silver, and Cheng placed third. On the uneven bars, He and Liukin both scored a 16.725, but after the tie-breaking procedures, He was awarded the gold medal and Liukin the silver; Yang (16.650 points) claimed the bronze. Johnson secured the gold medal in balance beam; Liukin settled for the silver and Cheng the bronze. Romania's Sandra Izbasa took the gold medal in the floor exercise with a score of 15.650 points, followed by Johnson and Liukin with scores of 15.500 and 15.425, respectively.

On the men's side, reigning world champion China dominated the team competition with a score of 286.125, more than 7 points better than its closest competitor, Japan (278.875). The Chinese men's team included Xiao Qin, Chen Yibing, Li Xiaopeng, Yang Wei, Zou Kai, and Huang Xu. The U.S. team, despite the loss of two of its stars, brothers Paul and Morgan Hamm, to injuries prior to the competition, took the bronze medal.

China's Yang Wei defended his 2007 world all-around title by winning the Olympic all-around gold; he was followed by Japan's Kohei Uchimura in second place and France's Benoit Caranobe in third. Gymnasts from China won five of the six individual events for men as Zou claimed the gold in both the floor competition and the horizontal bar, Li won the parallel bars, Xiao

The eventual gold medalist, Nastia Liukin of the U.S., dazzles the judges in the floor exercise portion of the women's individual all-around competition at the Beijing Olympic Games on August 15.

Paul Kitagaki, Jr.—Sacramento Bee/Landov

defended his world title on pommel horse, and Chen repeated his world championship triumph on rings. Leszek Blanik of Poland, the defending world champion on vault, took home the gold medal, Thomas Bouhail of France the silver, and Anton Golotsutskov of Russia the bronze.

In the rhythmic gymnastics competition, Russia's Yevgeniya Kanayeva won the gold medal. She was followed by Inna Zhukova of Belarus in second place and Anna Bessonova of Ukraine in third. The reigning world champion Russian team won the group competition, with China and Belarus taking the silver and bronze, respectively.

(LUAN PESZEK)

ICE HOCKEY

North America. Unique European bookends framed an eventful, compelling 2007–08 season for the National Hockey League (NHL). The league opened the season with a pair of games in London between the Anaheim Ducks—the defending Stanley Cup champions—and the Los Angeles Kings. The games, both sold out, were the first regular-season NHL contests to be played in Europe. The season ended with league commissioner Gary Bettman presenting the Stanley Cup to superb Swedish defenseman Nicklas Lidstrom (*see* BIOGRAPHIES), whose Detroit Red Wings defeated the Pittsburgh Penguins four games to two in the best-of-seven final. It was the first time that a European captain had led his team to an NHL championship. The season belonged to Detroit, which romped in the regular season, winning the President's Trophy as the NHL's top team and the franchise's fourth Stanley Cup in 11 seasons. The Red Wings had a record seven Swedes in their lineup, including Lidstrom, who won his sixth Norris Trophy as the NHL's best defenseman.

Ice hockey fans throughout the league were treated to the emergence of several young stars, a wave of talent that suggested that the NHL would be able to serve up an entertaining product for the foreseeable future. Washington Capitals winger Alexander Ovechkin, arguably the NHL's most exciting player, turned the regular season into his own personal showcase and filled his trophy case as a result. The 22-year-old Russian topped the league in goals with 65 (well ahead of the Atlanta Thrashers' Ilya Kovalchuk, who had 52) and in points with 112, edging out fellow Russian Evgeni Malkin of the Penguins, who finished with 106. That earned Ovechkin the Maurice Richard Trophy for goal scoring and the Art Ross Trophy for points. He continued his hardware haul at the NHL awards gala, where he was presented with the Hart Trophy for being the best player in the league and the Lester B. Pearson Award for being the best player, as decided by fellow players.

Bruce Bennett Getty Images

Nicklas Lidstrom of the Detroit Red Wings (left) battles for the puck with Sidney Crosby of the Pittsburgh Penguins in game six of the NHL Stanley Cup finals on June 4. Detroit won the game 3–2 to clinch the NHL title.

Sidney Crosby, the phenomenal 20-year-old Canadian, had another strong season and helped Pittsburgh emerge as a Stanley Cup finalist two seasons after it had finished 29th in the 30-team league. When Crosby missed 28 games with an ankle sprain midway through the season, however, it was Malkin, only 21 years old himself, who stepped up to keep the Penguins surging. During the games Crosby missed, Malkin recorded 20 goals and 26 assists for 46 points.

Other clubs, such as Montreal, Washington, Philadelphia, and Chicago, made huge strides owing largely to the contributions of young talent. Montreal, with stellar play from rookie goaltender Carey Price, surprised many with a first-place finish in the Eastern Conference. Washington jumped to 3rd place in the East from 14th the previous season. Philadelphia moved from last in the entire league into a play-off spot. Chicago, in the play-offs only once in the previous decade, moved toward respectability with two of the NHL's top freshmen in Patrick Kane and Jonathan Toews. Kane was named the league's Rookie of the Year.

While those teams climbed, one of the most dramatic falls belonged to the Ottawa Senators, who had been Stanley Cup finalists the previous season. The Senators started the season by winning 15 of their first 17 games and created expectations that they would win the East, but instead they fell apart, narrowly qualified for the play-offs, and were swept by Pittsburgh in the first round.

One of the highlights of the season was an outdoor New Year's Day game played at Buffalo's Ralph Wilson Stadium between the hometown Sabres and the Penguins. It was the NHL's second regular-season game to be played in the elements and the first in the U.S. The game, played in periodic snow and won by the Penguins 2–1 in a shootout, attracted a crowd of 71,217, setting an NHL attendance record for a single game. The league planned to stage another outdoor game at Wrigley Field in Chicago on Jan. 1, 2009, featuring the Red Wings and the Chicago Blackhawks.

A number of big-name players changed teams as free agents at season's end. Among the changes, Marian Hossa left Pittsburgh to sign with Detroit, Wade Redden jumped from Ot-

tawa to play for the New York Rangers, and Brian Campbell departed San Jose for Chicago. The NHL also said goodbye to some stars. Dominik Hasek, one of the greatest goaltenders of the modern era, retired from Detroit. Trevor Linden (Vancouver), Glen Wesley (Carolina), Dallas Drake (Detroit), and Sami Kapanen (Philadelphia) also hung up their skates. Jaromir Jagr, who led the NHL in scoring five times during a brilliant career, departed the Rangers to sign with Russian team Avangard Omsk. On a sad note, blossoming defensive prospect Luc Bourdon of the Vancouver Canucks died in an off-season motorcycle accident.

Despite an ownership controversy in Nashville and a guilty plea by Anaheim owner Henry Samueli to a felony charge of lying to the U.S. Securities and Exchange Commission, the NHL continued to see revenues rise. That meant the salary cap for teams rose to $56.7 million from $50.3 million. The league's board of governors also discussed potential expansion, but no plan was put in place.

International. Canada hosted the International Ice Hockey Federation (IIHF) world championship in men's hockey for the first time but could not take advantage of home ice to repeat as gold medalists. In a brilliantly played gold-medal match in Quebec City on May 18, 2008, Canada led historic rival Russia by two goals, 4–2, with just over 11 minutes remaining. The tremendously skilled Russians, however, came at their Canadian hosts in waves, and goals from Aleksey Tereshchenko and Ilya Kovalchuk pushed the game into overtime. In that extra time, Rick Nash, a hero in Canada for his scoring exploits at the previous year's tournament, received a delay-of-game penalty. During the subsequent power play, Kovalchuk rocketed a snapshot over Canadian goaltender Cam Ward to ignite an on-ice celebration.

Canadian winger Dany Heatley scored 12 goals in nine games in the tournament and was named Most Valuable Player. He played on a line with Nash and Ryan Getzlaf that scored 21 goals in nine games and was a force for Canada throughout the tournament. Russia's Yevgeny Nabokov was named the top goaltender. Finland defeated Sweden 4–0 to win the bronze medal.

It had been 15 years since the Russians last won a world championship. This tournament showed the depth of talent in Russia, as 14 of the gold medalists were players from Russian club teams rather than the NHL. Even Canadian fans had difficulty being too upset at the outcome. They had just witnessed an exhibition of hockey at the highest level, unfolding at high speed with tremendous playmaking. "It was such a spectacular match," commented Russian coach Vyacheslav Bykov. "The whole world won."

At the women's world championship, held in Harbin, China, the U.S. beat Canada 4–3 in the final on April 12. It was the second world title for the Americans as the Canadians could not match the speed and skill of their North American rivals. When the teams met earlier in the tournament, the U.S. won 4–2, and the Americans carried that momentum into the final. U.S. captain Natalie Darwitz was the scoring hero for the gold medalists. She had a pair of goals in the final and was named the top forward at the championship. Jenny Potter and Angela Ruggiero scored the other goals for the U.S., and goalie Jessie Vetter was outstanding for the winners. Sarah Vaillancourt, Jennifer Botterill, and Katie Weatherston scored Canada's goals. Finland won the bronze medal, beating Switzerland 4–1.

At the IIHF under-20 tournament, staged in the Czech Republic, the Canadian teenagers did what the country's men's and women's teams could not: take home the gold medal, though they needed overtime to do it. Canada defeated Sweden 3–2 at the CEZ Arena in Pardubice when Matt Halischuk jammed in a goal in extra time. It was Canada's fourth consecutive championship at the junior level and its 14th in 26 years. Russia defeated the U.S. 4–2 to capture the bronze medal.

(PAUL HUNTER)

ICE SKATING

Figure Skating. Canada came away as the biggest winner at the 2008 International Skating Union (ISU) world figure skating championships, held in March in Göteborg, Swed., by capturing a gold, a silver, and a bronze medal. Jeff Buttle took the gold in the men's competition, giving Canada its first world figure skating title since Shae-Lynn Bourne and Victor Kraatz won top honours in ice dancing in 2003. It was also the first gold for a Canadian man since Elvis Stojko captured the world title in 1997. Canada's silver medal came from Tessa Virtue and Scott Moir in ice dancing, and Jessica Dube and Bryce Davison won the bronze in pairs.

Mladen Antonov—AFP/Getty Images

At the European figure skating championship in Zagreb, Croatia, in January, pairs skaters Aliona Savchenko and Robin Szolkowy of Germany perform their winning free-skate routine.

France's Brian Joubert—the defending men's world champion and the bronze medal winner at the 2008 European championships in Zagreb, Croatia, in January—won the men's silver, and Johnny Weir helped the U.S. avoid going away without a medal for the first time since 1994 by taking the bronze. Weir went into the world championships on a high note after having finished with the exact same overall score as Evan Lysacek at the U.S. championships in St. Paul, Minn., in January. Lysacek took his second straight U.S. title on a tiebreaker, but his hopes of winning at the world championships were dashed the week before the event began after he hurt his left arm in a fall during practice and was forced to withdraw.

On the women's side in Göteborg, Mao Asada of Japan won her first world title after having finished second in 2007 to countrywoman Miki Ando, who withdrew from the 2008 competition during her free skate because of shoulder and leg injuries. Asada, a likely favourite for the gold medal at

the 2010 Vancouver Winter Olympics, announced in June that she would train under famed Russian coach Tatyana Tarasova. Italy's Carolina Kostner, who took gold at the European Figure Skating Championships, won the silver medal, and 17-year-old Kim Yu-Na of South Korea took the bronze for the second consecutive year.

The American pairs and women did not fare well at the world championships. Heavily favoured ice dancers Tanith Belbin and Benjamin Agosto failed to medal for the first time since 2004 after a rare fall in the compulsories. Belbin and Agosto, who won their record-tying fifth straight U.S. title in St. Paul, announced that they were leaving their longtime coaches after missing the podium in Sweden. Former world champion Kimmie Meissner finished seventh in the women's competition; she had also come in seventh at the U.S. championships.

France's Isabelle Delobel and Olivier Schoenfelder won the ice dance world crown two months after a second-place finish at the European championships. Aliona Savchenko and Robin Szolkowy gave Germany its first pairs world title since 1997; they also won a gold medal in Zagreb.

The sport of figure skating lost one of its greatest competitors in 2008 when champion skater Christopher Bowman died in January from a drug overdose and an enlarged heart. (*See* OBITUARIES.) Nicknamed "Bowman the Showman" for his theatrics on the ice, the two-time Olympian won two U.S. national titles and two medals at the world championships before retiring in 1992.

Speed Skating. American Shani Davis in 2008 once again showed the world why he was one of the best speed skaters ever to put his blades on the track. The 2006 Olympic 1,000-m champion had struggled to a sixth-place finish at the world allround speed-skating championships in Heerenveen, Neth., in 2007, but his return to Heerenveen in February 2008 for a World Cup race was a different story. He finished the 1,500 m in 1 min 45.25 sec to beat Denny Morrison of Canada and clinch the World Cup season title in the event. Davis then won his second speed-skating title in three days by finishing with a time of 1 min 8.63 sec in the 1,000 m (0.12 sec ahead of Morrison) for his seventh victory of the season in a World Cup race. A week before, in Inzell, Ger., Davis had broken the track record by winning a 1,000-m race in 1 min 9.65 sec. In the final event of the 2008 speed-skating season, Davis won the 1,000 m in track-record time at the world single-distance championships, held in Nagano, Japan. He clocked 1 min 8.99 sec to finish 0.04 sec ahead of Yevgeny Lalenkov of Russia, while Morrison took the bronze in 1 min 9.42 sec. Morrison won the 1,500 m in Nagano, clocking a track-record time of 1 min 45.22 sec and finishing 0.10 sec ahead of Davis and Sven Kramer of The Netherlands.

Jeremy Wotherspoon of Canada (34.92 sec) edged Japan's Joji Kato (35.07 sec) at Heerenveen to clinch the World Cup speed-skating title in the 500 m. A sixth-place finish in the 5,000 m was enough for Havard Bokko of Norway to win the season title in the event. South Korean Lee Kang Seok secured the 100-m World Cup title. In women's action, Kristina Groves of Canada finished third in the women's 1,500 m at Heerenveen to capture the season crown. Jenny Wolf of Germany won the season title in the 100 m and 500 m, and compatriot Anni Friesinger was the 1,000-m champion. In team pursuit, Kramer helped The Netherlands win the men's title, and Groves led Canada to the women's championship. (PAUL DIGIACOMO)

SAILING (YACHTING)

The Olympic Regatta was held in the Chinese port city of Qingdao during the 2008 Olympic Games. The sailing venue, with its strong currents and light air, was a challenging one for competitors. The water itself had seemed polluted to most sailors in the early regattas held there in 2007, with a large brown pool in one location of the racecourse. All competitors were wary of any contact with the water, but by the opening ceremony of the Olympics, the water was somewhat cleaner, and the shore facilities drew high praise from all participants. Great Britain won the regatta, earning four gold, one silver, and one bronze in the 11 events, while Australia was second with two golds and one silver; 18 countries won at least one medal.

The America's Cup sputtered in court for much of the year as the Swiss defenders and the potential American challengers argued their dispute over the terms of the next competition, to be held in 2009. After a finding favourable to the challengers was issued in November 2007, the Swiss team Alinghi appealed. A 3–2 finding by a New York state appellate court the following July reversed the previous finding and reinstated Spain's Club Náutico Español de Vela as the challenger of record, thus giving the Spanish team the right to negotiate the terms of the next challenge. The American team Oracle appealed the decision to the New York Supreme Court.

The Newport–Bermuda Race, in which 201 boats participated in June, produced some unlikely results. Winning on

Britain's Ben Ainslie expertly maneuvers his vessel during the Finn sailing competition at the Beijing Olympic Games, where he captured his third consecutive Olympic gold medal.

Bernat Armangue/AP

corrected time in both the ORR (U.S.) and the IRC (British) handicapping systems was a boat from the 1960s—*Sinn Fein*, a Cal 40—and a skipper from the 1930s—septuagenarian Peter Rebovich, a retired elementary-school teacher sailing with a family crew. It was *Sinn Fein*'s second consecutive win of a St. David's Lighthouse Trophy. In second place in both systems was a 1986 11.6-m (38-ft) McCurdy sloop, *Selkie*, sailed by the designer's daughter, Sheila McCurdy. Conditions were light and upwind for the entire race.

In Britain the Commodore's Cup was resuscitated, attracting 15 three-boat teams from six countries to compete. Britain's Red Team (*Fair Do's VII*, a Ker 46, *Erivale III*, a Ker 39, and *Quokka 7*, a Corby 39) won the event after some close racing.

At the Acura Key West Race in January, *Barking Mad* was the winner in the marquee Farr 40 class, in which a total of 25 boats competed. In April, 33 boats from 10 countries participated in the Farr 40 world championship in Miami Beach, where Vincenzo Onorato's *Mascalzone Latino* took the title for the third consecutive year.

Box rule boats continued to gain popularity, led by the Transpac 52s (TP52s), which competed at each of the six venues on the Audi MedCup circuit. In smaller boats, the Moths continued to lead the world in the application of hydrofoil technology. At the Moth world championships, held at the Weymouth and Portland National Sailing Academy in Dorset, Eng., all 79 boats "flew" around the course at double-digit speeds. International 14s featured lifting foils on their rudders, and the foil technology was being backfitted into other dinghies, notably the RS600 class. In March a new sailboard speed record of 49.09 knots was set by Frenchman Antoine Albeau on a canal in France. At the other end of the spectrum, there was a new record for the smallest sailboat to complete a transatlantic passage: Frenchman Franck Andreotta, in a 172-cm (5.64-ft) sloop, made the voyage in 48 days.

Several other sailing records were achieved during the year. In January the record for a solo nonstop circumnavigation was set by François Joyon of France, who sailed his 29-m (95-ft) trimaran *IDEC* around the world in 57 days 13 hr 34 min, averaging 15.84 knots. In June *ICAP Leopard*, a 30.5-m (100-ft) supermaxi, set a transatlantic record for a monohull yacht with powered winches of 7 days 19 hr 21 min. Frenchman Lionel Lemonchois and his 21.3-m (70-ft) maxi-catamaran *Gitana 13* set several passage records: New York City to San Francisco via Cape Horn (43 days 38 min); San Francisco to Yokohama, Japan (11 days 12 min 55 sec), and Hong Kong to London (41 days 21 hr 26 min). (JOHN B. BONDS)

SKIING

Alpine Skiing. The 2007–08 Alpine skiing season saw a changing of the guard as American skiers dominated the International Ski Federation (FIS) World Cup series, sweeping the overall titles and taking 5 of the 12 discipline crowns. Americans Bode Miller and Lindsey Vonn (*see* BIOGRAPHIES) each took overall honours, matching the feat of U.S. ski team stars Phil Mahre and Tamara McKinney in 1983. It was the second season title for Miller, who had claimed his first in 2005. Miller also won the super combined title and came within an eyelash of winning the downhill crown. He captured six World Cup races during the season to bring his career total to 31. American Ted Ligety, the 2006 Olympic combined champion, picked up his first season title, winning the giant slalom (GS).

Didier Cuche of Switzerland battled Miller all season long in the downhill, but despite winning just one event, Cuche defended his title by a mere five points after the final race was canceled owing to soft snow conditions in Bormio, Italy. The battle for the super G crown was even tighter, with Austrian Hannes Reichelt edging Cuche by a single point in the final race to win his first World Cup title. Cuche had the title in hand until one of his own teammates, running last, bumped the Swiss star one spot down the rankings and out of the points. Manfred Moelgg of Italy earned his first season crown, in slalom.

Vonn, meanwhile, completely dominated the women's downhill, clinching the title nearly a month before the end of the season with a second-place finish on the 2010 Olympic course in Whistler, B.C. She won six times to set a new U.S. women's career mark with 13. With 10 of those victories in downhill, Vonn also surpassed Daron Rahlves and Picabo Street as the most successful downhiller in American history.

Vonn was challenged for the overall title by defending champion Nicole Hosp of Austria, who finished second. Going into the World Cup finals in Bormio, however, it was Germany's Maria Riesch who appeared to be the potential spoiler. Vonn clinched the title by winning the second run of slalom in the finals. Riesch went on to narrowly eclipse Vonn for the super combined crown and also took the super G title—the first two World Cup crystal globes of her career. Austrian Marlies Schild handily defended her slalom title over Hosp with five wins (down from seven a year earlier). Italian Denise Karbon won the opening GS in Soelden, Austria, and went on to win the title, dominating the event with five victories during the season.

Nordic Skiing. Lukas Bauer of the Czech Republic ran away with the men's cross-country World Cup competition in 2007–08, claiming both the overall and distance titles with five wins to earn his first crystal globes. Ola Hattestad of Norway won the men's sprint title. In the women's field, Virpi Kuitunen of Finland defended her overall and distance titles with six wins during the season, and Petra Majdic of Slovenia took the sprint crown. With her sprint victory in Rybinsk, Russia, in December 2007, Kikkan Randall became the first American woman to win a World Cup cross-country race.

In Nordic combined, Ronny Ackermann of Germany captured his third overall title, posting three World Cup victories. Petter Tande of Norway finished the season in second place behind Ackermann, and Bill Demong of the U.S. placed third—the best finish ever by an American.

In ski jumping, Thomas Morgenstern of Austria amassed 10 victories, including 6 straight to open the season, en route to winning his first overall World Cup title. A victory at the Four Hills Tournament eluded Morgenstern, however, as he placed second to overall winner Janne Ahonen of Finland. Gregor Schlierenzauer of Austria soared 212 m (696 ft) to win the FIS ski flying world championships, held in Oberstdorf, Ger.

Freestyle Skiing. Australian Dale Begg-Smith, the 2006 Olympic moguls champion, continued to dominate moguls in 2007–08, winning his third straight World Cup title. Aiko Uemura of Japan set a torrid pace down the stretch, taking five consecutive wins at the end of the season to claim her first moguls crown. Steve Omischl of Canada defended his aerials World Cup title with six wins. Australian Jacqui Cooper landed five victories to defend her crown, the fifth of her career. Ophélie David of France was the runaway winner in women's ski cross.

Kyodo/Landov

Thomas Morgenstern of Austria soars down the large hill at the World Cup ski jumping event held in Sapporo, Japan, on February 2. Morgenstern's victory in Sapporo was one of six he amassed en route to his first overall World Cup title.

Tomas Kraus of the Czech Republic won the men's ski cross title. Ski halfpipe titles went to Canada's Matthew Hayward and Sarah Burke.

Snowboarding. With no snowboarding world championships held in 2008, eyes were on the X Games. Americans Shaun White and Gretchen Bleiler were on top again, each of them earning wins in the halfpipe, while Lindsey Jacobellis and Nate Holland, also of the U.S., won their fourth and third, respectively, X Games snowboardcross (SBX) titles. On the snowboarding World Cup circuit, the Swiss swept the halfpipe titles, with Iouri Podladtchikov coming out of nowhere to win his first men's crown and Manuela Laura Pesko taking her third straight women's title. Pierre Vaultier of France and Maelle Ricker of Canada won their first SBX World Cup titles. In Alpine snowboarding, the parallel and overall World Cup titles went to Austrian Benjamin Karl in the men's field and Nicolien Sauerbreij of The Netherlands on the women's side. (TOM KELLY)

SQUASH

Egypt was at the centre of the squash world in 2008, both as a venue and as the home of several top players. At the men's world open squash championship in Manchester, Eng., in October, the outcome was an inaugural title for Ramy Ashour, who defeated fellow Egyptian, and defending champion, Amr Shabana in the semifinal before holding off another countryman, Karim Darwish in the final. At the British Open in May, Darwish lost in the semifinals to eventual champion David Palmer of Australia. Mohamed El Shorbagy of Egypt beat Pakistan's Aamir Atlas Khan at the junior men's world championship in Zürich in August, but Pakistan turned the tables as it took the team title with a win over Egypt in the final.

For the first time, the women's world open championship was held simultaneously with the men's and at the same venue. World number one Nicol David of Malaysia won the women's crown for the third time, beating surprising finalist Vicky Botwright of England. David went unbeaten in Women's International Squash Players Association Tour events in 2008, amassing 10 titles, including the British Open. During October 2007–November 2008 she won 53 consecutive matches, to which she added another 6 at the women's world team championship in Cairo, where Malaysia finished third. The title went to second seed Egypt, which beat top-seed England in a pulsating three-match final on December 6. The women's matches used "point-a-rally" scoring as women's international squash began to use the system already used in the men's game.

The backdrop to the competitive activity was the campaign to add squash to the 2016 Olympic Games program. International Olympic Committee (IOC) inspectors were in attendance at the world opens, and representatives of the sport presented its credentials at the IOC Program Commission meeting in November. The final vote on squash and six other candidate sports would take place at the IOC Congress in October 2009. (ANDREW SHELLEY)

SWIMMING

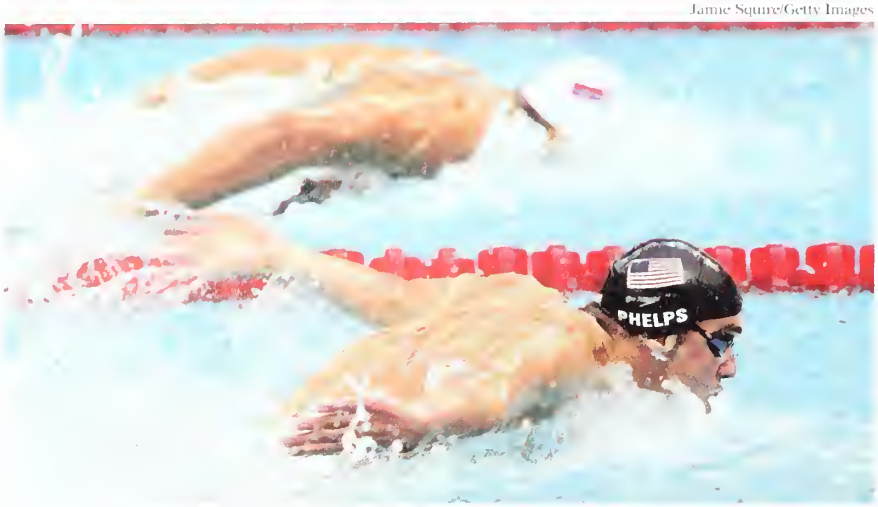
At the 2008 Olympic Games in Beijing, 23-year-old American swimming superstar Michael Phelps did nothing less than turn in the greatest Olympic performance ever, winning eight gold medals in eight events and setting seven world records (and one Olympic record) in the process. The challenge Phelps faced was physically exhausting, mentally daunting, and emotionally draining, requiring 17 separate swims in eight days of competition. Nevertheless, when the last race was finished, Phelps had surpassed swimmer Mark Spitz's record tally of seven gold medals set at the 1972 Games in Munich.

Phelps earned his victories in five individual events and three relays. He set world records in the 400-m individual medley (4 min 3.84 sec), the 200-m freestyle (1 min 42.96 sec), the 200-m butterfly (1 min 52.03 sec), and the 200-m individual medley (1 min 54.23 sec). He also posted an Olympic record in the 100-m butterfly (50.58 sec), coming from behind to edge out Milorad Cavic of Serbia by the slimmest of margins—one one-hundredth of a second. In addition, Phelps helped the U.S. team set global standards in the 4 × 100-m freestyle relay (3 min 8.24 sec), the 4 × 200-m freestyle relay (6 min 58.56 sec), and the 4 × 100-m medley relay (3 min 29.34 sec). The first of those relays, the 4 × 100-m freestyle, provided another moment of high drama as Phelps's teammate Jason Lezak swam an amazing 46.06-sec anchor leg—by far the fastest-ever 100-m split—to secure victory over the heavily favoured French team by a mere eight-hundredths of a second and keep Phelps's hopes alive for eight golds.

Another standout in the men's competition at Beijing was Japan's Kosuke Kitajima, who solidified his claim as the greatest breaststroke swimmer in history when he won both the 100-m and 200-m events for the second straight Olympics. He was the first swimmer to achieve such a feat. Kitajima stroked powerfully to capture the 100-m gold medal in the world-record time of 58.91 sec and then followed that performance with a victory in the 200-m breaststroke, posting a time (2 min 7.64 sec) that was just 13-hundredths of a second slower than the world record that he had set in June. Kitajima also picked up a bronze medal as a member of Japan's 4 × 100-m medley relay team.

In the 50-m freestyle, Brazilian speedster César Cielo upset world record

Jamie Squire/Getty Images



American swimming phenomenon Michael Phelps (bottom) edges past Milorad Cavic of Serbia in the 100-m butterfly final at the Beijing Olympics. Phelps defeated Cavic by only one one-hundredth of a second while setting an Olympic record.

holder Eamon Sullivan of Australia to take the gold with a time of 21.30 sec. Eighteen-year-old Park Tae Hwan of South Korea backed up his brash predictions of victory in the 400-m freestyle when he took command of the race at the 150-m mark and stroked home in a winning time of 3 min 41.86 sec—a mark that only Australian swimmer Ian Thorpe had bettered. Park thus became his country's first Olympic swimming gold medalist.

Ous Mellouli achieved the same breakthrough for Tunisia by beating Australia's Grant Hackett—arguably the greatest distance swimmer of all time—in Hackett's best event, the 1,500-m freestyle. Battling stroke-for-stroke with Hackett over the 30-lap distance, Mellouli gradually built a small lead and then held off the Australian at the end to win in 14 min 40.84 sec. American Aaron Peirsol reprised his 2004 Olympic triumph in the 100-m backstroke, overpowering the fastest field ever assembled and lowering his world record to 52.54 sec. In the 200-m backstroke, Peirsol and fellow American Ryan Lochte went into the Games sharing the world record, but it was Lochte who unleashed a withering kick in the final lap of the race to take the gold medal and set a new global standard of 1 min 53.94 sec.

Among the women, 20-year-old Australian Stephanie Rice, who had burst onto the world swimming scene in 2007, triumphed in both individual medley events, setting world records with each golden performance. In the 400-m medley, she held off Kirsty Coventry of Zimbabwe as both women crashed through the 4-min 30-sec barrier, clocking 4 min 29.45 sec and 4 min 29.89 sec, respectively. In the 200-m medley, Rice overtook Coventry on the final lap to win in 2 min 8.45 sec. To top off her first Olympic Games, Rice swam the leadoff leg on Australia's winning 4 × 200-m freestyle relay team, which clocked 7 min 44.31 sec, smashing the world record by nearly six seconds. For her spectacular performances, Rice was named female World Swimmer of the Year by *Swimming World* magazine, joining Michael Phelps, the unanimous male winner. As for the tenacious Coventry, although she earned her second of three silvers of the Games when she lost to American Natalie Coughlin in the 100-m backstroke, she did strike gold in the 200-m backstroke, setting a new world standard with a time of 2 min 5.24 sec.

Germany's Britta Steffen sprinted to her country's only swimming gold medals in Beijing, nipping the U.S.'s ageless wonder, Dara Torres, in the 50-m freestyle by the tiniest of margins, 24.06 sec to 24.07 sec. Last at the 50-m turn in the 100-m freestyle event, Steffen came charging home to upset world record holder Libby Trickett of Australia with a winning time of 53.12 sec and claim her second gold. The 41-year-old Torres, who after emerging from retirement was competing in her fifth Olympic Games, went on to earn two more silver medals as the anchor on both the U.S.'s 4 × 100-m freestyle relay team and its 4 × 100-m medley relay squad. Torres—whose initial Olympic experience had come in 1984, before any of her American teammates were born—thus became the oldest person ever to win an Olympic medal in swimming.

When she stepped onto the blocks for the start of the 400-m freestyle, Britain's Rebecca Adlington was carrying a burden dating back nearly half a century. It had been 48 years since a British woman had won an Olympic swimming gold, but that fact did not seem to faze the 19-year-old distance ace. Though in fourth place at the 350-m mark, Adlington won the race in 4 min 3.22 sec, besting American Katie Hoff by seven-hundredths of a second. Adlington, it turned out, was only getting started. In the 800-m freestyle, she took command early and kept lengthening her lead with every stroke before touching in 8 min 14.10 sec, more than two seconds under the world record set by American Janet Evans in 1989.

In one of the major upsets in Beijing, Rebecca Soni of the U.S. outpaced Australian star "Lethal" Leisel Jones in the 200-m breaststroke, setting a world record of 2 min 20.22 sec in the process. Earlier in the swimming competition, Jones had destroyed the field in the 100-m breaststroke. She posted a time of 1 min 5.17 sec, just eight-hundredths of a second off her own world mark.

Beijing was the first Olympic Games to offer an open-water swimming competition, the 10-km event. In the women's race, heavily favoured Larisa Ilchenko of Russia wound up coming from behind to overtake the British duo of Keri-Anne Payne and Cassandra Patten for the gold in a time of 1 hr 59 min 27.7 sec. Payne and Patten took silver and bronze, respectively. On the men's side, Maarten van der Weijden of The Netherlands, a leukemia survivor who was considered the longest of long shots, came storming from a tightly bunched pack to touch first in 1 hr 51 min 51.6 sec—just 1.5 seconds ahead of Britain's David Davies and 2 seconds ahead of Germany's Thomas Lurz.

Diving. Just as it had at every other international diving competition in the past decade, China totally dominated at the 2008 Olympic Games, delighting an appreciative home crowd. Of the eight events contested in Beijing, China won seven and earned 11 of the 12 medals for which it competed. The incomparable Guo Jingjing (*see* BIOGRAPHIES) made short shrift of her challengers in the 3-m springboard, posting 415.35 points to defeat Russia's Yuliya

Pakhalina (398.60) and teammate Wu Minxia (389.85). Guo and Wu teamed up to take the 3-m synchronized event with 343.50 points, nearly 20 more than the silver medalists, Russia's Pakhalina and Anastasiya Pozdnyakova. In the 10-m platform event, veteran Chinese diver Chen Ruolin won a close decision over Canada's Emilie Heymans. Chen and teammate Wang Xin then breezed in the 10-m synchronized contest, posting a 28-point victory over the Australian duo of Briony Cole and Melissa Wu.

There were no surprises in the first two of the men's contests as the 2007 world champions won both of them. In the 10-m synchronized contest, Lin Yue and Huo Liang took the gold by a comfortable 18-point margin over the German duo of Patrick Hausding and Sascha Klein. In the 3-m synchronized event, Qin Kai teamed with Wang Feng to form an unbeatable tandem that finished more than 47 points ahead of silver medalists Dmitry Sautin and Yury Kunakov of Russia. He Chong took the 3-m springboard, dismissing former world champion Alexandre Despatie of Canada. The upset came in the final diving event—the 10-m platform—when unheralded Australian Matthew Mitcham, who had finished 16th in the 3-m springboard, uncorked a brilliant final dive that earned mostly 10s from the judges and gave him just enough points to overtake China's Zhou Luxin for the gold.

Synchronized Swimming. Led by the two Anastasiyas—Davydova and Yermakova—Russia maintained its perch atop the world of synchronized swimming by taking both gold medals on offer at the 2008 Olympics in Beijing. Perfectly attuned to each other in the water, Davydova and Yermakova became the first synchronized swimmers to repeat as Olympic champions. Scoring eight perfect 10s, the Russian duo tallied 99.251 points, holding off a determined challenge from Spain's Gemma Mengual and Andrea Fuentes (98.334 points). Japan's Saho Harada and Emiko Suzuki (97.167 points) placed third.

The Anastasiyas then joined their teammates—Maria Gromova, Natalya Ishchenko, Elvira Khasyanova, Olga Kuzhela, Yelena Ovchinnikova, Anna Shorina, and Svetlana Romashina—as Russia, with 99.500 points, stroked to its third straight Olympic title in the team competition. Spain was second (98.251 points), and China took the bronze—its first Olympic medal in the sport—with 97.334 points.

(PHILLIP WHITTEN)

TENNIS

The 2008 season in tennis was likely to be remembered as one of the sport's most captivating years. Spain's charismatic Rafael Nadal celebrated a spectacular campaign, becoming the first man since Sweden's Björn Borg in 1980 to capture the French Open and All-England (Wimbledon) titles in the same year and then adding an Olympic gold medal to his list of credits. Nadal supplanted Roger Federer as the world's number one ranked player for the season, ending the Swiss champion's four-year run at the top. Serbian Novak Djokovic secured his first major title with a triumph at the Australian Open. Federer—not to be denied—won the last major of the year at the U.S. Open, garnering his 13th Grand Slam championship in the process and closing in on American Pete Sampras's men's record of 14.

Among the women, four different champions emerged at the majors. Mariya Sharapova of Russia came through at the Australian Open; Serbian Ana Ivanovic ruled at Paris's Roland Garros; and the Williams sisters of the U.S. held their own, with Venus triumphing on the lawns of Wimbledon and Serena claiming the U.S. Open title. Yet after a turbulent year that included the surprising retirement in May of former world number one Justine Henin of Belgium, Jelena Jankovic—the perspicacious Serbian with perhaps the best ball control in the women's game—was rewarded for her consistency with the year-end number one ranking on the Women's Tennis Association (WTA) computer. Jankovic was a quarterfinalist or better in 20 of the 22 tournaments in which she played. Serena Williams was the highest-paid woman on the Sony Ericsson WTA Tour, with $3,852,173. Nadal earned more than any other man, with $6,773,773.

Australian Open. Djokovic arrived in Melbourne primed for the first major of the season. The 20-year-old did not drop a set in six matches on his way to the final, upending top-seeded Federer in straight sets in their semifinal match. In the final, Djokovic came from a set down to defeat the free-wheeling Jo-Wilfried Tsonga of France. Tsonga performed brilliantly all through the fortnight, ousting British number nine seed Andy Murray in the opening round and taking apart Nadal 6–2, 6–3, 6–2 in a meticulous semifinal. In the championship match, Djokovic gradually found his bearings from the baseline and wore down the fast-charging Tsonga 4–6, 6–4, 6–3, 7–6 (2).

Sharapova swept through the event without losing a set in seven nearly perfect matches, crushing Henin 6–4, 6–0 in the quarterfinals, defeating Jankovic 6–3, 6–1 in the semifinals, and then besting Ivanovic 7–5, 6–3 in a well-played final. It was Sharapova's third Grand Slam championship title.

French Open. For the fourth straight year, Nadal was unstoppable on the red clay at Roland Garros. In a repeat of the 2006 and 2007 finals, the left-handed Spaniard took on Federer. While those battles both went to four sets before Nadal prevailed, in 2008 Nadal ruthlessly dismantled his subdued rival 6–1, 6–3, 6–0. It was the most decisive defeat Federer had suffered in 36 career appearances at Grand Slam events dating back to 1999. Nadal elevated his match record at the world's premier clay court event to an astounding 28–0, becoming the first man since Borg in 1980 to win the French Open without having lost a set and only the fifth man since "open" tennis commenced in 1968 to win a major tournament without having dropped a set—joining the ranks of

French Open winner Ana Ivanovic of Serbia sprints for the ball in her women's singles final against Dinara Safina of Russia on June 7.

Julian Finney/Getty Images

Borg, Australian Ken Rosewall, Ilie Nastase of Romania, and Federer in that elite category.

Ivanovic, an adventurous shotmaker who seemed more polished and confident after having lost two of the last four major finals, collected her first career Grand Slam championship. In the final at Roland Garros, the number 2 seed stopped number 13 Dinara Safina of Russia (the sister of 2000 U.S. Open and 2005 Australian Open champion Marat Safin) in two sets 6–4, 6–3. Safina—who finished the year ranked number three in the world—upset three Russians to reach her first major final: top-seeded Sharapova in the fourth round, number seven seed Yelena Dementyeva in the quarterfinals, and number four Svetlana Kuznetsova in the semifinals. Ivanovic rallied gamely from a service breakdown at 3–4 in the final set to beat Jankovic 6–4, 3–6, 6–4 in a gripping all-Serbian semifinal.

Wimbledon. In arguably the greatest tennis match ever played, Nadal and Federer faced off on Wimbledon's Centre Court in the final. Federer was determined to break Borg's record by winning the game's most prestigious event for a sixth consecutive year. In the end—after five tumultuous sets, two rain delays, and a long afternoon up to the edge of darkness—Federer rallied valiantly from two sets down to come within two points of victory. In the end, however, Nadal earned his 6–4, 6–4, 6–7 (5), 6–7 (8), 9–7 win after 4 hours and 48 minutes of sublime tennis. Nadal, who became the first Spaniard to win Wimbledon since Manuel Santana in 1966, lost his serve only once in the match.

In a remarkable stretch from the 2001 U.S. Open through Wimbledon in 2003, Venus and Serena Williams played against each other in six of the eight Grand Slam finals, with Serena victorious in all but one. In Wimbledon 2008 the sisters battled in a major championship match for the first time in five years. Many knowledgeable observers expected Serena to beat her older sister, but Venus was unshakable. Fighting back from 2–4 down in the opening set, seventh-seeded Venus handled the windy conditions well and earned a 7–5, 6–4 victory over Serena, the number six seed. Top-seeded Ivanovic lost in the third round to unseeded Jie Zheng of China, who eventually faced Serena in the semifinals. Number three seed Sharapova—hindered by a sore shoulder that compelled her to take the rest of the year off after August, was beaten in the second round by Russia's Alla Kudryavtseva (ranked number 154 in the world). Number two seed Jankovic was toppled by unseeded Tamarine Tanasugarn of Thailand in the fourth round.

U.S. Open. Going into the U.S. Open, Federer had won only 2 of the 14 events he had played over the course of a frustrating year, and Nadal had taken away his number one ranking in August. The Swiss champion survived a harrowing five-set scare against number 23 seed Igor Andreyev of Russia in the fourth round, handled number three seed Djokovic in a four-set semifinal, and then masterfully cut down number six seed Murray 6–2, 7–5, 6–2 for his fifth straight U.S. Open title. Murray, who removed the top-seeded Nadal in the other semifinal to reach his first major final, ended the year ranked number four in the world. It was the first time in the Open era that a British man had concluded a year among the top five.

In probably the most absorbing match the Williams sisters had ever played against each other, Serena beat Venus 7–6 (6), 7–6 (7) under the lights in the U.S. Open quarterfinals. Serena was magnificent under duress, saving two set points in the opening set and eight more in the second. Buoyed by that triumph, she easily dismissed Safina in the semifinals and then halted Jankovic 6–4, 7–5 in the final. In the second set against the tenacious Serbian—appearing in her first Grand Slam final—Williams rescued herself commendably, saving four set points on her way back from a 3–5, 0–40 deficit and sweeping four games in a row to close out the match. It was Serena's third U.S. Open title and ninth major crown.

Other Events. At the Beijing Olympic Games, Nadal beat Fernando González of Chile in the final to earn the men's gold medal, and Dementyeva took the most important prize of her career with a gold-medal-round victory over Safina. The Spanish men unexpectedly won the Davis Cup. Facing Argentina in Mar del Plata, Arg., with an injured Nadal absent, Spain prevailed 3–1. A pair of left-handers—Feliciano López and Fernando Verdasco—contributed victories in singles and joined forces in the doubles to lead their country to an exhilarating win. In the Fed Cup final, which was held in Madrid, Russia—led by Kuznetsova and Vera Zvonareva—routed Spain 4–0. (STEVE FLINK)

TRACK AND FIELD SPORTS (ATHLETICS)

Jamaican sprinter Usain Bolt (*see* BIOGRAPHIES) stamped his name on the 2008 track and field season, breaking world records four times, three of them in spectacular fashion at the Olympic Games in Beijing. Bolt was far from alone in record breaking, though, as 17 Olympic records, including 5 world records, fell in Beijing.

World Indoor Championships. With many stars preparing for the Beijing Olympics, the International Association of Athletics Federations (IAAF) world indoor championships, held March 7–9 in Valencia, Spain, showcased a largely different group of athletes from those who later won in Beijing. Russian pole vaulter Yelena Isinbayeva and shot-putter Valerie Vili of New Zealand were the only champions in Valencia to add Olympic crowns in the same events. Isinbayeva cleared 4.75 m (15 ft 7 in), well below her world record, and triumphed over American Jenn Stuczynski (who cleared the same height) only on the countback.

Bryan Clay of the U.S. scored 6,371 points to win the heptathlon as a prelude to his eventual Olympic decathlon victory. Tia Hellebaut of Belgium won the women's pentathlon and went on to take Olympic gold in the high jump. Adding another chapter to a fabulous rivalry, 2004 shot-put champion Christian Cantwell threw 21.77-m (71 ft 5¼ in) to defeat fellow American and 2006 titlist Reese Hoffa.

Russian Yelena Soboleva set an apparent world record of 3 min 57.71 sec in her 1,500-m victory over teammate Yuliya Fomenko, but at year's end it appeared that both would lose their medals. IAAF testing determined that during out-of-competition doping controls in 2007, Soboleva, Fomenko, and five other Russian women had submitted urine samples that belonged to other people. They faced a two-year competition ban, but the IAAF planned to challenge the Russian federation's decision to make the ban retroactive to the time of the tests, and the disposition of the world indoor medals remained unclear.

Olympic Games. Although Bolt, whose nickname was "Lightning," had lowered the 100-m world record to 9.72 sec in New York City in May, a close contest with countryman Asafa Powell was expected in the 100-m final at the Beijing Olympic Games in August. Instead, the long-legged Bolt overcame his slow reaction time—second slowest among the finalists—to pull away with an un-

Thomas Kienzle/AP

Usain Bolt of Jamaica triumphantly crosses the finish line in world-record time in the 200-m final at the Beijing Olympics.

matchable stride after 35 m. So thorough was his dominance that Bolt dropped his arms at 80 m, looked around, and thumped his chest but still cut 0.03 sec from the world record. The race was only the second in which six men finished in under 10 sec, yet Bolt defeated Trinidad and Tobago's Richard Thompson by an astounding 0.20 sec. Powell finished a disappointing fifth.

Bolt's approach to the 200-m final was different. Observers who had previously considered American Michael Johnson's 19.32-sec world record from the 1996 Olympics virtually unbreakable calculated that it was now in jeopardy. So did Bolt, and this time he sprinted full speed throughout the race to cut the record to 19.30 sec. Churandy Martina of the Netherlands Antilles finished second, in 19.82 sec, but Martina and third-place finisher Wallace Spearmon of the U.S. were subsequently disqualified for running on their inside lane lines. American Shawn Crawford (19.96 sec), the defending Olympic champion, was awarded the silver medal.

Bolt's third act was the 4 × 100-m relay. With the United States absent from the final owing to a botched baton exchange in the heats, Bolt ran for Jamaica on the third leg and passed to Powell, history's second fastest 100-m runner. Despite a merely serviceable pass, Powell powered to the finish in 37.10 sec, 0.30 sec faster than the old world record first run by an American relay team in 1992 and matched again in 1993 by another American squad.

Meanwhile, the Jamaican women held up their end. Unheralded Shelly-Ann Fraser led a Jamaican sweep of the women's 100-m medals; Veronica Campbell-Brown defended her title in the 200 m; and Melaine Walker took the 400-m hurdles in an Olympic record time of 52.64 sec.

The U.S. team was somewhat disappointed atop the track and field standings with 23 total medals, just 5 ahead of Russia. The American men's haul of four golds was a record low, but medal sweeps in the 400-m and 400-m hurdles led by LaShawn Merritt and Angelo Taylor saved face, along with Clay's decathlon win.

Two Ethiopians captured gold in the longest track races as Kenenisa Bekele became the sixth man to win a 5,000-m/10,000-m double and Tirunesh Dibaba became the first woman to win the same pairing. The 26-year-old Bekele set Olympic records (12 min 57.82 sec and 27 min 1.17 sec, respectively) with both his victories. Bekele's title defense in the 10,000 m was so strong that two-time Olympic champion Haile Gebrselassie of Ethiopia ran his fastest time ever in an Olympics and placed just sixth. Dibaba's defense of her 5,000-m title was the slowest winning time in an Olympics or world championship, but her 10,000-m mark (29 min 54.66 sec) was the second fastest clocking in history.

The women's steeplechase debuted as an Olympic event, and Russian Gulnara Samitova-Galkina broke her own world record to win in 8 min 58.81 sec. The only other world record set by a woman at the Games went to Isinbayeva, who defended her pole vault title and added a centimetre to her own world record, soaring over 5.05 m (16 ft 6¾ in).

Two racewalkers set Olympic records: Italy's Alex Schwazer in the men's 50-km event (3 hr 37 min 9 sec) and Russian Olga Kaniskina in the women's 20 km (1 hr 26 min 31 sec). Besides Isinbayeva, two other field eventers also broke Olympic records. Australian Steve Hooker pole-vaulted 5.96 m (19 ft 6½ in), and Aksana Miankova of Belarus threw the women's hammer 76.34 m (250 ft 5 in).

International Competition. The 2008 Golden League series shed dramatic tension quickly but wound up as a rags-to-riches tale. After three of the six elite European invitational meets, just two contenders remained eligible to share in the million-dollar jackpot at season's end: Kenyan 800-m runner Pamela Jelimo and Croatian high jumper Blanka Vlasic. Experienced internationalist Vlasic, who had won 34 consecutive meets since June 2007 before losing at the Olympics, seemed a better bet than 18-year-old Jelimo, an unknown internationally before she won the African title in May. Jelimo was undefeated all season, setting five world junior records with the fastest 800-m times in more than a decade and winning the Olympic gold. On a rain-slicked track in Brussels at the final Golden League meet in September, Vlasic lost while Jelimo won easily to bank the million dollars.

Two American male sprint stars hit bumpy roads in 2008. Tyson Gay, a triple gold medalist in the 100 m, 200 m, and 4 × 100-m relay at the 2007 world championships, hoped to duplicate that feat in the Olympics. At the U.S. Olympic Trials, he won the wind-aided 100-m final in 9.68 sec (the fastest time ever run in any conditions), but in the quarterfinals of the 200 m, he crashed to the track with a strained hamstring. Gay trained well in the six weeks before the Olympics to heal the injury, but he could not regain top form and was eliminated in the 100-m semifinals in Beijing. Jeremy Wariner, virtually unbeatable at 400 m during 2004–07, parted with his coach and lost four of seven races, including the Olympic Trials, the Olympics, and the

The Paralympic Games: A Forum for Disabled Athletes

On Sept. 6–17, 2008, nearly 4,000 athletes with disabilities representing 147 National Paralympic Committees (NPCs) competed in the Paralympic Games in Beijing shortly after the Olympic Games had concluded. (*See* Special Report on page 194.) The high profile accorded the 2008 Paralympics was judged by many to be a turning point in the drive for heightened respect for disabled athletes across the globe.

Paralympic athletes traditionally compete in six different disability groups—amputee, cerebral palsy, visual impairment, spinal cord injuries, intellectual disability, and "les autres" (athletes whose disability does not fit into one of the other categories, including dwarfism). Within each group, athletes are further divided into classes on the basis of the type and extent of their disabilities, though individual athletes may be reclassified at later competitions if their physical status changes.

The first major sports competition for athletes with disabilities was organized by Sir Ludwig Guttman for British World War II veterans with spinal cord injuries and was held in England in 1948. A follow-up competition took place in 1952, with athletes from The Netherlands joining the British competitors. In 1960 the first quadrennial Olympic-style Games for disabled athletes were held in Rome; the quadrennial Winter Games were added in 1976, in Sweden. Beginning with the 1988 Olympic Games, held in Seoul (and the 1992 Winter Olympics in Albertville, France), the Paralympics were held at the Olympic venues and used the same facilities. In 2001 the International Olympic Committee and the International Paralympic Committee (founded in 1989) agreed on the practice of "one bid, one city," in which every city that bids to host the Olympics also bids to hold the related Paralympics.

The size and diversity of the Paralympic Games increased greatly over the years. At the 2004 Athens Paralympics, more than 3,800 athletes representing 136 NPCs participated in 19 sports: archery, athletics (track and field), boccia, cycling, equestrian, association football (both 7-a-side and 5-a-side), goalball, judo, powerlifting, sailing, shooting, swimming, table tennis, volleyball (sitting), and wheelchair competition in basketball, fencing, rugby, and tennis. China captured the most medals, with a total of 141 (63 gold). At the most recent Winter Games, the 2006 Turin (Italy) Winter Paralympics, more than 470 athletes representing 39 NPCs competed in five sports: Alpine and cross-country skiing, ice sledge hockey, biathlon, and wheelchair curling.

The Beijing Paralympics, which added rowing to the schedule, handed out 1,431 medals (473 gold) in 20 sports to athletes from 76 NPCs, with China (211 medals), Great Britain (102), and the United States (99) topping the medals table. Top competitors included South African double amputee Oscar ("Blade Runner") Pistorius, a world-record-setting T44 sprinter who had dominated much of the news prior to the opening ceremony. In May he was granted permission by the Court of Arbitration for Sport to try out for the Olympic Games. Critics had suggested that Pistorius's high-tech prosthetic legs would actually give him an advantage over able-bodied runners. Although he ran a personal-best 400-m race of 46.25 sec, he failed by 0.70 sec to qualify for South Africa's Olympic team. He rebounded at the Paralympics, where he won three gold medals (100-, 200-, and 400-m T44) and set one world record and two additional Paralympic records. Other significant Paralympians included swimmer Daniel Dias of Brazil, who topped the overall rankings with nine medals (four gold); Australian swimmers Matthew Cowdrey and Peter Leek, with eight medals each; and South African swimmer Natalie du Toit, who won all five of her events. Du Toit's personal story was seen as an inspiration to other disabled athletes. She had hoped to qualify for the Olympics in Athens when in 2001 she lost the lower part of one leg in a motorcycle accident and switched to the Paralympics instead. In 2008 Du Toit made history as the first person with a partial leg to swim against able-bodied competitors at the Olympic Games, where she was 16th out of 24 finishers in the new 10-km open-water race.

(MELINDA C. SHEPHERD)

season-concluding IAAF World Athletics Final.

Cross Country and Marathon Running. Gebrselassie further rewrote the all-time marathon list in 2008, first with a 2-hr 4-min 53-sec race in Dubai, U.A.E., in January, at the time history's second fastest marathon. In September at the Berlin Marathon, the event in which he had completed the fastest time on record in 2007, the 35-year-old Ethiopian ran history's first sub-2-hr 4-min marathon. Gebrselassie passed the halfway mark in 1 hr 2 min 5 sec, 24 sec faster than in the 2007 race. He slowed noticeably at one point but summoned a finishing kick to lean across the line in 2 hr 3 min 59 sec.

Weather conditions for the Olympic marathons in Beijing were poor but better than expected. Romanian Constantina Tomescu, age 38, pulled clear of the women's field at the halfway point and held on to win in 2 hr 26 min 44 sec. It was the slowest Olympic-winning time since 1992 but 22 sec ahead of silver medalist Catherine Ndereba of Kenya. The men raced in higher temperatures but less humidity and eschewed caution. Kenyan winner Sammy Wanjiru's 2-hr 6-min 32-sec time broke the Olympic record by almost 3 min; runner-up Jaouad Gharib of Morocco also ran under the old standard in 2 hr 7 min 16 sec.

At the world cross country championships, held in Edinburgh on March 30, Ethiopia swept the individual titles. Bekele earned a record sixth title in the senior men's 12-km event; Dibaba prevailed in the senior women's race; her sister Genzebe won the junior women's race; and Ibrahim Jeilan took the junior men's event. (SIEG LINDSTROM)

VOLLEYBALL

The United States returned to the top of the volleyball world in 2008. The U.S. captured the men's gold medal at the Olympic Games in Beijing, downing Brazil 20–25, 25–22, 25–21, 25–23 in the final match, while Russia swept Italy 25–22, 25–19, 25–23 to take the bronze medal. The Americans' leading scorer, Clayton Stanley, was named the tournament's Most Valuable Player (MVP) as the U.S. earned its first Olympic indoor volleyball gold since 1988. The U.S. men also claimed their first Fédération Internationale de Volleyball (FIVB) World League title, defeating Serbia 26–24, 23–25, 25–23,

Doug Mills—The New York Times/Redux

In the Olympic beach volleyball final on August 21, American Todd Rogers watches as his partner, Phil Dalhausser, spikes the ball past Marcio Araujo of Brazil.

25–22. The Americans were led by four-time Olympian Lloy Ball, who was chosen as tournament MVP.

In women's competition, Brazil spoiled the Americans' Olympic gold medal sweep by posting a 25–15, 18–25, 25–13, 25–21 victory over the U.S. MVP honours went to Brazil's Paula Pequeno. China secured the bronze with a 25–16, 21–25, 25–13, 25–20 victory over Cuba. Prior to the Olympics, Brazil notched its seventh FIVB Grand Prix championship. Cuba took the silver, and Italy collected the bronze.

In Olympic beach volleyball competition, Americans Todd Rogers and Phil Dalhausser claimed the men's gold medal, defeating Brazil's Marcio Araujo and Fabio Luiz Magalhães 23–21, 17–21, 15–4 in the final match. Dalhausser was tabbed the men's tournament's Most Outstanding Player. Fellow Americans Misty May-Treanor and Kerri Walsh (*see* BIOGRAPHIES) captured their second consecutive Olympic gold with a 21–18, 21–18 triumph over Tian Jia and Wang Jie of China. May-Treanor was selected as the women's Most Outstanding Player. This marked the first time that the same country claimed both beach volleyball gold medals at the same Olympics. (RICHARD S. WANNINGER)

WEIGHTLIFTING

The Games of the XXIX Olympiad, held in August 2008 in Beijing, displayed on the competition platform 255 weightlifters representing 84 countries. Athletes from 18 countries won the 45 medals that were awarded in the eight men's and seven women's body-weight categories. A total of 10 senior world records and 19 other Olympic records were broken.

In the women's division, China won four gold medals, followed in the rankings by South Korea (one gold and one silver), North Korea (one gold and one bronze), Thailand (one gold), Kazakhstan and Russia (two silver and one bronze each), and four other countries. Three-time world champion Jang Mi Ran of South Korea was the gold medalist in the superheavyweight category, with a 326-kg (718.7-lb) overall total, a new world record.

China also led the men's team rankings, with four gold and one silver, followed by Belarus (one gold and one silver). South Korea, Kazakhstan, and Germany earned one gold medal each. Russia took four medals, none of them gold, and seven other countries divided the remaining men's medals. Matthias Steiner from Germany won the superheavyweight category with an overall total of 461 kg (1,016.3 lb).

(DRAGOMIR CIOROSLAN)

WRESTLING

Freestyle and Greco-Roman. Wrestling medals were contested in three disciplines—men's Greco-Roman, men's freestyle, and women's freestyle—at the 2008 Olympic Games in Beijing. Russia once again won the medal count in men's freestyle competition, with a total of six medals (three gold, one silver, and two bronze). Ukraine and Georgia completed the medal count with three each. The 74-kg class victory went to Russia's Buvayasa Saytiyev, who had also won gold at the 1996 Atlanta Olympics and the 2004 Games in Athens. His achievement equaled that of Aleksandr Medved of the Soviet Union, who won Olympic titles in 1964, 1968, and 1972; they were the only two freestyle wrestlers to claim three Olympic gold medals.

Japan repeated at the top of the women's freestyle competition, with four medals, including two gold. Olympic host country China and Canada both finished with two medals each. American Randi Miller captured the bronze medal in the 63-kg class, winning a one-point decision over Martine Degrenier of Canada.

In Greco-Roman competition Russia led the medal count with four (three gold and one silver). During the medal ceremony for the 84-kg class, Ara Abrahamian of Sweden took the bronze medal from around his neck and dropped it on the mat in protest as he walked away. The public display came after a disputed point in Abrahamian's semifinal contest against eventual gold medalist Andrea Minguzzi of Italy. The International Olympic Committee stripped Abrahamian of his medal, and the Fédération Internationale de Lutte Amateur, the sport's governing body, banned him from competition for two years. (ANDRE REDDINGTON)

Sumo. Just returning from his two-*basho* (grand tournament) suspension, *yokozuna* (grand champion) Asashoryu narrowly lost the January 2008 Hatsu (New Year's) Basho to fellow *yokozuna* Hakuho. Asashoryu won the Haru (spring) Basho in March. Bulgarian-born Kotooshu prevailed in the Natsu (summer) Basho in May, the first time a European fighter had won a *yusho* (championship). Hakuho took advantage of injuries to Asashoryu and swept the remaining three *basho* for 2008.

Outside the ring, scandal continued to plague the ancient sport. In mid-August Russian wrestler Wakanoho was arrested for marijuana use, and a week later he was expelled; his countrymen Roho and Hakurozan were arrested and expelled in early September. This forced the resignation of Japan Sumo Association (JSA) Chairman Kitanoumi. Reforms that the JSA adopted included drug testing, stricter guidelines for athlete conduct and training, and oversight by directors appointed from outside the sport. (KEN COLLER)

Sporting Record

ARCHERY

FITA Outdoor World Target Archery Championships*

Year	Men's individual		Men's team		Women's individual		Women's team	
	Winner	Points	Winner	Points	Winner	Points	Winner	Points
2003	M. Frangilli (Italy)	113	South Korea	238	Yun Mi Jin (S.Kor.)	116	South Korea	252
2005	Chung Jae Hun (S.Kor.)	102	South Korea	244	Lee Sung Jin (S.Kor.)	111	South Korea	251
2007	Im Dong Hyun (S.Kor.)	110	South Korea	224	N. Valeeva (Italy)	108	South Korea	226

*Olympic (recurve) division.

AUTOMOBILE RACING

Formula One Grand Prix Race Results, 2008

Race	Driver	Winner's time (hr:min:sec)
Australian GP	L. Hamilton (U.K.)	1:34:50.616
Malaysian GP	K. Räikkonen (Fin.)	1:31:18.555
Bahrain GP	F. Massa (Braz.)	1:31:06.970
Spanish GP	K. Räikkonen (Fin.)	1:38:19.051
Turkish GP	F. Massa (Braz.)	1:26:49.451
Monaco GP	L. Hamilton (U.K.)	2:00:42.742
Canadian GP	R. Kubica (Pol.)	1:36:24.447
French GP	F. Massa (Braz.)	1:31:50.245
British GP	L. Hamilton (U.K.)	1:39:09.440
German GP	L. Hamilton (U.K.)	1:31:20.874
Hungarian GP	H. Kovalainen (Fin.)	1:37:27.067
European GP	F. Massa (Braz.)	1:35:32.339
Belgian GP	F. Massa (Braz.)*	1:22:59.394
Italian GP	S. Vettel (Ger.)	1:26:47.494
Singapore GP	F. Alonso (Spain)	1:57:16.304
Japanese GP	F. Alonso (Spain)	1:30:21.892
Chinese GP	L. Hamilton (U.K.)	1:31:57.403
Brazilian GP	F. Massa (Braz.)	1:34:11.435

WORLD DRIVERS' CHAMPIONSHIP: Hamilton 98 points; Massa 97 points; Räikkönen 75 points.

CONSTRUCTORS' CHAMPIONSHIP: Ferrari 172 points; McLaren-Mercedes 151 points; BMW Sauber 135 points.

*Original winner (Lewis Hamilton [U.K.]) stripped and demoted to third place.

National Association for Stock Car Auto Racing (NASCAR) Sprint Cup Champions*

Year	Winner
2006	J. Johnson
2007	J. Johnson
2008	**J. Johnson**

*Nextel Cup until 2008.

Rusty Jarrett/Getty Images

NASCAR driver Jimmie Johnson celebrates his third consecutive drivers' championship.

Daytona 500

Year	Winner	Avg. speed in mph
2006	J. Johnson	142.667
2007	K. Harvick	149.335
2008	**R. Newman**	**152.672**

Indy Car Champions

Year	Indy Racing League	Champ Car
2006	S. Hornish, Jr. (U.S.)	S. Bourdais (Fr.)
2007	D. Franchitti (Scot.)	S. Bourdais (Fr.)
2008*	**S. Dixon (N.Z.)**	

*IRL and Champ Car merged in 2008.

Indianapolis 500

Year	Winner	Avg. speed in mph
2006	S. Hornish (U.S.)	157.085
2007*	D. Franchitti (Scot.)	151.774
2008	**S. Dixon (N.Z.)**	**143.567**

*Race stopped after 415 mi because of rain.

Le Mans 24-Hour Grand Prix d'Endurance

Year	Car	Drivers
2006	Audi R10	F. Biela, E. Pirro, M. Werner
2007	Audi R10	F. Biela, E. Pirro, M. Werner
2008	**Audi R10**	**R. Capello, T. Kristensen, A. McNish**

Monte-Carlo Rally

Year	Car	Driver
2006	Ford Focus WRC	M. Grönholm (Fin.)
2007	Citroen C4 WRC	S. Loeb (Fr.)
2008	**Citroën C4 WRC**	**S. Loeb (Fr.)**

BADMINTON

All England Open Championships—Singles

Year	Men	Women
2006	Lin Dan (China)	Xie Xingfang (China)
2007	Lin Dan (China)	Xie Xingfang (China)
2008	**Chen Jin (China)**	**T. Rasmussen (Den.)**

Thomas Cup (men)

Year	Winner	Runner-up
2003–04	China	Denmark
2005–06	China	Denmark
2007–08	**China**	**South Korea**

Uber Cup (women)

Year	Winner	Runner-up
2003–04	China	South Korea
2005–06	China	Netherlands
2007–08	**China**	**Indonesia**

World Badminton Championships

Year	Men's singles	Women's singles	Men's doubles	Women's doubles	Mixed doubles
2005	T. Hidayat (Indon.)	Xie Xingfang (China)	H. Bach, T. Gunawan (U.S.)	Yang Wei, Zhang Jiewen (China)	N. Widianto, L. Natsir (Indon.)
2006	Lin Dan (China)	Xie Xingfang (China)	Cai Yun, Fu Haifeng (China)	Gao Ling, Huang Sui (China)	N. Robertson, G. Emms (Eng.)
2007	Lin Dan (China)	Zhu Lin (China)	M. Kido, H. Setiawan (Indon.)	Yang Wei, Zhang Jiewen (China)	N. Widianto, L. Natsir (Indon.)

BASEBALL

Final Major League Standings, 2008

AMERICAN LEAGUE

East Division	Won	Lost	G.B.†
*Tampa Bay	97	65	—
*Boston	95	67	2
N.Y. Yankees	89	73	8
Toronto	86	76	11
Baltimore	68	93	28½

Central Division	Won	Lost	G.B.†
*Chicago W.Sox‡	89	74	—
Minnesota‡	88	75	1
Cleveland	81	81	7½
Kansas City	75	87	13½
Detroit	74	88	14½

West Division	Won	Lost	G.B.†
*L.A. Angels	100	62	—
Texas	79	83	21
Oakland	75	86	24½
Seattle	61	101	39

NATIONAL LEAGUE

East Division	Won	Lost	G.B.†
*Philadelphia	92	70	—
N.Y. Mets	89	73	3
Florida	84	77	7½
Atlanta	72	90	20
Washington	59	102	32½

Central Division	Won	Lost	G.B.†
*Chicago Cubs	97	64	—
*Milwaukee	90	72	7
Houston	86	75	11
St. Louis	86	76	11½
Cincinnati	74	88	23½
Pittsburgh	67	95	30½

West Division	Won	Lost	G.B.†
*L.A. Dodgers	84	78	—
Arizona	82	80	2
Colorado	74	88	10
San Francisco	72	90	12
San Diego	63	99	21

*Qualified for play-offs. †Games behind. ‡Tied at regular season's end, division winner determined by one-game play-off

Caribbean Series

Year	Winning team	Country
2006	Caracas Lions (Leones)	Venezuela
2007	Cibao Eagles (Aguilas)	Dominican Republic
2008	**Licey Tigers (Tigres)**	**Dominican Republic**

World Series*

Year	Winning team	Losing team	Results
2006	St. Louis Cardinals (NL)	Detroit Tigers (AL)	4–1
2007	Boston Red Sox (AL)	Colorado Rockies (NL)	4–0
2008	**Philadelphia Phillies (NL)**	**Tampa Bay Rays (AL)**	**4–1**

*AL—American League; NL—National League.

Japan Series*

Year	Winning team	Losing team	Results
2006	Nippon Ham Fighters (PL)	Chunichi Dragons (CL)	4–1
2007	Chunichi Dragons (CL)	Nippon Ham Fighters (PL)	4–1
2008	**Seibu Lions (PL)**	**Yomiuri Giants (CL)**	**4–3**

*CL—Central League; PL—Pacific League.

BASKETBALL

NBA Final Standings, 2007–08

EASTERN CONFERENCE

Atlantic Division	Won	Lost	G.B.†
*Boston	66	16	—
*Toronto	41	41	25
*Philadelphia	40	42	26
New Jersey	34	48	32
New York	23	59	43

Central Division	Won	Lost	G.B.†
*Detroit	59	23	—
*Cleveland	45	37	14
Indiana	36	46	23
Chicago	33	49	26
Milwaukee	26	56	33

Southeast Division	Won	Lost	G.B.†
*Orlando	52	30	—
*Washington	43	39	9
*Atlanta	37	45	15
Charlotte	32	50	20
Miami	15	67	37

WESTERN CONFERENCE

Northwest Division	Won	Lost	G.B.†
*Utah	54	28	—
*Denver	50	32	4
Portland	41	41	13
Minnesota	22	60	32
Seattle	20	62	34

Pacific Division	Won	Lost	G.B.†
*L.A. Lakers	57	25	—
*Phoenix	55	27	2
Golden State	48	34	9
Sacramento	38	44	19
L.A. Clippers	23	59	34

Southwest Division	Won	Lost	G.B.†
*New Orleans	56	26	—
*San Antonio	56	26	—
*Houston	55	27	1
*Dallas	51	31	5
Memphis	22	60	34

*Qualified for play-offs. †Games behind.

National Basketball Association (NBA) Championship

Season	Winner	Runner-up	Results
2005–06	Miami Heat	Dallas Mavericks	4–2
2006–07	San Antonio Spurs	Cleveland Cavaliers	4–0
2007–08	**Boston Celtics**	**Los Angeles Lakers**	**4–2**

Women's National Basketball Association (WNBA) Championship

Season	Winner	Runner-up	Results
2006	Detroit Shock	Sacramento Monarchs	3–2
2007	Phoenix Mercury	Detroit Shock	3–2
2008	**Detroit Shock**	**San Antonio Silver Stars**	**3–0**

Division I National Collegiate Athletic Association (NCAA) Championship—Men

Year	Winner	Runner-up	Score
2006	Florida	UCLA	73–57
2007	Florida	Ohio State	84–75
2008	**Kansas**	**Memphis**	**75–68**

Division I National Collegiate Athletic Association (NCAA) Championship—Women

Year	Winner	Runner-up	Score
2006	Maryland	Duke	78–75
2007	Tennessee	Rutgers	59–46
2008	**Tennessee**	**Stanford**	**64–48**

World Basketball Championship—Men

Year	Winner	Runner-up
2004*	Argentina	Italy
2006	Spain	Greece
2008*	**United States**	**Spain**

*Olympic champion

World Basketball Championship—Women

Year	Winner	Runner-up
2004*	United States	Australia
2006	Australia	Russia
2008*	**United States**	**Australia**

*Olympic champion.

BILLIARD GAMES

World Three-Cushion Championship*

Year	Winner
2006	F. Mercks (Belg.)
2007	R. Umeda (Japan)
2008	**M. Zanetti (Italy)**

*Union Mondiale de Billard champion.

WPA World Nine-Ball Championships

Year	Men's champion
2006	R. Alcano (Phil.)
2007	D. Peach (U.K.)
2008	***postponed to early 2009***
Year	**Women's champion**
2006	Kim Ga Young (S.Kor.)
2007	Pan Xiaoting (China)
2008	**Lin Yuan-chun (Taiwan)**

World Professional Snooker Championship

Year	Winner
2006	G. Dott
2007	J. Higgins
2008	**R. O'Sullivan**

BOBSLEIGH AND LUGE

Bobsleigh and Skeleton World Championships

Year	Two-man bobsleigh	Four-man/driver	Women's bobsleigh	Men's skeleton	Women's skeleton	Team
2006†	A. Lange, K. Kuske (Ger.)	Germany/A. Lange	S. Kiriasis, A. Schneiderheinze (Ger.)	D. Gibson (Can.)	M. Pedersen (Switz.)	
2007	A. Lange, K. Kuske (Ger.)	Switzerland/I. Rueegg	S. Kiriasis, R. Logsch (Ger.)	G. Stähli (Switz.)	N. Pikus-Pace (U.S.)	Germany
2008	**A. Lange, K. Kuske (Ger.)**	**Germany/A. Lange**	**S. Kiriasis, R. Logsch (Ger.)**	**K. Bromley (Gr.Brit.)**	**A. Huber (Ger.)**	**Germany**

*Olympic champions.

Luge World Championships*

Year	Men	Women	Doubles	Team
2006†	A. Zoggeler (Italy)	S. Otto (Ger.)	A. Linger, W. Linger (Austria)	
2007	D. Moller (Ger.)	T. Hufner (Ger.)	P. Leitner, A. Resch (Ger.)	Germany
2008	**F. Loch (Ger.)**	**T. Hüfner (Ger.)**	**A. Florschutz, T. Wustlich (Ger.)**	**Germany**

*Artificial track. †Olympic champions.

BOWLING

USBC Open Bowling Championships—Regular Division

Year	Singles	Score	All-events	Score
2006	W. Macpherson	812	D. Mitchell	2,189
2007	F. Aki	814	M. Rose, Jr.	2,198
2008	**B. Young**	**832**	**J. Futrell**	**2,183**

USBC Women's Bowling Championships—Classic Division

Year	Singles	Score	All-events	Score
2006	K. Stroud	771	K. Stroud	2,159
2007	T. Stanbrough	745	W. Macpherson	2,161
2008	**C. Ham**	**736**	**L. Johnson**	**2,113**

PBA Tournament of Champions

Year	Champion
2005–06	C. Barnes
2006–07	T. Jones
2007–08	**M. Haugen, Jr.**

PBA World Championship

Year	Winner
2005–06	W.R. Williams, Jr.
2006–07	D. Kent
2007–08	**N. Duke**

World Tenpin Bowling Championships—Men

Year	Singles	Doubles	Trios	Team (fives)
2003	M. Luoto (Fin.)	Sweden	United States	Sweden
2006	R. Ong (Sing.)	Sweden	South Korea	United States
2008	**W.R. Williams, Jr. (U.S.)**	**United States**	**South Korea**	**United States**

World Tenpin Bowling Championships—Women

Year	Singles	Pairs	Triples	Team (fives)
2003	Z. Glover (Eng.)	England	Philippines	Malaysia
2005	F. Cheah (Malay.)	Germany	Taiwan	Taiwan
2007	S. O'Keefe (U.S.)	South Korea	Sweden	Malaysia

BOXING

World Heavyweight Champions No Weight Limit

WBA

Ruslan Chagaev (Uzbek.; 4/14/07)
champion declared "in recess" in 2008
Nikolay Valuyev (Russia; 8/30/08)

WBC

Oleg Maskayev (Russia; 8/12/06)
Samuel Peter (Nigeria; 3/8/08)
Vitali Klitschko (Ukr.; 10/11/08)

IBF

Wladimir Klitschko (Ukr.; 4/22/06)

World Cruiserweight Champions Top Weight 195 Pounds (WBC 200 Pounds)

WBA

David Haye (U.K.; 11/10/07)
declared unified champion in 2007
gave up title in 2008
Firat Arslan (Ger.; 11/24/07)
Guillermo Jones (Pan.; 9/27/08; defeated Arslan)

WBC

David Haye (U.K.; 11/10/07)
gave up title in 2008
Giacobbe Fragomeni (Italy; 10/24/08)

IBF

Steve Cunningham (U.S.; 5/26/07)
Tomasz Adamek (Pol.; 12/11/08)

BOXING (continued)

World Light Heavyweight Champions
Top Weight 175 Pounds

WBA

Danny Green (Austl.; 12/16/07)
gave up title in 2008
Hugo Hernan Garay (Arg.; 7/3/08)

WBC

Chad Dawson (U.S.; 2/3/07)
gave up title in 2008
Adrian Diaconu (Rom.; 7/11/08)

IBF

Clinton Woods (U.K.; 3/4/05)
Antonio Tarver (U.S.; 4/12/08)
Chad Dawson (U.S.; 10/11/08)

World Super Middleweight Champions
Top Weight 168 Pounds

WBA

Mikkel Kessler (Den.; 11/12/04)
declared unified champion in 2006
Anthony Mundine (Austl.; 3/7/07)
gave up title in 2008
Joe Calzaghe (U.K.; 11/3/07; defeated Kessler)
declared unified champion in 2007
Mikkel Kessler (Den.; 6/21/08; won Mundine's vacant title)

WBC

Joe Calzaghe (U.K.; 11/3/07)
gave up title in 2008
Carl Froch (U.K.; 12/6/08)

IBF

Lucian Bute (Can.; 10/19/07)

World Middleweight Champions
Top Weight 160 Pounds

WBA

Felix Sturm (Ger.; 4/28/07)

WBC

Kelly Pavlik (U.S.; 9/29/07)

IBF

Arthur Abraham (Arm.; 12/10/05)

World Junior Middleweight Champions
Top Weight 154 Pounds
(also called super welterweight)

WBA

Joachim Alcine (Can.; 7/7/07)
Daniel Santos (P.R.; 7/11/08)

WBC

Vernon Forrest (U.S.; 7/28/07)
Sergio Mora (U.S.; 6/7/08)
Vernon Forrest (U.S.; 9/13/08)

IBF

Cory Spinks (U.S.; 7/8/06)
Verno Phillips (U.S.; 3/27/08)

World Welterweight Champions
Top Weight 147 Pounds

WBA

Miguel Cotto (P.R.; 12/2/06)
Antonio Margarito (Mex.; 7/26/08)
declared super champion in 2008
Yuriy Nuzhnenko (Ukr.; interim 12/8/07)
declared champion in 2008

WBC

Floyd Mayweather (U.S.; 11/4/06)
gave up title in 2008
Andre Berto (U.S.; 6/21/08)

IBF

Kermit Cintrón (P.R.; 10/28/06)
Antonio Margarito (Mex.; 4/12/08)
gave up title in 2008
Joshua Clottey (Ghana; 8/2/08)

World Junior Welterweight Champions
Top Weight 140 Pounds
(also called super lightweight)

WBA

Gavin Rees (U.K.; 7/21/07)
Andreas Kotelnik (Ukr.; 3/22/08)

WBC

Junior Witter (U.K.; 9/15/06)
Timothy Bradley (U.S.; 5/10/08)

IBF

Paul Malignaggi (U.S.; 6/16/07)
gave up title in 2008

World Lightweight Champions
Top Weight 135 Pounds

WBA

Juan Diaz (U.S.; 7/17/04)
declared unified champion in 2007
José Alfaro (Nic.; 12/29/07)
Nate Campbell (U.S.; 3/8/08; defeated Diaz)
declared unified champion in 2008
Yusuke Kobori (Japan; 5/19/08; defeated Alfaro)

WBC

David Diaz (U.S.; interim 8/12/06)
declared champion in 2007
Manny Pacquiao (Phil.; 6/28/08)

IBF

Juan Diaz (U.S.; 10/13/07)
Nate Campbell (U.S.; 3/8/08)

World Junior Lightweight Champions
Top Weight 130 Pounds
(also called super featherweight)

WBA

Edwin Valero (Venez.; 8/5/06)
gave up title in 2008
Jorge Linares (Venez.; 11/28/08)

WBC

Juan Manuel Márquez (Mex.; 3/17/07)
Manny Pacquiao (Phil.; 3/15/08)
declared vacant in 2008
Humberto Soto (Mex.; 12/20/08)

IBF

Mzonke Fana (S.Af.; 4/20/07)
Cassius Baloyi (S.Af.; 5/31/06)

World Featherweight Champions
Top Weight 126 Pounds

WBA

Chris John (Indon.; 9/26/03)
interim champion 2003–05

WBC

Jorge Linares (Venez.; 7/21/07)
gave up title in 2008
Óscar Larios (Mex.; 10/16/08)

IBF

Robert Guerrero (U.S.; 2/23/07)
gave up title in 2008
Cristóbal Cruz (Mex.; 10/23/08)

World Junior Featherweight Champions
Top Weight 122 Pounds
(also called super bantamweight)

WBA

Celestino Caballero (Pan.; 10/4/06)

WBC

Israel Vazquez (Mex.; 8/4/07)
declared "champion emeritus" in 2008

IBF

Steve Molitor (Can.; 11/10/06)
Celestino Caballero (Pan.; 11/21/08)

World Bantamweight Champions
Top Weight 118 Pounds

WBA

Vladimir Sidorenko (Ukr.; 2/26/05)
Anselmo Moréno (Pan.; 5/31/08)

WBC

Hozumi Hasegawa (Japan; 4/16/05)

IBF

Joseph Agbeko (Ghana; 9/29/07)

World Junior Bantamweight Champions
Top Weight 115 Pounds
(also called super flyweight)

WBA

Alexander Muñoz (Venez.; 5/3/07)
Cristian Mijares (Mex.; 5/17/08)
declared unified champion in 2008
Nobuo Nashiro (Japan; 9/15/08)
Vic Darchinyan (Austl.; 11/1/08; defeated Mijares)
declared unified champion in 2008

WBC

Cristian Mijares (Mex.; interim 9/18/06)
declared champion in 2007
Vic Darchinyan (Austl.; 11/1/08)

IBF

Dmitry Kirilov (Russia; 10/13/07)
Vic Darchinyan (Austl.; 8/2/08)

BOXING (continued)

World Flyweight Champions
Top Weight 112 Pounds

WBA

Takefumi Sakata (Japan; 3/19/07)
Denkaosan Kaovichit (Thai.; 12/31/08)

WBC

Daisuke Naito (Japan; 7/18/07)

IBF

Nonito Donaire (Phil.; 7/7/07)

World Junior Flyweight Champions
Top Weight 108 Pounds

WBA

Brahim Asloum (Fr.; 12/8/07)

WBC

Edgar Sosa (Mex.; 4/14/07)

IBF

Ulises Solis (Mex.; 1/7/06)

World Mini-flyweight Champions
Top Weight 105 Pounds
(also called strawweight)

WBA

Yutaka Niida (Japan; 7/3/04)
Román González (Nic.; 9/15/08)

WBC

Oleydong Sithsanerchai (Thai.; 11/29/07)

IBF

Florante Condes (Phil.; 7/7/07)
Raúl García (Mex.; 6/14/08)

CHESS

FIDE Olympiad—Open

Year	Winner	Runner-up
2004	Ukraine	Russia
2006	Armenia	China
2008	**Armenia**	**Israel**

FIDE Olympiad—Women

Year	Winner	Runner-up
2004	China	United States
2006	Ukraine	Russia
2008	**Georgia**	**Ukraine**

Rick Rycroft/AP

India cricketers jump for joy after defeating Australia, unbeaten in its last 16 Tests, in Perth, Australia.

CRICKET

Test Match Results, October 2007–September 2008

Host/Ground	Date	Scores	Result
Pakistan/Karachi	Oct. 1–5	S.Af. 450 and 264 for 7 dec; Pak. 291 and 263	S.Af. won by 160 runs
Pakistan/Lahore	Oct. 8–12	S.Af. 357 and 305 for 4 dec; Pak. 206 and 316 for 4	Match drawn; S.Af. won series 1–0
Australia/Brisbane	Nov. 8–12	Austl. 551 for 4 dec, SriL. 211 and 300	Austl. won by an innings and 40 runs
Australia/Hobart	Nov. 16–20	Austl. 542 for 5 dec and 210 for 2 dec; SriL. 246 and 410	Austl. won by 96 runs; Austl. won series 2–0
South Africa/Johannesburg	Nov. 8–11	S.Af. 226 and 422 for 3 dec; N.Z. 118 and 172	S.Af. won by 358 runs
South Africa/Centurion	Nov. 16–18	N.Z. 188 and 136; S.Af. 383	S.Af. won by an innings and 59 runs; S.Af. won series 2–0
India/Delhi	Nov. 22–26	Pak. 231 and 247; India 276 and 203 for 4	India won by 6 wickets
India/Kolkata	Nov. 3–Dec. 4	India 616 for 5 dec and 184 for 4 dec; Pak. 456 and 214 for 4	Match drawn
India/Bangalore	Dec. 8–12	India 626 and 284 for 6 dec; Pak. 537 and 162 for 7	Match drawn; India won series 1–0
Sri Lanka/Kandy	Dec. 1–5	SriL. 188 and 442 for 8 dec; Eng. 281 and 261	SriL. won by 88 runs
Sri Lanka/Colombo	Dec. 9–13	Eng. 351 and 250 for 3; SriL. 548 for 9 dec	Match drawn
Sri Lanka/Galle	Dec. 18–22	SriL. 499 for 8 dec; Eng. 81 and 251 for 6	Match drawn; SriL. won series 1–0
Australia/Melbourne	Dec. 26–29	Austl. 343 and 351 for 7 dec, India 196 and 161	Austl. won by 337 runs
Australia/Sydney	Jan. 2–6	Austl. 463 and 401 for 7 dec; India 532 and 210	Austl. won by 122 runs
Australia/Perth	Jan. 16–19	India 330 and 294, Austl. 212 and 340	India won by 72 runs
Australia/Adelaide	Jan. 24–28	India 526 and 269 for 7 dec; Austl. 563	Match drawn; Austl. won series 2–1
South Africa/Port Elizabeth	Dec. 26–29	W.Ind. 408 and 175; S.Af. 195 and 260	W.Ind. won by 128 runs
South Africa/Cape Town	Jan. 2–5	W.Ind. 243 and 262; S.Af. 321 and 186 for 3	S.Af. won by 7 wickets
South Africa/Durban	Jan. 10–12	W.Ind. 139 and 317; S.Af. 556 for 4 dec	S.Af. won by an innings and 100 runs; S.Af. won series 2–1

CRICKET (continued)

Test Match Results, October 2007–September 2008 (continued)

Host/Ground	Date	Scores	Result
New Zealand/Dunedin	Jan. 4–6	Bangl. 137 and 254; N.Z. 357 and 39 for 1	N.Z. won by 9 wickets
New Zealand/Wellington	Jan. 12–14	Bangl. 143 and 113; N.Z. 393	N.Z. won by an innings and 137 runs; N.Z. won series 2–0
Bangladesh/Mirpur	Feb. 22–25	Bangl. 192 and 182; S.Af. 170 and 205 for 5	S.Af. won by 5 wickets
Bangladesh/Chittagong	Feb. 29–March 3	S.Af. 583 for 7 dec., Bangl. 259 and 119	S.Af. won by an innings and 205 runs; S.Af. won series 2–0
New Zealand/Hamilton	March 5–9	N.Z. 470 and 177 for 9 dec; Eng. 348 and 110	N.Z. won by 189 runs
New Zealand/Wellington	March 13–17	Eng. 342 and 293; N.Z. 198 and 311	Eng. won by 126 runs
New Zealand/Napier	March 22–26	Eng. 253 and 467 for 7 dec; N.Z. 168 and 431	Eng. won by 121 runs; Eng. won series 2–1
West Indies/Guyana	March 22–26	SriL. 476 for 8 dec and 240 for 7 dec; W.Ind. 280 and 315	SriL. won by 121 runs
West Indies/Trinidad	April 3–6	SriL. 278 and 268; W.Ind. 294 and 254 for 4	W.Ind. won by 6 wickets; series tied 1–1
India/Chennai	March 26–30	S.Af. 540 and 331 for 5 dec.; India 627	Match drawn
India/Ahmedabad	April 3–5	India 76 and 328; S.Af. 494 for 7 dec	S.Af. won by an innings and 90 runs
India/Kanpur	April 11–13	S.Af. 265 and 121; India 325 and 64 for 2	India won by 8 wickets; series tied 1–1
England/London (Lord's)	May 15–19	N.Z. 277 and 269 for 6; Eng. 319	Match drawn
England/Manchester	May 23–26	N.Z. 381 and 114; Eng. 202 and 294 for 4	Eng. won by 6 wickets
England/Nottingham	June 5–8	Eng. 364; N.Z. 123 and 232	Eng. won by an innings and 9 runs; Eng. won series 2–0
West Indies/Jamaica	May 22–26	Austl. 431 and 167; W.Ind. 312 and 191	Austl. won by 95 runs
West Indies/Antigua	May 30–June 3	Austl. 479 for 7 dec and 244 for 6 dec; W.Ind. 353 and 266 for 5	Match drawn
West Indies/Barbados	June 12–16	Austl. 251 and 439 for 5 dec; W.Ind. 216 and 387	Austl. won by 87 runs; Austl. won series 2–0
England/London (Lord's)	July 10–14	Eng. 593 for 8 dec; S.Af. 247 and 393 for 3 dec	Match drawn
England/Leeds	July 18–21	Eng. 203 and 327; S.Af. 522 and 9 for 0	S.Af. won by 10 wickets
England/Birmingham	July 30–Aug. 2	Eng. 231 and 363; S.Af. 314 and 283 for 5	S.Af. won by 5 wickets
England/London (The Oval)	Aug. 7–11	S.Af. 194 and 318; Eng. 316 and 198 for 4	Eng. won by 6 wickets; S.Af. won series 2–1
Sri Lanka/Colombo	July 23–26	SriL. 600 for 6 dec; India 223 and 138	SriL. won by an innings and 239 runs
Sri Lanka/Galle	July 31–Aug. 3	India 329 and 269; SriL. 292 and 136	India won by 170 runs
Sri Lanka/Colombo	Aug. 8–11	India 249 and 268; SriL. 396 and 123 for 2	SriL. won by 8 wickets; SriL. won series 2–1

Cricket World Cup

Year	Result			
1999	Australia	133 for 2	Pakistan	132
2003	Australia	359 for 2	India	234
2007	Australia	281 for 4	Sri Lanka	215 for 8

CURLING

World Curling Championship—Men

Year	Winner	Runner-up
2006	Scotland	Canada
2007	Canada	Germany
2008	**Canada**	**Scotland**

World Curling Championship—Women

Year	Winner	Runner-up
2006	Sweden	United States
2007	Canada	Denmark
2008	**Canada**	**China**

Canadian skip Jennifer Jones focuses on the sliding rock at the world curling championships in March. The women's team captured Canada's second straight title and 15th overall.

Andy Clark—Reuters/Landov

CYCLING

Cycling Champions, 2008

Event	Winner	Country
WORLD CHAMPIONS—TRACK		
Men		
Sprint	C. Hoy	Great Britain
Individual pursuit	B. Wiggins	Great Britain
Kilometre time trial	T. Mulder	Netherlands
Points	V. Kiryienka	Belarus
Team pursuit	E. Clancy, G. Thomas, P. Manning, B. Wiggins	Great Britain
Keirin	C. Hoy	Great Britain
Team sprint	G. Bauge, K. Sireau, A. Tournant	France
Madison	M. Cavendish, B. Wiggins	Great Britain
Scratch	A. Lisouski	Belarus
Omnium	H. Godfrey	New Zealand
Women		
Sprint	V. Pendleton	Great Britain
Individual pursuit	R. Romero	Great Britain
500-m time trial	L. Guerra Rodriguez	Cuba
Points	M. Vos	Netherlands
Team pursuit	W. Houvenaghel, R. Romero, J. Rowsell	Great Britain
Keirin	J. Reed	United States
Team sprint	V. Pendleton, S. Reade	Great Britain
Scratch	E. Van Dijk	Netherlands
WORLD CHAMPIONS—ROAD		
Men		
Individual road race	A. Ballan	Italy
Individual time trial	B. Grabsch	Germany
Women		
Individual road race	N. Cooke	Great Britain
Individual time trial	A. Neben	United States
WORLD CHAMPION—CYCLO-CROSS		
Men	L. Boom	Netherlands
Women	H. Kupfernagel	Germany

Event	Winner	Country
WORLD CHAMPIONS—MOUNTAIN BIKES		
Men		
Cross-country	C. Sauser	Switzerland
Downhill	G. Atherton	Great Britain
4-cross	R. Alvarez de Lara Lu	Spain
Women		
Cross-country	M. Fullana	Spain
Downhill	R. Atherton	Great Britain
4-cross	M. Buhl	United States
MAJOR ELITE ROAD-RACE WINNERS		
Tour de France	C. Sastre	Spain
Tour of Italy	A. Contador	Spain
Tour of Spain	A. Contador	Spain
Tour of Switzerland	R. Kreuziger	Czech Republic
Milan–San Remo	F. Cancellaro	Switzerland
Tour of Flanders	S. Devolder	Belgium
Paris–Roubaix	T. Boonen	Belgium
Amstel Gold	D. Cunego	Italy
Liège–Bastogne–Liège	A. Valverde	Spain
Vattenfall Cyclassics	R. McEwen	Australia
GP Ouest-France	P. Fédrigo	France
San Sebastian Classic	A. Valverde	Spain
Tour of Lombardy	D. Cunego	Italy
Paris–Nice	D. Rebellin	Italy
Ghent–Wevelgem	O. Freire	Spain
Flèche Wallonne	K. Kirchen	Luxembourg
Tour of Romandie	A. Kloden	Germany
Dauphiné Libéré	A. Valverde	Spain
Tirreno–Adriatico	F. Cancellaro	Switzerland

EQUESTRIAN SPORTS

The Kentucky Derby

Year	Horse	Jockey
2006	Barbaro	E. Prado
2007	Street Sense	C. Borel
2008	**Big Brown**	**K. Desormeaux**

The Preakness Stakes

Year	Horse	Jockey
2006	Bernardini	J. Castellano
2007	Curlin	R. Albarado
2008	**Big Brown**	**K. Desormeaux**

The Belmont Stakes

Year	Horse	Jockey
2006	Jazil	F. Jara
2007	Rags to Riches	J. Velazquez
2008	**Da' Tara**	**A. Garcia**

2,000 Guineas

Year	Horse	Jockey
2006	George Washington	K. Fallon
2007	Cockney Rebel	O. Peslier
2008	**Henrythenavigator**	**J. Murtagh**

The Derby

Year	Horse	Jockey
2006	Sir Percy	M. Dwyer
2007	Authorized	F. Dettori
2008	**New Approach**	**K. Manning**

The St. Leger

Year	Horse	Jockey
2006	Sixties Icon	F. Dettori
2007	Lucarno	J. Fortune
2008	**Conduit**	**F. Dettori**

Triple Crown Champions—U.S.

Year	Horse
1973	Secretariat
1977	Seattle Slew
1978	Affirmed

Triple Crown Champions—British

Year	Winner
1918	Gainsborough
1935	Bahram
1970	Nijinsky

Melbourne Cup

Year	Horse	Jockey
2006	Delta Blues	Y. Iwata
2007	Efficient	M. Rodd
2008	**Viewed**	**B. Shinn**

The Hambletonian Trot

Year	Horse	Driver
2006	Glidemaster	J. Campbell
2007	Donato Hanover	R. Pierce
2008	**Deweycheatumnhowe**	**R. Schnittker**

EQUESTRIAN SPORTS (continued)

Major Thoroughbred Race Winners, 2008

Race	Won by	Jockey
United States		
Acorn Stakes	Zaltig	J. Velazquez
Alabama Stakes	Proud Spell	G. Saez
Alcibiades Stakes	Dream Empress	R. Albarado
American Oaks Invitational	Pure Clan	J. Leparoux
Apple Blossom Handicap	Zenvatta	M. Smith
Arlington Million	Spirit One	I. Mendizabal
Ashland Stakes	Little Belle	R. Maragh
Beldame Stakes	Cocoa Beach	R. Dominguez
Belmont Stakes	Da' Tara	A. Garcia
Beverly D. Stakes	Mauralakana	K. Desormeaux
Blue Grass Stakes	Monba	E. Prado
Breeders' Cup Classic	Raven's Pass	F. Dettori
Breeders' Cup Dirt Mile	Albertus Maximus	G. Gomez
Breeders' Cup Filly and Mare Sprint	Ventura	G. Gomez
Breeders' Cup Filly and Mare Turf	Forever Together	J. Leparoux
Breeders' Cup Juvenile	Midshipman	G. Gomez
Breeders' Cup Juvenile Fillies	Stardom Bound	M. Smith
Breeders' Cup Juvenile Fillies Turf	Maram	J. Lezcano
Breeders' Cup Juvenile Turf	Donativum	F. Dettori
Breeders' Cup Ladies' Classic	Zenvatta	M. Smith
Breeders' Cup Marathon	Muhannak	P. Smullen
Breeders' Cup Mile	Goldikova	O. Peslier
Breeders' Cup Sprint	Midnight Lute	G. Gomez
Breeders' Cup Turf	Conduit	R. Moore
Breeders' Cup Turf Sprint	Desert Code	R. Migliore
Breeders' Futurity	Square Eddie	R. Bejarano
Carter Handicap	Bustin Stones	E. Prado
Champagne Stakes	Vineyard Haven	E. Prado
Cigar Mile Handicap	Tale of Ekati	E. Prado
Citation Handicap	Hyperbaric	T. Baze
Coaching Club American Oaks	Music Note	J. Castellano
Donn Handicap	Spring At Last	E. Coa
Eddie Read Handicap	Monzante	R. Bejarano
Florida Derby	Big Brown	K. Desormeaux
Flower Bowl Invitational	Dynaforce	A. Garcia
Haskell Invitational	Big Brown	K. Desormeaux
Hollywood Derby	Court Vision	R. Dominguez
Hollywood Gold Cup	Mast Track	T. Baze
Hopeful Stakes	Vineyard Haven	A. Garcia
Jockey Club Gold Cup	Curlin	R. Albarado
Joe Hirsch Turf Classic	Grand Couturier	A. Garcia
Kentucky Derby	Big Brown	K. Desormeaux
Kentucky Oaks	Proud Spell	G. Saez
Manhattan Handicap	Dancing Forever	R. Douglas
Man o' War Stakes	Red Rocks	J. Castellano
Matriarch Stakes	Cocoa Beach	R. Dominguez
Metropolitan Handicap	Divine Park	A. Garcia
Mother Goose Stakes	Music Note	J. Castellano
Pacific Classic	Go Between	G. Gomez
Preakness Stakes	Big Brown	K. Desormeaux
Queen Elizabeth II Challenge Cup	Alwajeeha	J. Velazquez
Ruffian Handicap	Tough Tiz's Sis	E. Prado
Santa Anita Derby	Colonel John	C. Nakatani
Santa Anita Handicap	Heatseeker	R. Bejarano
Secretariat Stakes	Winchester	R. Douglas
Spinster Stakes	Carriage Trail	K. Desormeaux
Stephen Foster Handicap	Curlin	R. Albarado
Suburban Handicap	Frost Giant	R. Rodriguez
Swaps Breeders' Cup Stakes	Tres Borrachos	T. Baze
Sword Dancer	Grand Couturier	A. Garcia
Travers Stakes	Colonel John	G. Gomez
Turf Mile Stakes	Thorn Song	R. Albarado
United Nations Stakes	Precious Passion	E. Castro
Vosburgh Stakes	Black Seventeen	C. Potts
Whitney Handicap	Commentator	J. Velazquez
Wood Memorial	Tale of Ekati	E. Prado
Woodward Stakes	Curlin	R. Albarado
Yellow Ribbon Stakes	Wait A While	J. Velazquez

Race	Won by	Jockey
England		
Two Thousand Guineas	Henrythenavigator	J. Murtagh
One Thousand Guineas	Natagora	C. Lemaire
Epsom Oaks	Look Here	S. Sanders
Coronation Cup	Soldier of Fortune	J. Murtagh
Epsom Derby	New Approach	K. Manning
Ascot Gold Cup	Yeats	J. Murtagh
Darley July Cup	Marchand d'Or	D. Bonilla
King George VI and Queen Elizabeth Diamond Stakes	Duke of Marmalade	J. Murtagh
Sussex Stakes	Henrythenavigator	J. Murtagh
Juddmonte International Stakes	Duke of Marmalade	J. Murtagh
St. Leger	Conduit	F. Dettori
Queen Elizabeth II Stakes	Raven's Pass	J. Fortune
Champion Stakes	New Approach	K. Manning
France		
Poule d'Essai des Poulains	Falco	O. Peslier
Poule d'Essai des Pouliches	Zarkava	C. Soumillon
Prix du Jockey-Club (French Derby)	Vision d'Etat	I. Mendizabal
Prix de Diane (French Oaks)	Zarkava	C. Soumillon
Grand Prix de Saint-Cloud	Youmzain	R. Hughes
Grand Prix de Paris	Montmartre	C. Soumillon
Prix Jacques Le Marois	Tamayuz	D. Bonilla
Prix Vermeille	Zarkava	C. Soumillon
Prix de l'Arc de Triomphe	Zarkava	C. Soumillon
Prix Jean-Luc Lagardère–Grand Criterium	Naaqoos	D. Bonilla
Prix Royal-Oak	Yeats	J. Murtagh
Ireland		
Irish Two Thousand Guineas	Henrythenavigator	J. Murtagh
Irish One Thousand Guineas	Halfway to Heaven	S. Hellernan
Irish Derby	Frozen Fire	S. Hellernan
Irish Oaks	Moonstone	J. Murtagh
Irish Champion Stakes	New Approach	K. Manning
Irish St. Leger	Septimus	S. Hellernan
Italy		
Derby Italiano	Cima de Triomphe	S. Mulas
Gran Premio del Jockey Club	*canceled*	
Germany		
Deutsches Derby	Kamsin	A. Starke
Grosser Preis von Baden	Kamsin	J. Victoire
Preis von Europa	Baila Me	D. Boeuf
Australia		
Caulfield Cup	All The Good	K. McEvoy
Cox Plate	Maldivian	M. Rodd
Melbourne Cup	Viewed	B. Shinn
United Arab Emirates		
Dubai World Cup	Curlin	R. Albarado
Dubai Sheema Classic	Sun Classique	K. Shea
Dubai Duty Free	Jay Peg	A. Marcus
Asia		
Japan Cup	Screen Hero	M. Demuro
Hong Kong Cup	Eagle Mountain	K. Shea
Singapore International Cup	Jay Peg	A. Marcus
Canada		
Queen's Plate Stakes	Not Bourbon	J. Jones
Prince of Wales Stakes	Harlem Rocker	E. Coa
Breeders' Stakes	Marlang	R. Dos Ramos
Woodbine Mile	Raby's Attorney	S. Callaghan
Canadian International Stakes	Marsh Side	J. Castellano

FENCING

World Fencing Championships—Men

Year	Individual			Team		
	Foil	Épée	Sabre	Foil	Épée	Sabre
2006	P. Joppich (Ger.)	Wang Lei (China)	S. Pozdnyakov (Russia)	France	France	France
2007	P. Joppich (Ger.)	K. Kulcsar (Hung.)	S. Pozdnyakov (Russia)	France	France	Hungary
2008	**B. Kleibrink (Ger.)**	**M. Tagliariol (Italy)**	**Zhong Man (China)**	**Italy**	**France**	**France**

*Olympic champions, except for team foil.

World Fencing Championships—Women

Year	Individual			Team		
	Foil	Épée	Sabre	Foil	Épée	Sabre
2006	M. Granbassi (Italy)	T. Nagy (Hung.)	R. Ward (U.S.)	Russia	China	France
2007	V. Vezzali (Italy)	B. Heidemann (Ger.)	Ye. Netchaveva (Russia)	Poland	France	France
2008	**V. Vezzali (Italy)**	**B. Heidemann (Ger.)**	**M. Zagunis (U.S.)**	**Russia**	**France**	**Ukraine**

*Olympic champions, except for team foil.

Chen Xiaowei—Xinhua/Landov

Italian gold medalist Valentina Vezzali (top) demonstrates her expertise in the individual foil at the Beijing Olympics.

FIELD HOCKEY

World Cup Field Hockey Championship—Men

Year	Winner	Runner-up
1998	Netherlands	Spain
2002	Germany	Australia
2006	Germany	Australia

World Cup Field Hockey Championship—Women

Year	Winner	Runner-up
1998	Australia	Netherlands
2002	Argentina	Netherlands
2006	Netherlands	Australia

FOOTBALL

FIFA World Cup—Men

Year	Result			
1998	France	3	Brazil	0
2002	Brazil	2	Germany	0
2006	Italy	1	France	1

*Won on penalty kicks.

FIFA World Cup—Women

Year	Result			
1999	United States*	0	China	0
2003	Germany	2	Sweden	1
2007	Germany	2	Brazil	0

*Won on penalty kicks.

Association Football National Champions, 2007–08

Nation	League Champions	Cup Winners	Nation	League Champions	Cup Winners
Argentina	Lanús (Opening)	River Plate (Closing)	Mexico	Atlante (Opening)	Santos Laguna (Closing)
Australia	Newcastle United Jets		Morocco	FAR Rabat	FAR Rabat
Austria	Rapid Vienna	*not held*	Nigeria	Kano Pillars	Ocean Boys
Belgium	Standard Liege	Anderlecht	Northern Ireland	Linfield	Linfield
Bolivia	Universitario (Opening)	Aurora (Closing)	Norway	Stabæk	Vålerenga
Brazil	Sao Paulo	Sport Recife	Paraguay	Libertad (Opening)	Libertad (Closing)
Bulgaria	CSKA Sofia	Litex	Peru	Universitario (Opening)	San Martín (Closing)
Cameroon	Coton Sport	Coton Sport	Poland	Wisla	Legia
Chile	Everton (Opening)	Colo Colo (Closing)	Portugal	Porto	Sporting Lisbon
China	Shandong Luneng	*not held*	Romania	Cluj	Cluj
Colombia	Boyaca Chico (Opening)	América Cali (Closing)	Russia	Rubin Kazan	CSKA Moscow
Costa Rica	Saprissa		Saudi Arabia	Al-Hilal	Al-Shabab
Croatia	Dinamo Zagreb	Dinamo Zagreb	Scotland	Celtic	Rangers
Czech Republic	Slavia Prague	Sparta Prague	Senegal	AS Douanes	Jaraaf
Denmark	Aalborg	Brondby	Serbia	Partizan Belgrade	Partizan Belgrade
Ecuador	Deportivo Quito		Slovakia	Artmedia	Artmedia
England	Manchester United	Portsmouth	Slovenia	Domzale	Interblock
Finland	Inter Turku	HJK Helsinki	South Africa	SuperSport United	Mamelodi Sundowns
France	Lyon	Lyon	South Korea	Suwon Bluewings	Pohang Steelers
Georgia	Dinamo Tbilisi	Zestafoni	Spain	Real Madrid	Valencia
Germany	Bayern Munich	Bayern Munich	Sweden	Kalmar	IFK Gothenburg
Greece	Olympiakos	Olympiakos	Switzerland	Basel	Basel
Holland	PSV Eindhoven	Feyenoord	Tunisia	Club Africain	Espérance
Hungary	MTK	Debrecen	Turkey	Galatasaray	Kayseri
Ireland	Bohemians	Bohemians	Ukraine	Shakhtar Donetsk	Shakhtar Donetsk
Israel	Beitar Jerusalem	Beitar Jerusalem	USA (MLS)	Columbus Crew	
Italy	Internazionale	Roma	Uruguay	Defensor	
Japan	Kashima Antlers	Gamba Osaka	Venezuela	Deportivo Táchira	Aragua

FOOTBALL (continued)

UEFA Champions League

Season	Result			
2005–06	FC Barcelona (Spain)	2	Arsenal FC (Eng.)	1
2006–07	AC Milan (Italy)	2	Liverpool FC (Eng.)	1
2007–08	**Manchester United (Eng.)***	**1**	**Chelsea (Eng.)**	**1**

*Won on penalty kicks.

UEFA Cup

Season	Result			
2005–06	Seville (Spain)	4	Middlesbrough (Eng.)	0
2006–07	Seville (Spain)*	2	Espanyol (Spain)	2
2007–08	**FC Zenit St. Petersburg (Russia)**	**2**	**Rangers FC (Scot.)**	**0**

*Won on penalty kicks.

Libertadores de América Cup

Year	Winner (country)	Runner-up (country)	Scores
2006	Internacional (Braz.)	São Paulo (Braz.)	2–1, 2–2
2007	Boca Juniors (Arg.)	Grêmio (Braz.)	3–0, 2–0
2008	**Liga de Quito (Ecua.)**	**Fluminense Rio de Janeiro (Braz.)**	**4–2, 5–5**

Copa América

Year	Winner	Runner-up	Score
2001	Colombia	Mexico	1–0
2004	Brazil	Argentina	2–2, 4–2*
2007	Brazil	Argentina	3–0

*Winner determined in penalty shoot-out.

MLS Cup

Year	Result			
2006	Houston Dynamo*	1	New England Revolution	1
2007	Houston Dynamo	2	New England Revolution	1
2008	**Columbus Crew**	**3**	**New York Red Bulls**	**1**

*Won on penalty kicks.

U.S. College Football National Championship*

Season	Result			
2006–07	Florida	41	Ohio State	14
2007–08	Louisiana State	38	Ohio State	24
2008–09	**Florida**	**24**	**Oklahoma**	**14**

*BCS championship game.

Rose Bowl

Season	Result			
2006–07	Southern California	32	Michigan	18
2007–08	Southern California	49	Illinois	17
2008–09	**Southern California**	**38**	**Penn State**	**24**

Orange Bowl

Season	Result			
2006–07	Louisville	24	Wake Forest	13
2007–08	Kansas	24	Virginia Tech	21
2008–09	**Virginia Tech**	**20**	**Cincinnati**	**7**

Fiesta Bowl

Season	Result			
2006–07	Boise State	43	Oklahoma	42
2007–08	West Virginia	48	Oklahoma	28
2008–09	**Texas**	**24**	**Ohio State**	**21**

Sugar Bowl

Season	Result			
2006–07	Louisiana State	41	Notre Dame	14
2007–08	Georgia	41	Hawaii	10
2008–09	**Utah**	**31**	**Alabama**	**17**

NFL Final Standings, 2008–09

AMERICAN CONFERENCE

East Division	Won	Lost	Tied
*Miami	11	5	0
New England	11	5	0
New York Jets	9	7	0
Buffalo	7	9	0

North Division	Won	Lost	Tied
*Pittsburgh	12	4	0
*Baltimore	11	5	0
Cincinnati	4	11	1
Cleveland	4	12	0

South Division	Won	Lost	Tied
*Tennessee	13	3	0
Indianapolis	12	4	0
Houston	8	8	0
Jacksonville	5	11	0

West Division	Won	Lost	Tied
*San Diego	8	8	0
Denver	8	8	0
Oakland	5	11	0
Kansas City	2	14	0

NATIONAL CONFERENCE

East Division	Won	Lost	Tied
*New York Giants	12	4	0
*Philadelphia	9	6	1
Dallas	9	7	0
Washington	8	8	0

North Division	Won	Lost	Tied
*Minnesota	10	6	0
Chicago	9	7	0
Green Bay	6	10	0
Detroit	0	16	0

South Division	Won	Lost	Tied
*Carolina	12	4	0
*Atlanta	11	5	0
Tampa Bay	9	7	0
New Orleans	8	8	0

West Division	Won	Lost	Tied
Arizona	9	7	0
San Francisco	7	9	0
Seattle	4	12	0
St. Louis	2	14	0

*Qualified for play-offs.

Super Bowl

	Season	Result			
XL	2005–06	Pittsburgh Steelers (AFC)	21	Seattle Seahawks (NFC)	10
XLI	2006–07	Indianapolis Colts (AFC)	29	Chicago Bears (NFC)	17
XLII	**2007–08**	**New York Giants (NFC)**	**17**	**New England Patriots (AFC)**	**14**

CFL Grey Cup*

Year	Result			
2006	British Columbia Lions (WD)	25	Montreal Alouettes (ED)	14
2007	Saskatchewan Roughriders (WD)	23	Winnipeg Blue Bombers (ED)	19
2008	**Calgary Stampeders (WD)**	**22**	**Montreal Alouettes (ED)**	**14**

*ED—Eastern Division; WD—Western Division

FOOTBALL (continued)

AFL Grand Final

Year	Result			
2006	West Coast Eagles	12.13 (85)	Sydney Swans	12.12 (84)
2007	Geelong Cats	24.19 (163)	Port Adelaide Power	6.8 (44)
2008	**Hawthorn Hawks**	**18.7 (115)**	**Geelong Cats**	**11.23 (89)**

Rugby Union World Cup

Year	Result			
1999	Australia	35	France	12
2003	England	20	Australia	17
2007	South Africa	15	England	6

Rugby League World Cup

Year	Result			
1995	Australia	16	England	8
2000	Australia	40	New Zealand	12
2008	**New Zealand**	**34**	**Australia**	**20**

Six Nations Championship

Year	Result
2006	France
2007	France
2008	**Wales***

*Grand Slam winner.

Tertius Pickard/AP

New Zealand's Sam Perrett (carrying the ball) is tackled in the Rugby League World Cup final on November 22. New Zealand scored a stunning 34–20 upset over Australia.

GOLF

Masters Tournament

Year	Winner
2006	P. Mickelson (U.S.)
2007	Z. Johnson (U.S.)
2008	**T. Immelman (S.Af.)**

United States Open Championship (men)

Year	Winner
2006	G. Ogilvy (Austl.)
2007	A. Cabrera (Arg.)
2008	**T. Woods (U.S.)**

British Open Tournament (men)

Year	Winner
2006	T. Woods (U.S.)
2007	P. Harrington (Ire.)
2008	**P. Harrington (Ire.)**

U.S. Professional Golfers' Association (PGA) Championship

Year	Winner
2006	T. Woods (U.S.)
2007	T. Woods (U.S.)
2008	**P. Harrington (Ire.)**

United States Amateur Championship (men)

Year	Winner
2006	R. Ramsay (Scot.)
2007	C. Knost (U.S.)
2008	**D. Lee (N.Z.)**

British Amateur Championship (men)

Year	Winner
2006	J. Guerrier (Fr.)
2007	D. Weaver (U.S.)
2008	**R. Saxton (Neth.)**

United States Women's Open Championship

Year	Winner
2006	A. Sorenstam (Swed.)
2007	C. Kerr (U.S.)
2008	**Park Inbee (S.Kor.)**

Women's British Open Championship

Year	Winner
2006	S. Steinhauer (U.S.)
2007	L. Ochoa (Mex.)
2008	**Shin Ji Yai (S.Kor.)**

Ladies Professional Golf Association (LPGA) Championship

Year	Winner
2006	Pak Se Ri (S.Kor.)
2007	S. Pettersen (Nor.)
2008	**Y. Tseng (Taiwan)**

United States Women's Amateur Championship

Year	Winner
2006	K. Kim (U.S.)
2007	M.J. Uribe (Colom.)
2008	**A. Blumenherst (U.S.)**

Ladies' British Amateur Championship

Year	Winner
2006	B. Mozo (Spain)
2007	C. Ciganda (Spain)
2008	**A. Nordqvist (Swed.)**

World Cup (men; professional)

Year	Winner
2006	Germany (B. Langer and M. Siem)
2007	Scotland (C. Montgomerie and M. Warren)
2008	**Sweden (R. Karlsson and H. Stenson)**

Solheim Cup (women; professional)

Year	Result
2003	Europe 17½, United States 10½
2005	United States 15½, Europe 12½
2007	United States 16, Europe 12

Ryder Cup (men; professional)

Year	Result
2004	Europe 18½, United States 9½
2006	Europe 18½, United States 9½
2008	**United States 16½, Europe 11½**

GYMNASTICS

World Gymnastics Championships—Men

Year	All-around team	All-around individual	Horizontal bar	Parallel bars
2006	China	Yang Wei (China)	P. Rizzo (Austl.)	Yang Wei (China)
2007	China	Yang Wei (China)	F. Hambuchen (Ger.)	M. Petkovsek (Slvn.)* Kim Dae Eun (S.Kor.)*
2008†	**China**	**Yang Wei (China)**	**Zou Kai (China)**	**Li Xiaopeng (China)**

Year	Pommel horse	Rings	Vault	Floor exercise
2006	Xiao Qin (China)	Chen Yibing (China)	M. Dragulescu (Rom.)	M. Dragulescu (Rom.)
2007	Xiao Qin (China)	Chen Yibing (China)	L. Blanik (Pol.)	D. Hypolito (Braz.)
2008†	**Xiao Qin (China)**	**Chen Yibing (China)**	**L. Blanik (Pol.)**	**Zou Kai (China)**

*Tied. †Olympic champions.

World Gymnastics Championships—Women

Year	All-around team	All-around individual	Balance beam
2006	China	V. Ferrari (Italy)	I. Krasnyanska (Ukr.)
2007	United States	S. Johnson (U.S.)	N. Liukin (U.S.)
2008*	**China**	**N. Liukin (U.S.)**	**S. Johnson (U.S.)**

Year	Uneven parallel bars	Vault	Floor exercise
2006	E. Tweddle (U.K.)	Cheng Fei (China)	Cheng Fei (China)
2007	K. Semenova (Russia)	Cheng Fei (China)	S. Johnson (U.S.)
2008*	**He Kexin (China)**	**Hong Un Jong (N.Kor.)**	**S. Izbasa (Rom.)**

*Olympic champions.

Rob Carr/AP

Two-time world champion Chen Yibing of China performs on the rings en route to the Olympic gold medal.

ICE HOCKEY

NHL Final Standings, 2007–08

EASTERN CONFERENCE

Northeast Division	Won	Lost	OTL*
†Montreal	47	25	10
†Ottawa	43	31	8
†Boston	41	29	12
Buffalo	39	31	12
Toronto	36	35	11

Atlantic Division	Won	Lost	OTL*
†Pittsburgh	47	27	8
†New Jersey	46	29	7
†N.Y. Rangers	42	27	13
†Philadelphia	42	29	11
N.Y. Islanders	35	38	9

Southeast Division	Won	Lost	OTL*
†Washington	43	31	8
Carolina	43	33	6
Florida	38	35	9
Atlanta	34	40	8
Tampa Bay	31	42	9

WESTERN CONFERENCE

Central Division	Won	Lost	OTL*
†Detroit	54	21	7
†Nashville	41	32	9
Chicago	40	34	8
Columbus	34	36	12
St. Louis	33	36	13

Northwest Division	Won	Lost	OTL*
†Minnesota	44	28	10
†Colorado	44	31	7
†Calgary	42	30	10
Edmonton	41	35	6
Vancouver	39	33	10

Pacific Division	Won	Lost	OTL*
†San Jose	49	23	10
†Anaheim	47	27	8
†Dallas	45	30	7
Phoenix	38	37	7
Los Angeles	32	43	7

*Overtime losses, worth one point. †Qualified for play-offs.

The Stanley Cup

Season	Winner	Runner-up	Results
2005–06	Carolina Hurricanes	Edmonton Oilers	4–3
2006–07	Anaheim Ducks	Ottawa Senators	4–1
2007–08	**Detroit Red Wings**	**Pittsburgh Penguins**	**4–2**

World Ice Hockey Championship—Men

Year	Winner
2006	Sweden
2007	Canada
2008	**Russia**

World Ice Hockey Championship—Women

Year	Winner
2006*	Canada
2007	Canada
2008	**United States**

*Olympic champion.

ICE SKATING

World Figure Skating Champions—Men

Year	Winner
2006	S. Lambiel (Switz.)
2007	B. Joubert (Fr.)
2008	**J. Buttle (Can.)**

World Figure Skating Champions—Women

Year	Winner
2006	K. Meissner (U.S.)
2007	M. Ando (Japan)
2008	**M. Asada (Japan)**

World Figure Skating Champions—Pairs

Year	Winners
2006	Pang Qing, Tong Jian (China)
2007	Shen Xue, Zhao Hongbo (China)
2008	**A. Savchenko, R. Szolkowy (Ger.)**

World Ice Dancing Champions

Year	Winners
2006	A. Denkova, M. Staviski (Bulg.)
2007	A. Denkova, M. Staviski (Bulg.)
2008	**I. Delobel, O. Schoenfelder (Fr.)**

ICE SKATING (continued)

World Ice Speed-Skating Records Set in 2008 on Major Tracks*

Event	Name	Country	Result
MEN			
2 - 500 m	Jeremy Wotherspoon	Canada	68.31 sec
1,500 m	Shani Davis	Canada	1 min 42.01 sec
WOMEN			
big combo†	Mari Hemmer	Norway	168,287 points

*May include records awaiting ISU ratification at year's end.
†Not an officially ratified event; best performance on record.

World Ice Speed-Skating Records Set in 2008 on Short Tracks*

Event	Name	Country	Time
MEN			
500 m	Sung Si Bak	South Korea	41.051 sec
5,000-m relay	South Korea National Team (Kwak Yoon Gy, Lee Ho Suk, Lee Jung Su, Sung Si Bak)	South Korea	6 min 38.486 sec
WOMEN			
500 m	Wang Meng	China	43.216 sec
	Wang Meng	China	43.125 sec
	Wang Meng	China	42.609 sec
1,000 m	Wang Meng	China	1 min 29.495 sec
1,500 m	Zhou Yang	China	2 min 16.729 sec
3,000 m	Jung Eun Ju	South Korea	4 min 46.983 sec
3,000-m relay	South Korea National Team (Jung Eun Ju, Park Seung Hi, Shin Sae Bom, Yang Shin Young)	South Korea	4 min 09.938 sec
	China National Team (Liu Qiuhong, Wang Meng, Zhang Hui, Zhou Yang)	China	4 min 07.179 sec

*May include records awaiting ISU ratification at year's end

Chung Sung-Jun/Getty Images

Wang Meng of China leads the pack in a 1,000-m race at the world short-track speed-skating championships. Wang won the women's overall title and set four individual world records in 2008.

World All-Around Speed-Skating Champions

Year	Men	Women
2006	S. Davis (U.S.)	C. Klassen (Can.)
2007	S. Kramer (Neth.)	I. Wüst (Neth.)
2008	**S. Kramer (Neth.)**	**P. van Deutekom (Neth.)**

World Short-Track Speed-Skating Championships—Overall Winners

Year	Men	Women
2006	Ahn Hyun Soo (S.Kor.)	Jin Sun Yu (S.Kor.)
2007	Ahn Hyun Soo (S.Kor.)	Jin Sun Yu (S.Kor.)
2008	**A.A. Ohno (U.S.)**	**Wang Meng (China)**

World Speed-Skating Sprint Champions

Year	Men	Women
2006	J. Cheek (U.S.)	S. Zhurova (Russia)
2007	Lee Kyou Hyuk (S.Kor.)	A. Friesinger (Ger.)
2008	**Lee Kyou Hyuk (S.Kor.)**	**J. Wolf (Ger.)**

JUDO

World Judo Championships—Men

Year	Open weights	60 kg	66 kg	73 kg
2003	K. Suzuki (Japan)	Choi Min Ho (S.Kor.)	A. Miresmaeili (Iran)	Lee Won Hee (S.Kor.)
2005	D. Van der Geest (Neth.)	C. Fallon (Gt.Brit.)	J. Derly (Braz.)	A. Braun (Hung.)
2007	Y. Muneta (Japan)	R. Houkes (Neth.)	J. Derly (Braz.)	Wang Ki Chun (S.Kor.)
Year	**81 kg**	**90 kg**	**100 kg**	**+100 kg**
2003	F. Wanner (Ger.)	Hwang Hee Tae (S.Kor.)	K. Inoue (Japan)	Y. Muneta (Japan)
2005	G. Elmont (Neth.)	H. Izumi (Japan)	K. Suzuki (Japan)	A. Mikhaylin (Russia)
2007	T. Camilo (Braz.)	I. Tsirekidze (Geo.)	L. Corrêa (Braz.)	T. Riner (France)

World Judo Championships—Women

Year	Open weights	48 kg	52 kg	57 kg
2003	Tong Wen (China)	R. Tamura (Japan)	A. Savon (Cuba)	Kye Sun Hui (N.Kor.)
2005	M. Shintani (Japan)	Y. Bermov (Cuba)	Li Ying (China)	Kye Sun Hui (N.Kor.)
2007	M. Tsukada (Japan)	R. Tamura Tani (Japan)	Shi Junjie (China)	Kye Sun Hui (N.Kor.)
Year	**63 kg**	**70 kg**	**78 kg**	**+78 kg**
2003	D. Krukower (Arg.)	M. Ueno (Japan)	N. Anno (Japan)	Sun Fuming (China)
2005	I. Decosse (Fr.)	E. Bosch (Neth.)	Y. Lahorde (Cuba)	Tong Wen (China)
2007	D. Gonzalez (Cuba)	G. Emane (Fr.)	Y. Lahorde (Cuba)	Tong Wen (China)

RODEO

Men's World All-Around Rodeo Championship

Year	Winner
2006	T. Brazile
2007	T. Brazile
2008	**T. Brazile**

ROWING

World Rowing Championships—Men

Year	Single sculls	Min:sec	Double sculls	Min:sec	Quadruple sculls	Min:sec	Coxed pairs	Min:sec
2006	M. Drysdale (N.Z.)	6:35.40	J.-B. Macquet, A. Hardy (Fr.)	6:07.60	Poland	5:38.99	M. Marjanovic, J. Popovic (Serbia)	6:51.27
2007	M. Drysdale (N.Z.)	6:45.67	L. Spik, I. Cop (Slvn.)	6:16.65	Poland	5:49.42	D. Paczes, I. Kardas (Pol.)	7:00.10
2008*	**O. Tufte (Nor.)**	**6:59.83**	**D. Crawshay, S. Brennan (Austl.)**	**6:27.77**	**Poland**	**5:41.33**	**G. Bergen, J. Dunaway (Can.)**	**7:06.69**

Year	Coxless pairs	Min:sec	Coxed fours	Min:sec	Coxless fours	Min:sec	Eights	Min:sec
2006	D. Ginn, D. Free (Austl.)	6:18.00	Germany	6:05.77	Great Britain	5:43.75	Germany	5:21.85
2007	D. Ginn, D. Free (Austl.)	6:24.89	United States	6:10.36	New Zealand	5:54.24	Canada	5:34.92
2008*	**D. Ginn, D. Free (Austl.)**	**6:37.44**			**Great Britain**	**6:06.57**	**Canada**	**5:23.89**

*Olympic champions, except coxed pairs.

World Rowing Championships—Women

Year	Single sculls	Min:sec	Coxless pairs	Min:sec
2006	Ye. Karsten-Khodotovich (Bela.)	7:11.02	D. Marquardt, J. Rumball (Can.)	6:54.68
2007	Ye. Karsten-Khodotovich (Bela.)	7:26.52	Yu. Bichyk, N. Helakh (Bela.)	7:06.56
2008*	**R. Neykova (Bulg.)**	**7:22.34**	**G. Andrunache, V. Susanu (Rom.)**	**7:20.60**

Year	Double sculls	Min:sec	Coxless fours	Min:sec
2006	L. Kell, B. Pratley (Austl.)	6:47.67	Australia	6:25.35
2007	Li Qin, Tian Liang (China)	6:54.38	United States	6:37.94
2008*	**C. Evers-Swindell, G. Evers-Swindell (N.Z.)**	**7:07.32**	**Belarus**	**6:39.89**

Year	Quadruple sculls	Min:sec	Eights	Min:sec
2006	Great Britain†	6:12.50	United States	5:55.50
2007	Great Britain	6:30.81	United States	6:17.20
2008*	**China**	**6:16.06**	**United States**	**6:05.34**

*Olympic champions, except coxless fours. †Original winner disqualified after one rower failed drug test

The Boat Race*

Year	Winner	Winner's time (min:sec)	Margin of victory
2006	Oxford	18:26	5 lengths
2007	Cambridge	17:49	1¼ lengths
2008†	**Oxford**	**20:53**	**6 lengths**

*Annual race between the Universities of Cambridge and Oxford. †Historic record: Cambridge 79, Oxford 74, 1 draw.

SAILING (YACHTING)

America's Cup

Year	Winning yacht	Owner	Skipper	Losing yacht	Owner
2000	*Black Magic* (N.Z.)	Team New Zealand	R. Coutts	*Luna Rossa* (Italy)	Prada Challenge
2003	*Alinghi* (Switz.)	Alinghi Swiss Challenge	R. Coutts	*New Zealand* (N.Z.)	Team New Zealand
2007	*Alinghi* (Switz.)	Alinghi	B. Butterworth	*New Zealand* (N.Z.)	Team New Zealand

World Class Boat Champions, 2008

Class	Winner	Country
Etchells 22	B. Hardesty	United States
Finn	B. Ainslie	Great Britain
J/24	A. Casale	Italy
Laser	P. Goodison	Great Britain
Laser Women	A. Tunnicliffe	United States
RS:X (men's boards)	T. Ashley	New Zealand
RS:X (women's boards)	Yin Jian	China
470 (men's)	N. Wilmot/M. Page	Australia
470 (women's)	E. Rechichi/T. Parkinson	Australia
49er	J. Warrer/M. Ibsen	Denmark
2.4 metre	P. Tingley	Canada
Moth	J. Harris	Australia
Optimist	R. Rios	Puerto Rico
Star	M. Kusznierewicz/ D. Zycki	Poland
Tornado	F. Echavarri/A. Paz	Spain
Yngling (women's)	S. Ayton/S. Webb/ P. Wilson	Great Britain
Farr 40	V. Onorato	Italy
Transpac 52 (TP52)	Quantum Racing (T. Hutchinson)	United States

Admiral's Cup

Year	Winning team
2003	Australia
2005	*canceled*
2007	*canceled*

Transpacific Race

Year	Winning yacht	Owner
2003	*Alta Vita*	B. Turpin
2005	*Rosebud*	R. Sturgeon
2007	*Reinrag2*	T. Garnier

Bermuda Race*

Year	Winning yacht	Owner
2004	*Alliance*	D. Porco
2006	*Sinn Fein* *Lively Lady III‡*	P. Rebovich W. Hubbard III
2008	***Sinn Fein***	**P. Rebovich**

*St. David's Lighthouse Trophy winner.
†Winner under Offshore Rating Rule (ORR) scoring
‡Winner under IRC scoring.

SKIING

World Alpine Skiing Championships—Slalom

Year	Men's slalom	Men's giant slalom	Men's supergiant slalom	Women's slalom	Women's giant slalom	Women's supergiant slalom	Team
2005	B. Raich (Austria)	H. Maier (Austria)	B. Miller (U.S.)	J. Kostelic (Cro.)	A. Parson (Swed.)	A. Parson (Swed.)	Germany
2006	B. Raich (Austria)	B. Raich (Austria)	K.A. Aamodt (Nor.)	A. Parson (Swed.)	J. Mancuso (U.S.)	M. Dorfmeister (Austria)	
2007	M. Matt (Austria)	A. Svindal (Nor.)	P. Staudacher (Italy)	S. Zahrobska (Cz.Rep.)	N. Hosp (Austria)	A. Pärson (Swed.)	Austria

*Olympic champions.

World Alpine Skiing Championships—Downhill

Year	Men	Women
2005	B. Miller (U.S.)	J. Kostelic (Cro.)
2006*	A. Deneriaz (Fr.)	M. Dorfmeister (Austria)
2007	A. Svindal (Nor.)	A. Parson (Swed.)

*Olympic champions.

World Alpine Skiing Championships—Combined

Year	Men	Women
2005	B. Raich (Austria)	J. Kostelic (Cro.)
2006*	T. Ligety (U.S.)	J. Kostelic (Cro.)
2007	D. Albrecht (Switz.)	A. Parson (Swed.)

*Olympic champions.

World Nordic Skiing Championships—Men

Year	Sprint	Team sprint	Double pursuit	15-km	30-km	50-km	Relay
2005	V. Rochev (Russia)	Norway	V. Vittoz (Fr.)	P. Piller Cottrer (Italy)		F. Estil (Nor.)	Norway
2006*	B. Lind (Swed.)	Sweden		A. Veerpalu (Est.)	Ye. Dementyev (Russia)	G. Di Centa (Italy)	Italy
2007	J.A. Svartedal (Nor.)	Italy	A. Teichmann (Ger.)	L. Berger (Nor.)		O.-B. Hjelmeset (Nor.)	Norway

*Olympic champions.

World Nordic Skiing Championships—Women

Year	Sprint	Team sprint	Double pursuit	10-km	15-km	30-km	Relay
2005	E. Ohrstig (Swed.)	Norway	Yu. Chepalova (Russia)	K. Neumannova (Cz.Rep.)		M. Bjørgen (Nor.)	Norway
2006*	C. Crawford (Can.)	Sweden		K. Smigun (Est.)	K. Smigun (Est.)	K. Neumannova (Cz.Rep.)	Russia
2007	A. Jacobsen (Nor.)	Finland	O. Savvalova (Russia)	K. Neumannova (Cz.Rep.)		V. Kuitunen (Fin.)	Finland

*Olympic champions.

World Nordic Skiing Championships—Ski Jump

Year	Normal hill (90 m)*	Large hill (120 m)†	Team jump (normal hill)	Team jump (large hill)	Nordic combined (7.5-km)	Nordic combined (15-km)	Nordic combined Team
2005	R. Benkovic (Slvn.)	J. Ahonen (Fin.)	Austria	Austria	R. Ackermann (Ger.)	R. Ackermann (Ger.)	Norway
2006‡	L. Bystol (Nor.)	T. Morgenstern (Austria)		Austria	F. Gottwald (Austria)	G. Hettich (Ger.)	Austria
2007	A. Malysz (Pol.)	S. Ammann (Switz.)		Austria	H. Manninen (Fin.)	R. Ackermann (Ger.)	Finland

*95-m hill in 2006; 100-m hill in 2007. †125-m hill in 2006; 134-m hill in 2007. ‡Olympic champions.

Alpine World Cup

Year	Men	Women
2006	B. Raich (Austria)	J. Kostelic (Cro.)
2007	A. Svindal (Nor.)	N. Hosp (Austria)
2008	**B. Miller (U.S.)**	**L. Kildow Vonn (U.S.)**

Freestyle Skiing World Cup

Year	Men	Women
2006	T. Kraus (Cz.Rep.)	O. David (Fr.)
2007	D. Begg-Smith (Austl.)	J. Heil (Can.)
2008	**S. Omischl (Can.)**	**O. David (Fr.)**

Nordic World Cup

Year	Men	Women
2006	T. Angerer (Ger.)	M. Bjørgen (Nor.)
2007	T. Angerer (Ger.)	V. Kuitunen (Fin.)
2008	**L. Bauer (Cz.Rep.)**	**V. Kuitunen (Fin.)**

Snowboard World Cup

Year	Men	Women
2006	*no overall champion*	*no overall champion*
2007	S. Schoch (Switz.)	D. Krings (Austria)
2008	**B. Karl (Austria)**	**N. Sauerbreij (Neth.)**

Armando Trovati/AP

American Alpine skier Lindsey Vonn (née Kildow) holds the trophy she won as the women's overall World Cup champion.

SQUASH

British Open Championship—Men

Year	Winner
2006	N. Matthew (Eng.)
2007	G. Gaultier (Fr.)
2008	**D. Palmer (Austl.)**

British Open Championship—Women

Year	Winner
2006	N. David (Malay.)
2007	R. Grinham (Austl.)
2008	**N. David (Malay.)**

World Open Championship—Men

Year	Winner
2006	D. Palmer (Austl.)
2007	A. Shabana (Egypt)
2008	**R. Ashour (Egypt)**

World Open Championship—Women

Year	Winner
2006	N. David (Malay.)
2007	R. Grinham (Austl.)
2008	**N. David (Malay.)**

SWIMMING

World Swimming Records Set in 2008 in 25-m Pools*

Event	Name	Country	Time
MEN			
50-m freestyle	Duje Draganja	Croatia	20.81 sec
	Roland Schoeman	South Africa	20.64 sec
	Amaury Leveaux	France	20.48 sec
100-m freestyle	Alain Bernard	France	45.69 sec
	Amaury Leveaux	France	45.12 sec
	Amaury Leveaux	France	44.94 sec
200-m freestyle	Paul Biedermann	Germany	1 min 40.83 sec
800-m freestyle	Grant Hackett	Australia	7 min 23.42 sec
50-m backstroke	Robert Hurley	Australia	23.24 sec
	Peter Marshall	United States	23.05 sec
	Randall Bal	United States	22.87 sec
100-m backstroke	Peter Marshall	United States	49.94 sec
	Peter Marshall	United States	49.63 sec
	Stanislav Donets	Russia	49.32 sec
	Aschwin Wildehoer	Spain	49.20 sec
200-m backstroke	Markus Rogan	Austria	1 min 47.84 sec
50-m breaststroke	Cameron van der Burgh	South Africa	26.08 sec
	Cameron van der Burgh	South Africa	25.94 sec
100-m breaststroke	Cameron van der Burgh	South Africa	56.88 sec
50-m butterfly	Matt Jaukovic	Australia	22.50 sec
	Amaury Leveaux	France	22.29 sec
	Amaury Leveaux	France	22.18 sec
200-m butterfly	Nikolay Skvortsov	Russia	1 min 50.60 sec
100-m individual medley	Ryan Lochte	United States	51.25 sec
	Ryan Lochte	United States	51.15 sec
200-m individual medley	Ryan Lochte	United States	1 min 51.56 sec
4 × 100-m freestyle relay	United States (Ryan Lochte, Bryan Lundquist, Nathan Adrian,Doug Van Wie)	United States	3 min 08.44 sec
	France (Gregory Mallet, Fabien Gilot, William Meynard, Frederick Bousquet)	France	3 min 04.98 sec
4 × 100-m medley relay	Russia (Stanislav Donets,Sergey Geybel, Yevgeny Korotyshkin, Aleksandr Sukhorukov)	Russia	3 min 24.29 sec
WOMEN			
50-m freestyle	Marleen Veldhuis	Netherlands	23.25 sec
200-m freestyle	Coralie Balmy	France	1 min 53.18 sec
	Federica Pellegrini	Italy	1 min 51.85 sec
800-m freestyle	Alessia Filippi	Italy	8 min 04.53 sec
50-m backstroke	Sanja Jovanovic	Croatia	26.37 sec
	Sanja Jovanovic	Croatia	26.23 sec
200-m backstroke	Reiko Nakamura	Japan	2 min 03.24 sec
	Kirsty Coventry	Zimbabwe	2 min 00.91 sec
50-m breaststroke	Jessica Hardy	United States	29.58 sec
100-m breaststroke	Leisel Jones	Australia	1 min 03.72 sec
50-m butterfly	Felicity Galvez	Australia	25.32 sec
	Therese Alshammar	Sweden	25.31 sec
	Marieke Guehrer	Australia	24.99 sec
100-m butterfly	Felicity Galvez	Australia	55.89 sec
	Lisbeth Trickett	Australia	55.74 sec
200-m butterfly	Yuko Nakanishi	Japan	2 min 03.12 sec
200-m individual medley	Kirsty Coventry	Zimbabwe	2 min 06.13
400-m individual medley	Kirsty Coventry	Zimbabwe	4 min 26.52 sec
	Julia Smit	United States	4 min 25.87 sec
	Mireia Belmonte (Garcia)	Spain	4 min 25.06 sec
4 × 100-m freestyle relay	Netherlands (Hinkelien Schreuder, Femke Heemskerk, Inge Dekker, Marleen Veldhuis)	Netherlands	3 min 29.42 sec
	Netherlands (Hinkelien Schreuder, Ranomi Kromowidjojo, Inge Dekker, Marleen Veldhuis)	Netherlands	3 min 28.22 sec
4 × 200-m freestyle relay	Netherlands (Inge Dekker, Femke Heemskerk, Marleen Veldhuis, Ranomi Kromowidjojo)	Netherlands	7 min 38.90 sec
4 × 100-m medley relay	United States (Margaret Hoelzer, Jessica Hardy, Rachel Komisarz, Kara Denby)	United States	3 min 51.36 sec

*May include records awaiting FINA ratification at year's end.

World Swimming Records Set in 2008 in 50-m Pools*

Event	Name	Country	Time
MEN			
50-m freestyle	Eamon Sullivan	Australia	21.56 sec
	Alain Bernard	France	21.50 sec
	Eamon Sullivan	Australia	21.41 sec
	Eamon Sullivan	Australia	21.28 sec
100-m freestyle	Alain Bernard	France	47.60 sec
	Alain Bernard	France	47.50 sec
	Eamon Sullivan	Australia	47.24 sec
	Alain Bernard	France	47.20 sec
	Eamon Sullivan	Australia	47.05 sec
200-m freestyle	Michael Phelps	United States	1 min 42.96 sec
50-m backstroke	Liam Tancock	Great Britain	24.47 sec
	Randall Bal	United States	24.33 sec
100-m backstroke	Aaron Peirsol	United States	52.89 sec
	Aaron Peirsol	United States	52.54 sec
200-m backstroke	Aaron Peirsol	United States	1 min 54.32 sec†
	Ryan Lochte	United States	1 min 53.94 sec
100-m breaststroke	Kosuke Kitajima	Japan	58.91 sec
200-m breaststroke	Kosuke Kitajima	Japan	2 min 07.51 sec
200-m butterfly	Michael Phelps	United States	1 min 52.03 sec
200-m individual medley	Michael Phelps	United States	1 min 54.80 sec
	Michael Phelps	United States	1 min 54.23 sec
400-m individual medley	Michael Phelps	United States	4 min 05.25 sec
	Michael Phelps	United States	4 min 03.84 sec
4 × 100-m freestyle relay	United States (Nathan Adrian, Cullen Jones, Ben Wildman-Tobriner, Matt Grevers)	United States	3 min 12.23 sec
	United States (Michael Phelps, Garrett Weber-Gale, Cullen Jones, Jason Lezak)	United States	3 min 08.24 sec
4 × 200-m freestyle relay	United States (Michael Phelps, Ryan Lochte, Ricky Berens, Peter Vanderkaay)	United States	6 min 58.56 sec
4 × 100-m medley relay	United States (Aaron Peirsol, Brendan Hansen, Michael Phelps, Jason Lezak)	United States	3 min 29.34 sec
WOMEN			
50-m freestyle	Marleen Veldhuis	Netherlands	24.09 sec
	Lisbeth Lenton Trickett	Australia	23.97 sec
100-m freestyle	Lisbeth Lenton Trickett	Australia	52.88 sec
200-m freestyle	Federica Pellegrini	Italy	1 min 55.45 sec
	Federica Pellegrini	Italy	1 min 54.82 sec
400-m freestyle	Federica Pellegrini	Italy	4 min 01.53 sec
800-m freestyle	Rebecca Adlington	Great Britain	8 min 14.10 sec
50-m backstroke	Hayley McGregory	United States	28.00 sec
	Emily Seebohm	Australia	27.95 sec
	Sophie Edington	Australia	27.67 sec
100-m backstroke	Natalie Coughlin	United States	59.21 sec
	Hayley McGregory	United States	59.15 sec
	Natalie Coughlin	United States	59.03 sec
	Natalie Coughlin	United States	58.97 sec
	Kirsty Coventry	Zimbabwe	58.77 sec
200-m backstroke	Kirsty Coventry	Zimbabwe	2 min 06.39 sec
	Margaret Hoelzer	United States	2 min 06.09 sec
	Kirsty Coventry	Zimbabwe	2 min 05.24 sec
200-m breaststroke	Rebecca Soni	United States	2 min 20.22 sec
200-m butterfly	Liu Zige	China	2 min 04.18 sec
200-m individual medley	Stephanie Rice	Australia	2 min 08.92 sec
	Stephanie Rice	Australia	2 min 08.45 sec
400-m individual medley	Stephanie Rice	Australia	4 min 31.46 sec
	Katie Hoff	United States	4 min 31.12 sec
	Stephanie Rice	Australia	4 min 29.45 sec
4 × 100-m freestyle relay	Netherlands (Inge Dekker, Ranomi Kromowidjojo, Femke Heemskerk, Marleen Veldhuis)	Netherlands	3 min 33.62 sec
4 × 200-m freestyle relay	Australia (Stephanie Rice, Bronte Barratt, Kylie Palmer, Linda Mackenzie)	Australia	7 min 44.31 sec
4 × 100-m medley relay	Australia (Emily Seebohm, Leisel Jones, Jessicah Schipper, Lisbeth Lenton Trickett)	Australia	3 min 52.69 sec

*May include records awaiting FINA ratification at year's end. †Equals world record.

SWIMMING (continued)

World Swimming and Diving Championships—Men

	Freestyle					
Year	50 m	100 m	200 m	400 m	800 m	1,500 m
2003	A. Popov (Russia)	A. Popov (Russia)	I. Thorpe (Austl.)	I. Thorpe (Austl.)	G. Hackett (Austl.)	G. Hackett (Austl.)
2005	R. Schoeman (S.Af.)	I. Magnini (Italy)	M. Phelps (U.S.)	G. Hackett (Austl.)	G. Hackett (Austl.)	G. Hackett (Austl.)
2007	B. Wildman-Tobriner (U.S.)	F. Magnini (Italy)	M. Phelps (U.S.)	Park Tae Hwan (S.Kor.)	P. Stanczyk (Pol.)*	M. Sawrymowicz (Pol.)

	Backstroke			Breaststroke		
	50 m	100 m	200 m	50 m	100 m	200 m
2003	T. Rupprath (Ger.)	A. Peirsol (U.S.)	A. Peirsol (U.S.)	J. Gibson (U.K.)	K. Kitajima (Japan)	K. Kitajima (Japan)
2005	A. Grigoriadis (Greece)	A. Peirsol (U.S.)	A. Peirsol (U.S.)	M. Warnecke (Ger.)	B. Hansen (U.S.)	B. Hansen (U.S.)
2007	G. Zandberg (S.Af.)	A. Peirsol (U.S.)	R. Lochte (U.S.)	O. Lisogor (Ukr.)	B. Hansen (U.S.)	K. Kitajima (Japan)

	Butterfly			Individual medley		Team relays
	50 m	100 m	200 m	200 m	400 m	4 × 100-m freestyle
2003	M. Welsh (Austl.)	I. Crocker (U.S.)	M. Phelps (U.S.)	M. Phelps (U.S.)	M. Phelps (U.S.)	Russia
2005	R. Schoeman (S.Af.)	I. Crocker (U.S.)	P. Korzeniowski (Pol.)	M. Phelps (U.S.)	L. Cseh (Hung.)	United States
2007	R. Schoeman (S.Af.)	M. Phelps (U.S.)	M. Phelps (U.S.)	M. Phelps (U.S.)	M. Phelps (U.S.)	United States

			Diving				
	4 × 200-m freestyle	4 × 100-m medley	1-m springboard	3-m springboard	Platform	3-m synchronized	10-m synchronized
2003	Australia	United States	Xu Xiang (China)	A. Dobrosok (Russia)	A. Despatie (Can.)	Russia	Australia
2005	United States	United States	A. Despatie (Can.)	A. Despatie (Can.)	Hu Jia (China)	China	Russia
2007	United States	Australia	Luo Yutong (China)	Qin Kai (China)	G. Galperin (Russia)	China	China

*Original winner stripped after failing drug test.

World Swimming and Diving Championships—Women

	Freestyle					
Year	50 m	100 m	200 m	400 m	800 m	1,500 m
2003	I. de Bruijn (Neth.)	H.-M. Seppala (Fin.)	A. Popchanka (Bela.)	H. Stockbauer (Ger.)	H. Stockbauer (Ger.)	H. Stockbauer (Ger.)
2005	L. Lenton (Austl.)	J. Henry (Austl.)	S. Figues (Fr.)	L. Manaudou (Fr.)	K. Ziegler (U.S.)	K. Ziegler (U.S.)
2007	L. Lenton (Austl.)	L. Lenton (Austl.)	L. Manaudou (Fr.)	L. Manaudou (Fr.)	K. Ziegler (U.S.)	K. Ziegler (U.S.)

	Backstroke			Breaststroke		
	50 m	100 m	200 m	50 m	100 m	200 m
2003	N. Zhivanevskaya (Spain)	A. Buschschulte (Ger.)	K. Sexton (U.K.)	Luo Xuejuan (China)	Luo Xuejuan (China)	A. Beard (U.S.)
2005	G. Rooney (Austl.)	K. Coventry (Zimb.)	K. Coventry (Zimb.)	J. Edmistone (Austl.)	L. Jones (Austl.)	L. Jones (Austl.)
2007	L. Vaziri (U.S.)	N. Coughlin (U.S.)	M. Hoelzer (U.S.)	J. Hardy (U.S.)	L. Jones (Austl.)	L. Jones (Austl.)

	Butterfly			Individual medley		Team relays
	50 m	100 m	200 m	200 m	400 m	4 × 100-m freestyle
2003	I. de Bruijn (Neth.)	J. Thompson (U.S.)	O. Jedrzejczak (Pol.)	Ya. Klochkova (Ukr.)	Ya. Klochkova (Ukr.)	United States
2005	D. Miatke (Austl.)	J. Schipper (Austl.)	O. Jedrzejczak (Pol.)	K. Hoff (U.S.)	K. Hoff (U.S.)	Australia
2007	T. Alshammar (Swed.)	L. Lenton (Austl.)	J. Schipper (Austl.)	K. Hoff (U.S.)	K. Hoff (U.S.)	Australia

			Diving				
	4 × 200-m freestyle	4 × 100-m medley	1-m springboard	3-m springboard	Platform	3-m synchronized	10-m synchronized
2003	United States	China	I. Lashko (Austl.)	Guo Jingjing (China)	E. Heymans (Can.)	China	China
2005	United States	Australia	B. Hartley (Can.)	Guo Jingjing (China)	L. Wilkinson (U.S.)	China	China
2007	United States	Australia	He Zi (China)	Guo Jingjing (China)	Wang Xin (China)	China	China

TABLE TENNIS

World Table Tennis Championships—Men

Year	St. Bride's Vase (singles)	Iran Cup (doubles)
2003	W. Schlager (Austria)	Wang Liqin, Yan Sen (China)
2005	Wang Liqin (China)	Kong Linghui, Wang Hao (China)
2007	Wang Liqin (China)	Chen Qi, Ma Lin (China)

World Table Tennis Championships—Women

Year	G. Geist Prize (singles)	W.J. Pope Trophy (doubles)
2003	Wang Nan (China)	Wang Nan, Zhang Yining (China)
2005	Zhang Yining (China)	Wang Nan, Zhang Yining (China)
2007	Guo Yue (China)	Wang Nan, Zhang Yining (China)

Table Tennis World Cup

Year	Men
2006	Ma Lin (China)
2007	Wang Hao (China)
2008	**Wang Hao (China)**
Year	**Women**
2006	Guo Yan (China)
2007	Wang Nan (China)
2008	**Li Xiaoxia (China)**

World Table Tennis Championships—Mixed

Year	Heydusek Prize
2003	Ma Lin, Wang Nan (China)
2005	Guo Yue, Wang Liqin (China)
2007	Guo Yue, Wang Liqin (China)

World Table Tennis Championships—Team

Year	Swaythling Cup (men	Corbillon Cup (women)
2004	China	China
2006	China	China
2008	**China**	**China**

TENNIS

Australian Open Tennis Championships—Singles

Year	Men	Women
2006	R. Federer (Switz.)	A. Mauresmo (Fr.)
2007	R. Federer (Switz.)	S. Williams (U.S.)
2008	**N. Djokovic (Serbia)**	**M. Sharapova (Russia)**

Australian Open Tennis Championships—Doubles

Year	Men	Women
2006	B. Bryan, M. Bryan	Yan Zi, Zheng Jie
2007	B. Bryan, M. Bryan	C. Black, L. Huber
2008	**J. Erlich, A. Ram**	**A. Bondarenko, K. Bondarenko**

French Open Tennis Championships—Singles

Year	Men	Women
2006	R. Nadal (Spain)	J. Henin-Hardenne (Belg.)
2007	R. Nadal (Spain)	J. Henin (Belg.)
2008	**R. Nadal (Spain)**	**A. Ivanovic (Serbia)**

French Open Tennis Championships—Doubles

Year	Men	Women
2006	J. Bjorkman, M. Mirnyi	L. Raymond, S. Stosur
2007	M. Knowles, D. Nestor	A. Molik, M. Santangelo
2008	**P. Cuevas, L. Horna**	**A. Medina Garrigues, V. Ruano Pascual**

All-England (Wimbledon) Tennis Championships—Singles

Year	Men	Women
2006	R. Federer (Switz.)	A. Mauresmo (Fr.)
2007	R. Federer (Switz.)	V. Williams (U.S.)
2008	**R. Nadal (Spain)**	**V. Williams (U.S.)**

All-England (Wimbledon) Tennis Championships—Doubles

Year	Men	Women
2006	B. Bryan, M. Bryan	Yan Zi, Zheng Jie
2007	A. Clément, M. Llodra	C. Black, L. Huber
2008	**D. Nestor, N. Zimonjic**	**S. Williams, V. Williams**

United States Open Tennis Championships—Singles

Year	Men	Women
2006	R. Federer (Switz.)	M. Sharapova (Russia)
2007	R. Federer (Switz.)	J. Henin (Belg.)
2008	**R. Federer (Switz.)**	**S. Williams (U.S.)**

United States Open Tennis Championships—Doubles

Year	Men	Women
2006	M. Damm, L. Paes	N. Dechy, V. Zvonareva
2007	S. Aspelin, J. Knowle	N. Dechy, D. Salina
2008	**B. Bryan, M. Bryan**	**C. Black, L. Huber**

Davis Cup (men)

Year	Winner	Runner-up	Results
2006	Russia	Argentina	3–2
2007	United States	Russia	4–1
2008	**Spain**	**Argentina**	**3–1**

Fed Cup (women)

Year	Winner	Runner-up	Results
2006	Italy	Belgium	3–2
2007	Russia	Italy	4–0
2008	**Russia**	**Spain**	**4–0**

TRACK AND FIELD SPORTS (ATHLETICS)

World Outdoor Track and Field Championships—Men

Event	2005	2007
100 m	J. Gatlin (U.S.)	T. Gay (U.S.)
200 m	J. Gatlin (U.S.)	T. Gay (U.S.)
400 m	J. Wariner (U.S.)	J. Wariner (U.S.)
800 m	R. Ramzi (Bahrain)	A.K. Yego (Kenya)
1,500 m	R. Ramzi (Bahrain)	B. Lagat (U.S.)
5,000 m	B. Limo (Kenya)	B. Lagat (U.S.)
10,000 m	K. Bekele (Eth.)	K. Bekele (Eth.)
steeplechase	S.S. Shaheen (Qatar)	B.K. Kipruto (Kenya)
110-m hurdles	L. Doucouré (Fr.)	Liu Xiang (China)
400-m hurdles	B. Jackson (U.S.)	K. Clement (U.S.)
marathon	J. Gharib (Mor.)	L. Kibet (Kenya)
20-km walk	J. Pérez (Ecua.)	J. Pérez (Ecua.)
50-km walk	S. Kirdyapkin (Russia)	N. Deakes (Austl.)
4 × 100-m relay	France (L. Doucouré, R. Pognon, E. de Lépine, L. Dovy)	United States (D. Patton, W. Spearmon, T. Gay, L. Dixon)
4 × 400-m relay	United States (A. Rock, D. Brew, D. Williamson, J. Wariner)	United States (L. Merritt, A. Taylor, D. Williamson, J. Wariner)
high jump	Yu. Krymarenko (Ukr.)	D. Thomas (Bahamas)
pole vault	R. Blom (Neth.)	B. Walker (U.S.)
long jump	D. Phillips (U.S.)	I. Saladino (Pan.)
triple jump	W. Davis (U.S.)	N. Évora (Port.)
shot put	A. Nelson (U.S.)	R. Hoffa (U.S.)
discus throw	V. Alekna (Lith.)	G. Kanter (Est.)
hammer throw	I. Tikhon (Bela.)	I. Tikhon (Bela.)
javelin throw	A. Värnik (Est.)	T. Pitkämäki (Fin.)
decathlon	B. Clay (U.S.)	R. Sebrle (Cz.Rep.)

World Outdoor Track and Field Championships—Women

Event	2005	2007
100 m	L. Williams (U.S.)	V. Campbell (Jam.)
200 m	A. Felix (U.S.)	A. Felix (U.S.)
400 m	T. Williams-Darling (Bah.)	C. Ohuruogu (U.K.)
800 m	Z. Calatayud (Cuba)	J. Jepkosgei (Kenya)
1,500 m	T. Tomashova (Russia)	M.Y. Jamal (Bahrain)
5,000 m	T. Dibaba (Eth.)	M. Delar (Eth.)
10,000 m	T. Dibaba (Eth.)	T. Dibaba (Eth.)
steeplechase	D. Inzikuru (Uganda)	Ye. Volkova (Russia)
100-m hurdles	M. Perry (U.S.)	M. Perry (U.S.)
400-m hurdles	Yu. Pechonkina (Russia)	J. Rawlinson (Austl.)
marathon	P. Radcliffe (U.K.)	C. Ndereba (Kenya)
20-km walk	O. Ivanova (Russia)	O. Kaniskina (Russia)
4 × 100-m relay	United States (A. Daigle, M. Lee, M. Barber, L. Williams)	United States (L. Williams, A. Felix, M. Barber, T. Edwards)
4 × 400-m relay	Russia (Yu. Pechonkina, O. Krasnomovets, N. Antyukh, S. Pospelova)	United States (D. Trotter, A. Felix, M. Wineberg, S. Richards)
high jump	K. Bergqvist (Swed.)	B. Vlasic (Cro.)
pole vault	Ye. Isinbayeva (Russia)	Ye. Isinbaveva (Russia)
long jump	T. Madison (U.S.)	T. Lebedeva (Russia)
triple jump	T. Smith (Jam.)	Y. Savigne (Cuba)
shot put	N. Ostapchuk (Bela.)	V. Vili (N.Z.)
discus throw	F. Dietzsch (Ger.)	F. Dietzsch (Ger.)
hammer throw	O. Kuzenkova (Russia)	B. Heidler (Ger.)
javelin throw	O. Menéndez (Cuba)	B. Spotakova (Cz.Rep.)
heptathlon	C. Kluft (Swed.)	C. Klüft (Swed.)

TRACK AND FIELD SPORTS (ATHLETICS) (continued)

World Indoor Track and Field Championships—Men

Event	2006	2008
60 m	I. Scott (U.S.)	O.A. Fasuba (Nigeria)
400 m	A. Francique (Grenada)	T. Christopher (Can.)
800 m	W. Bungei (Kenya)	A. Kaki Khamis (Sudan)
1,500 m	I. Heshko (Ukr.)	D. Mekonnen (Eth.)
3,000 m	K. Bekele (Eth.)	T. Bekele (Eth.)
60 m hurdles	T. Trammell (U.S.)	Liu Xiang (China)
4 × 400 m relay	United States (T. Washington, I. Merritt, M. Campbell, W. Spearmon)	United States (J. Davis, J. Torrance, G. Nixon, K. Willie)
high jump	Ya. Ryhakov (Russia)	S. Holm (Swed.)
pole vault	B. Walker (U.S.)	Ye. Lukyanenko (Russia)
long jump	I. Gaisah (Ghana)	G.K. Mokoena (S.Af.)
triple jump	W. Davis (U.S.)	P. Idowu (Gr.Brit.)
shot put	R. Hoffa (U.S.)	C. Cantwell (U.S.)
heptathlon	A. Niklaus (Ger.)	B. Clay (U.S.)

World Indoor Track and Field Championships—Women

Event	2006	2008
60 m	M. Barber (U.S.)	A. Williams (U.S.)
400 m	O. Krasnomovets (Russia)	O. Zykina (Russia)
800 m	M. Mutola (Mozam.)	T. Lewis (Austl.)
1,500 m	Yu. Chizhenko (Russia)	Ye. Soboleva (Russia)
3,000 m	M. Defar (Eth.)	M. Defar (Eth.)
60-m hurdles	D. O'Rourke (Ire.)	L. Jones (U.S.)
4 × 400-m relay	Russia (T. Levina, N. Nazarova, O. Krasnomovets, N. Antyukh)	Russia (Yu. Gushchina, T. Levina, N. Nazarova, O. Zykina)
high jump	Ye. Slesarenko (Russia)	B. Vlasic (Cro.)
pole vault	Ye. Isinbayeva (Russia)	Ye. Isinbayeva (Russia)
long jump	T. Kotova (Russia)	N. Gomes (Port.)
triple jump	T. Lebedeva (Russia)	Y. Savigne (Cuba)
shot put	N. Khoroneko (Bela.)	V. Vili (N.Z.)
pentathlon	L. Blonska (Ukr.)	T. Hellebaut (Belg.)

2008 World Indoor Records—Men*

Event	Competitor and country	Performance
distance medley relay†	University of Texas (K. Miller, D. Fortson, J. Hernandez, L. Manzano)	9 min 25.97 sec

*May include records awaiting IAAF ratification at year's end. †Not an officially ratified event, best performance on record.

2008 World Indoor Records—Women*

Event	Competitor and country	Performance
60-m hurdles	Susanna Kallur (Swed.)	7.68 sec
pole vault	Yelena Isinbayeva (Russia)	4.95 m (16 ft 3¼ in)
4 × 800-m relay	Russia Sverdlovsk Region (Yevgeniya Zinurova, Olga Kotlyarova, Marina Savinova, Natalya Ignatova)	8 min 18.54 sec

*May include records awaiting IAAF ratification at year's end.

2008 World Outdoor Records—Men*

Event	Competitor and country	Performance
100 m	Usain Bolt (Jam.)	9.72 sec
	Usain Bolt (Jam.)	9.69 sec
200 m	Usain Bolt (Jam.)	19.30 sec
two miles†	Kenenisa Bekele (Eth.)	8 min 4.35 sec
marathon†	Haile Gebrselassie (Eth.)	2 hr 03 min 59 sec
110-m hurdles	Dayron Robles (Cuba)	12.87 sec
20-km race walk	Sergey Morozov (Russia)	1 hr 16 min 43 sec
50-km race walk	Denis Nizhegorodov (Russia)	3 hr 34 min 14 sec
4 × 100-m relay	Jamaica (Nesta Carter, Michael Frater, Usain Bolt, Asafa Powell)	37.10 sec

*May include records awaiting IAAF ratification at year's end. †Not an officially ratified event, best performance on record.

2008 World Outdoor Records—Women*

Event	Competitor and country	Performance
5,000 m	Tirunesh Dibaba (Eth.)	14 min 11.15 sec
one hour	Dire Tune (Eth.)	18.517 km
3,000-m steeplechase	Gulnara Samitova-Galkina (Russia)	8 min 58.81 sec
pole vault	Yelena Isinbayeva (Russia)	5.03 m (16 ft 6 in)
	Yelena Isinbayeva (Russia)	5.04 m (16 ft 6½ in)
	Yelena Isinbayeva (Russia)	5.05 m (16 ft 6¾ in)
javelin throw	Barbora Spotakova (Cz Rep.)	72.28 m (237 ft 2 in)
20-km race walk	Olga Kaniskina (Russia)	1 hr 25 min 11 sec

*May include records awaiting IAAF ratification at year's end.

Boston Marathon

Year	Men	hr:min:sec
2006	R.K. Cheruiyot (Kenya)	2:07:14
2007	R.K. Cheruiyot (Kenya)	2:14:13
2008	**R.K. Cheruiyot (Kenya)**	**2:07:46**
Year	**Women**	**hr:min:sec**
2006	R. Jeptoo (Kenya)	2:23:38
2007	L. Grigoryeva (Russia)	2:29:18
2008	**D. Tune (Eth.)**	**2:25:25**

London Marathon

Year	Men	hr:min:sec
2006	F. Limo (Kenya)	2:06:39
2007	M. Lel (Kenya)	2:07:41
2008	**M. Lel (Kenya)**	**2:05:15**
Year	**Women**	**hr:min:sec**
2006	D. Kastor (U.S.)	2:19:36
2007	Zhou Chunxiu (China)	2:20:38
2008	**I. Mikitenko (Ger.)**	**2:24:14**

Berlin Marathon

Year	Men	hr:min:sec
2006	H. Gebrselassie (Eth.)	2:05:56
2007	H. Gebrselassie (Eth.)	2:04:26
2008	**H. Gebrselassie (Eth.)**	**2:03:59**
Year	**Women**	**hr:min:sec**
2006	G. Wami (Eth.)	2:21:34
2007	G. Wami (Eth.)	2:23:17
2008	**I. Mikitenko (Ger.)**	**2:19:19**

Chicago Marathon

Year	Men	hr:min:sec
2006	R.K. Cheruiyot (Kenya)	2:07:35
2007	P. Ivuti (Kenya)	2:11.11
2008	**E. Cheruiyot (Kenya)**	**2:06:25**
Year	**Women**	**hr:min:sec**
2006	B. Adere (Eth.)	2:20:42
2007	B. Adere (Eth.)	2:33:49
2008	**L. Grigoryeva (Russia)**	**2:27:17**

New York City Marathon

Year	Men	hr:min:sec
2006	M. Gomes dos Santos (Braz.)	2:09:58
2007	M. Lel (Kenya)	2:09:04
2008	**M. Gomes dos Santos (Braz.)**	**2:08:43**
Year	**Women**	**hr:min:sec**
2006	J. Prokopcuka (Latvia)	2:25:05
2007	P. Radcliffe (U.K.)	2:23:09
2008	**P. Radcliffe (U.K.)**	**2:23:56**

TRACK AND FIELD SPORTS (ATHLETICS) (continued)

World Cross Country Championships—Men

Year	Individual	Team
2006	K. Bekele (Eth.)	Kenya
2007	Z. Tadese (Eritrea)	Kenya
2008	**K. Bekele (Eth.)**	**Kenya**

World Cross Country Championships—Women

Year	Individual	Team
2006	T. Dibaba (Eth.)	Ethiopia
2007	L. Kiplagat (Neth.)	Ethiopia
2008	**T. Dibaba (Eth.)**	**Ethiopia**

VOLLEYBALL

Beach Volleyball World Championships

Year	Men	Women
2003	R. Santos, E. Rego (Braz.)	M. May, K. Walsh (U.S.)
2005	M. Araujo, F. Magalhães (Braz.)	M. May-Treanor, K. Walsh (U.S.)
2007	P. Dalbausser, T. Rogers (U.S.)	M. May-Treanor, K. Walsh (U.S.)

World Volleyball Championships

Year	Men	Women
2004	Brazil	China
2006	Brazil	Russia
2008*	**United States**	**Brazil**

*Olympic champions.

WEIGHTLIFTING

World Weightlifting Champions, 2008*

MEN			WOMEN		
Weight class	**Winner (country)**	**Performance**	**Weight class**	**Winner (country)**	**Performance**
56 kg (123 lb)	Long Qingquan (China)	292 kg (645.2 lb)	48 kg (105.5 lb)	Chen Xiexia (China)	212 kg (468.5 lb)
62 kg (136.5 lb)	Zhang Xiangxiang (China)	319 kg (704.9 lb)	53 kg (116.5 lb)	Prapawadee Jaroenrattanatarakoon (Thai.)	221 kg (488.4 lb)
69 kg (152 lb)	Liao Hui (China)	348 kg (769.1 lb)	58 kg (127.5 lb)	Chen Yanqing (China)	244 kg (537.9 lb)
77 kg (169.5 lb)	Sa Jae Hyouk (S.Kor.)	366 kg (808.8 lb)	63 kg (138.5 lb)	Pak Hyon Suk (N.Kor.)	241 kg (532.6 lb)
85 kg (187 lb)	Lu Yong (China)	394 kg (870.7 lb)	69 kg (152 lb)	Liu Chunhong (China)	286 kg (632.1 lb)
94 kg (207 lb)	Ilya Ilin (Kazak.)	406 kg (897.3 lb)	75 kg (165 lb)	Cao Lei (China)	282 kg (623.2 lb)
105 kg (231 lb)	Andrei Aramnau (Bela.)	436 kg (961.2 lb)	+75 kg (+165 lb)	Jang Mi Ran (S.Kor.)	326 kg (720.5 lb)
+105 kg (+231 lb)	Matthias Steiner (Ger.)	461 kg (1,018.8 lb)			

*Olympic champions.

WRESTLING

World Wrestling Championships—Freestyle

Year	55 kg	60 kg	66 kg	74 kg
2006	R. Velikov (Bulg.)	S. Mohammadi (Iran)	B. Zadick (U.S.)	I. Aldatov (Ukr.)
2007	B. Kudukhov (Russia)	M. Batirov (Russia)	R. Sabin (Tur.)	M. Murtazaliyev (Russia)
2008*	**H. Cejudo (U.S.)**	**M. Batirov (Russia)**	**R. Sahin (Tur.)**	**B. Saytiyev (Russia)**
Year	**84 kg**	**96 kg**	**120 kg**	
2006	S. Sazbidov (Russia)	K. Gatsalov (Russia)	A. Taymazov (Uzbek.)	
2007	G. Ketoyev (Russia)	K. Gatsalov (Russia)	B. Makbov (Russia)	
2008*	**R. Mindorashvili (Geo.)**	**S. Muradov (Russia)**	**A. Taymazov (Uzbek.)**	

*Olympic champions.

World Wrestling Championships—Greco-Roman Style

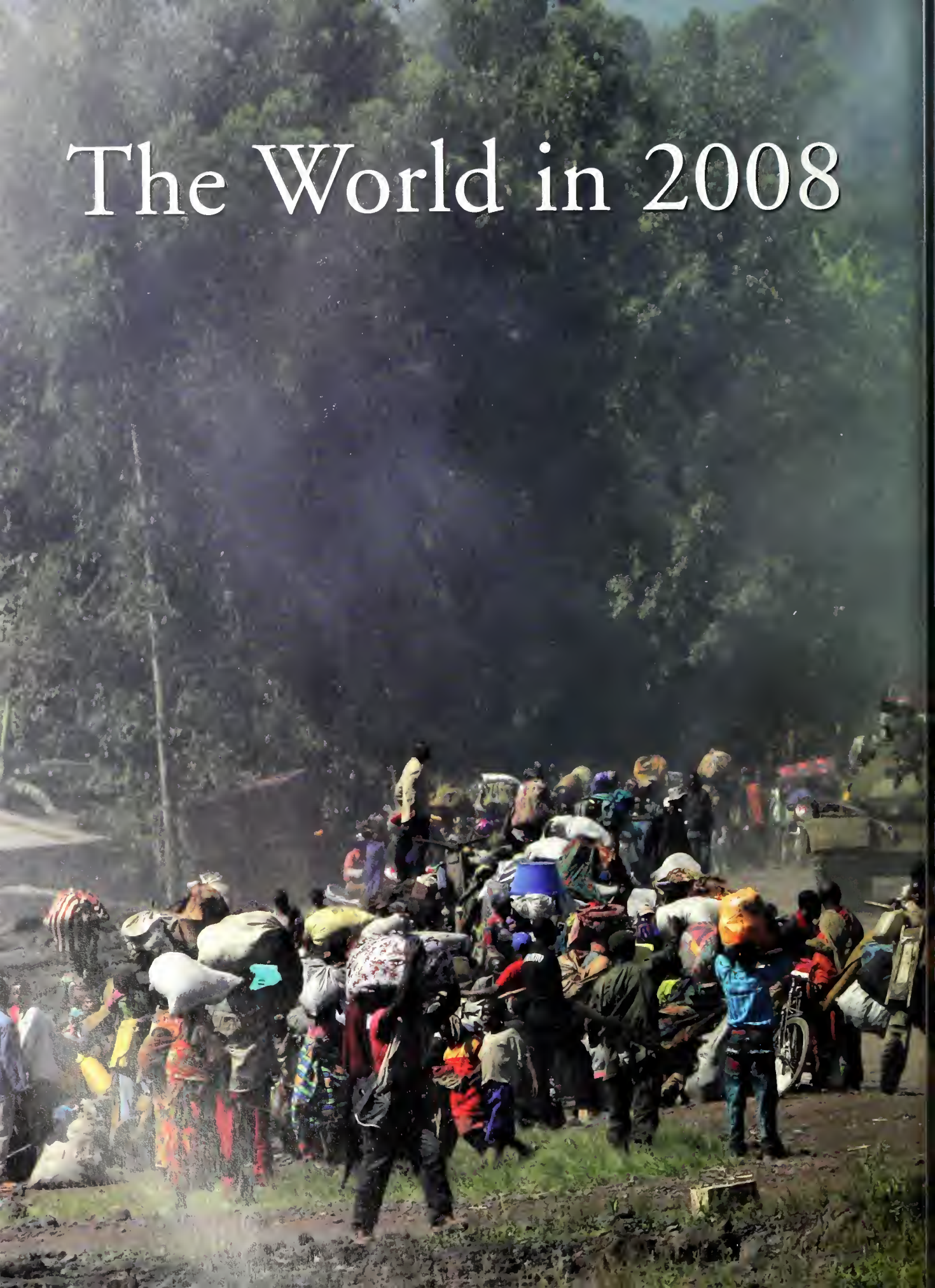
Year	55 kg	60 kg	66 kg	74 kg
2006	H. Surian-Reyhanpur (Iran)	J. Warren (U.S.)	Li Yanyan (China)	V. Shatskym (Ukr.)
2007	H. Surian-Reyhanpur (Iran)	D. Bedinadze (Geo.)	F. Mansurov (Azer.)	Y. Yanakiev (Bulg.)
2008*	**N. Mankiyev (Russia)**	**L.-B. Albiyev (Russia)**	**S. Guénot (Fr.)**	**M. Kvirkelia (Geo.)**
Year	**84 kg**	**96 kg**	**120 kg**	
2006	M. Abdelfatah (Egypt)	H. Nabi (Est.)	K. Borovev (Russia)	
2007	A. Mishin (Russia)	R. Nozadze (Geo.)	M. López (Cuba)	
2008*	**A. Minguzzi (Italy)**	**A. Khushtov (Russia)**	**M. López (Cuba)**	

*Olympic champions.

Sumo Tournament Champions, 2008

Tournament	Location	Winner	Winner's record
Hatsu Basho (New Year's tournament)	Tokyo	Hakuho	14–1
Haru Basho (spring tournament)	Osaka	Asasoryu	13–2
Natsu Basho (summer tournament)	Tokyo	Kotoosshu	14–1
Nagoya Basho (Nagoya tournament)	Nagoya	Hakubo	15–0
Aki Basho (autumn tournament)	Tokyo	Hakubo	14–1
Kyushu Basho (Kyushu tournament)	Fukuoka	Hakubo	13–2

The World in 2008



Thousands of displaced persons stream toward Goma in eastern Democratic Republic of the Congo in late October as government forces retreat from fighting with rebel militia.

Karel Prinsloo/AP

World Affairs

SKYROCKETING food and fuel prices and a global FINANCIAL CRISIS imperiled the world in 2008. KOSOVO proclaimed its INDEPENDENCE; a new president, an AFRICAN AMERICAN, was elected in the United States; the 239-year-old constitutional MONARCHY was DISSOLVED in Nepal; Bhutan completed its transition from an ABSOLUTE monarchy to a democracy; former REBEL LEADERS (in Kosovo and Nepal) became the prime ministers of their countries; and a coordinated TERRORIST ATTACK targeted LANDMARKS in the Indian city of MUMBAI.

UNITED NATIONS

The United Nations in 2008 celebrated both its 60th year of peacekeeping and the 60th anniversary of the Universal Declaration of Human Rights, as well as the 40th anniversary of the signing of the Treaty on the Nonproliferation of Nuclear Weapons. The year also witnessed the worst financial crisis since the Great Depression of the 1930s, a worsening global food crisis, and concerns that climate change could perhaps offer the greatest long-term challenge for international cooperation.

Financial Crisis. The global credit crisis, which began in 2007, threatened to destabilize many countries and bring financial devastation to countless millions of people. The IMF in October 2008 launched an emergency lending program to help large emerging market economies deal with the crisis. Under the program, countries with sustainable debt and a record of sound financial policy were allowed to borrow up to five times their financial contribution to the IMF with few conditions attached. At year's end the situation was still uncertain, with most major economies struggling to contain the fallout. (*See* Special Report on page 170.)

The already-severe world food crisis, spurred by a decline in agricultural production and an associated rise in food prices, was exacerbated by the financial crisis as many governments moved to protect their food supplies. The Food and Agriculture Organization (FAO) reported that 36 countries were in need of emergency assistance and that a disaster was looming unless countries made food security a top priority. During 2008, 40 million additional persons were forced into hunger, bringing the total of the world's hungry to about one billion. In mid-December 2008 the FAO reported that it needed $5.2 billion urgently to feed 100 million people in severe crisis. Secretary-General Ban Ki-moon reported to the General Assembly that the food crisis was expected to drive another 100 million persons into poverty. (*See* Special Report on page 182.)

Peacekeeping and Security. During 2008 the UN fielded 18 peacekeeping missions utilizing more than 112,000 troops, police, and civilians, with a total budget of more than $7 billion. These operations ranged from providing support to political processes in places such as the Democratic Republic of the Congo (DRC), Haiti, and Lebanon to supplying comprehensive support to efforts to demilitarize conflict areas and reestablish judicial, police, security, and good governance capabilities in war-torn areas. There were 12 ongoing UN political peacebuilding operations, most notably the UN Assistance Mission in Afghanistan (UNAMA), with nearly 1,300 personnel, and the UN Assistance Mission for Iraq, with an authorized strength of 1,014. Troops and other personnel were contributed by 117 member countries. By far the largest contributors were Pakistan, Bangladesh, and India, followed by Nigeria.

The UN mission in the DRC was the largest, with 17,000 peacekeepers, but it proved insufficient in the face of growing violence along the border with Rwanda, where Tutsi and Hutu rebels battled each other. By mid-November 2008 the number of refugees in the DRC had grown to more than one million in the face of increased violence. Adding to the tense situation in the strife-ridden country, elements of Joseph Kony's Lord's Resistance Army (LRA), hiding in the huge Garamba National Park, launched raids on villages near there and in neighbouring Central African Republic (CAR) and The Sudan. A special summit, held in Nairobi in early November, was attended by the leaders of Burundi, the Republic of the Congo, the DRC, Kenya, Rwanda, South Africa, Tanzania, and Uganda, as well as Ban Ki-moon. The summit produced what was termed a multipronged agreement calling for a cease-fire and a commitment to send African Union (AU) peacekeepers to the front lines if UN peacekeepers could not protect civilians.

The Security Council in July 2007 approved UNAMID, a joint AU-UN operation in the Darfur region of The Sudan with the core mandate of protecting civilians. Although the mission began formal operation on Dec. 31, 2007, deployment was hampered by political problems with the Sudanese government and by shortfalls in contributions of troops, police, transport and aviation assets, and logistic support. When fully deployed, UNAMID would be the largest peacekeeping operation in history and would have nearly 20,000 troops, 6,000 police, and a significant civilian component.

Somalia remained high on the list of international security concerns, with increased piracy off the Somali coast adding to the deteriorating situation in the failed state. On Dec. 16, 2008, the UN Security Council passed a resolution urging countries and regional organizations with the capacity to deploy naval ships and aircraft to thwart further piracy. It authorized countries to "take all necessary measures that are appropriate in Somalia" to suppress acts of piracy. The secretary-general urged the Council to consider the problem in the context of building compre-

hensive peace and restoring stable governance to Somalia.

The UN Peacebuilding Commission expanded its work to include Guinea-Bissau and the CAR in addition to its ongoing efforts in Burundi and Sierra Leone. In the latter two cases, the commission assisted in electoral processes and facilitated multistakeholder dialogue. Forty-five member countries pledged $267 million to the Peacebuilding Fund.

In regard to nuclear proliferation, the International Atomic Energy Agency (IAEA) reported in October that the theft of nuclear materials was disturbingly high, with nearly 250 cases reported in the year ended in June 2008. In September the IAEA revealed that Iran was failing to cooperate with its investigators and was continuing industrial uranium enrichment in defiance of Security Council resolutions.

Terrorism. The terrorist attack in Mumbai (Bombay) in late November reminded the world that terrorism remained a major global issue. (*See* Special Report on page 192.) This latest major attack came just months after the European Court of Justice had declared that the UN's blacklist of suspected financiers of al-Qaeda and other terrorist groups lacked accountability and due process and violated the fundamental human rights of the suspects, in part because suspects had no ability to challenge being included on the list. In the U.S. the bipartisan leadership of the Senate Armed Services Committee, including Republican presidential candidate John McCain (*see* BIOGRAPHIES), released a report that accused former U.S. secretary of defense Donald Rumsfeld of being responsible for war crimes and abuses committed by U.S. forces at Abu Ghraib prison in Iraq, the Guantánamo Detention Facility in Cuba, and other military detention centres. On October 7 a U.S. judge ordered the release from the Guantánamo Bay military prison of 17 Chinese Uighur Muslims who had been held for more than seven years without having been charged with a crime. In a sharp break with Pres. George W. Bush's administration, President-elect Barack Obama (*see* BIOGRAPHIES) pledged during his first major interview following the election to close the Guantánamo Bay facility and ban torture by the U.S. military.

Humanitarian Affairs. On the humanitarian front, the UN was engaged in a number of locations, Darfur, with nearly 15,000 aid workers assisting more than four million people, being the largest. As 2008 dawned, there were 11.4 million refugees, and the number was rising. At the same time, there were 26 million internally displaced persons. In response to the massive destruction caused by the magnitude-7.9 earthquake in Sichuan, China, in May, UN agencies initiated the China Appeal for Early Recovery Support. This effort to raise $33.5 million was the first step in providing aid to the earthquake victims. The earthquake killed at least 69,000 people, injured hundreds of thousands of others, and left millions of people homeless.

Bassem Tellawi/AP

Iraqi refugees in Damascus, Syria, register their names on June 25 to receive UN food aid.

In Uganda's two-decade-long war with rebel forces, nearly two million persons were forced by the Ugandan army (UPDF) from their homes into what were in essence poorly defended concentration camps. The LRA was accused of having abducted more than 60,000 people, many if not most of them children, and forcing tens of thousands to join Kony's army. The list of crimes included rape, murder, mutilation, and sexual slavery. The Ugandan military forces, on the other hand, also had been accused by human rights organizations of murder, rape, torture, and, especially, forced displacement. The Ugandan government in 2003 asked the International Criminal Court (ICC) to conduct an investigation of alleged atrocities committed by the LRA (but not government forces). The ICC responded in 2005 by unsealing indictments against Kony and four other LRA leaders for crimes against humanity and war crimes, but the task of carrying out the arrest warrants proved futile. In mid-November 2008 the ICC announced that it was reviewing the LRA case in light of the Uganda government–LRA peace talks that began in 2006.

Human Rights. The UN Human Rights Council, still in its infancy in 2008, initiated a Universal Periodic Review of countries' performances in satisfying their human rights commitments. In doing so, the council examined the records of 48 member countries.

In July the chief ICC prosecutor charged Sudanese Pres. Omar al-Bashir (*see* BIOGRAPHIES) with genocide, crimes against humanity, and war crimes in Darfur and asked the court to issue an arrest warrant against him. In December the judges were still considering the case. The case was similar to the LRA case in Uganda, since a main issue in both cases was the impact that ICC indictments might have on ongoing peace negotiations. In the Bashir case there was also concern regarding the impact on the ability to continue UN peace missions in Darfur and southern Sudan.

Development. The financial crisis in 2008 posed a threat to the future of the Millennium Development Goal (MDG) process as donor governments scrambled to deal with domestic financial problems. The most progress was made toward achieving the target set for MDG 2: to ensure that by 2015, children everywhere (boys and girls alike) would be able to complete a full course of primary schooling. Improving maternal health, MDG 5, lagged the most behind schedule. More than 1.2 billion people still lived in extreme poverty, and their plight was worsening as a result of the food and financial crises. Nearly a billion people did not have access to safe drinking water, and 2.5 billion did not have adequate sanitation facilities. Urban poverty was on the rise, and UN Habitat announced in October that the number of urban slum dwellers had for the first time surpassed one billion.

Health. The World Health Organization (WHO) reported that polio infections had more than doubled in the four countries—Afghanistan, India, Nigeria, and Pakistan—where it was

endemic and had spread to 10 additional countries. Global progress in containing avian (H5N1) flu continued, although it was still pandemic in poultry in parts of Asia, and 36 human cases and 28 deaths were reported in Indonesia in 2008. In October the UN and the World Bank warned that a global avian flu pandemic was still a threat.

More than 3.3 billion people were considered at risk of contracting malaria, which was endemic in 109 countries; more than a million deaths annually, primarily of children under the age of five, were due to malaria. The Global Fund to Fight AIDS, Tuberculosis and Malaria announced a $2.75 billion initiative of new funding over the next two years, with 90% of the funds to go to low-income countries. More than half would be spent on fighting malaria, with 38% and 11% devoted to AIDS and tuberculosis programs, respectively. In November the Global Fund froze its aid to Zimbabwe after discovering that the country's central bank had stolen £4.5 million (about $7.3 million) that had been intended to train 50,000 people and purchase drugs for a national antimalaria campaign.

UNAIDS decided not to publish a new "AIDS Epidemic Update" in 2008. Nonetheless, it reported that in 2008 the global AIDS pandemic had stabilized in terms of the percentage of people living with AIDS, even though the overall number continued to increase as a result of new infections and increased life expectancy resulting from broader availability of antiretroviral therapy. In 2007 an estimated 33 million people worldwide were HIV infected. Two-thirds of these individuals lived in sub-Saharan Africa, which also accounted for more than three-fourths of all AIDS deaths and nearly 90% of all children living with HIV. Globally, the number of children under the age of 15 living with HIV had increased since 2001, but the rate of new infections among children had declined, with an estimated 370,000 new infections in 2007. On a positive note, the AIDS epidemics in most sub-Saharan African countries had stabilized or were in decline. In October the new South African minister of health publicly pronounced that HIV causes AIDS and pledged that her country would now, after years of failed policies, do everything needed to deal effectively with the pandemic.

Environment. A UN Climate Change Conference was held in Poznan, Pol., during Dec. 1–12, 2008. The meeting, which involved a ministerial-level session on a shared vision for long-term cooperative action, represented another step forward in the negotiations toward strengthening international action on climate change—the so-called Bali Road Map process. While agreement on most major issues remained elusive, progress was made in several technical areas, including adaptation, finance, technology, deforestation and forest degradation emission reduction, and disaster management. Conferees agreed to move into full negotiating mode in 2009, with four major international conferences planned for the year. The aim was to conclude a final agreement at the Copenhagen meeting in December 2009 for a new treaty on climate change that would replace the Kyoto Protocol, which was due to expire in 2012.

Administration and Reform. The secretary-general continued the restructuring initiative of the UN Department of Peacekeeping Operations (DPKO) that he began in 2007. The reform initiative included the establishment of a Department of Field Support, an Office of the Rule of Law and Security Institutions, and Integrated Operational Teams. The DPKO finalized a number of strategic doctrine documents, including the "capstone" doctrine of the "United Nations Peacekeeping Operations Principles and Guidelines." (ROGER A. COATE)

EUROPEAN UNION

When Slovenia assumed the rotating presidency of the European Union on Jan. 1, 2008, the symbolism was unmistakable. With a population of just over two million, Slovenia had become the first postcommunist country (of the eight that joined the EU in 2004) to take on the six-month chairmanship of what had long been an elite "Western" club. Slovenia's big moment underscored how the EU—representing 27 countries and almost 500 million citizens—had begun to embrace those postcommunist Eastern European members.

Slovenia, which had helped to trigger the collapse of the former Yugoslavia when it declared independence in 1991, took control of the EU presidency at a time when problems in the Balkans were threatening to reassert themselves. Kosovo, a province of Serbia with a population comprising a mix of ethnic Albanians (Kosovars) and Serbians, announced on February 17 that it was breaking away from Serbia. Serbia and its ally Russia were vehemently opposed, describing the split as illegal.

Amid the rising tension, Slovenian Foreign Minister Dimitrij Rupel saw an opportunity for his country to make a mark on history by using the lure of EU membership for Serbia as a way to resolve the crisis. Despite divisions between EU countries over how to approach the crisis, it was made increasingly clear to Serbia that if it accepted Kosovan independence, Serbia could soon become a candidate for EU membership. The approach worked, and in Serbia's parliamentary elections in May, the "For a European Serbia" alliance outperformed the Serbian nationalists. Then in July the arrest of Bosnian Serb wartime leader Radovan Karadzic—one of a group of men whose capture the EU had been demanding—also helped improve relations. Karadzic's capture was described by British Foreign Minister David Miliband as an "important step" toward Serbia's accession to the EU.

Ireland, historically one of the most enthusiastic EU member countries, caused the biggest short-term problem in the middle of the year. In June in a referendum, Irish voters rejected the EU's Lisbon Treaty—a set of proposals designed to modernize the bloc's institutions so that they could function with its increased membership of 27 countries. The treaty had started out in 2004 as the EU Constitutional Treaty, which was rejected in referenda in France and The Netherlands in 2005.

The renamed Lisbon Treaty was much the same in substance, although EU leaders—in the hope of making it more acceptable to citizens who feared the loss of powers from their own national governments to the EU's central power in Brussels—insisted that the new treaty was less far reaching in constitutional terms. According to the existing rules, every country in the EU must ratify a new treaty, either in its respective parliament or in a referendum, for that accord to be implemented anywhere in the community. With the Irish rejection, the Lisbon Treaty was unable to come into force as scheduled on Jan. 1, 2009. EU leaders said that the process of ratification in other countries had to continue, but there was no obvious way forward unless, sometime in the future, the Irish government held another vote and won approval. In the meantime, the EU would have to carry on with structures devised in the 1950s for its original six-country membership.

In August the EU's attention switched to the crisis in Georgia after Russia sent tanks into that country in a dis-

pute over the breakaway region of South Ossetia, whose population was primarily ethnically Russian. Moscow's actions were seen in part as a warning to Western countries not to back Georgia's efforts to join NATO—an idea that had been discussed by members of the Western alliance.

The question of how to deal with the situation in Georgia caused intense debate among the EU member countries. An emergency summit of EU leaders in Brussels on September 1 denounced the "disproportionate" Russian action and described as "unacceptable" the Kremlin's recognition of South Ossetia and Abkhazia, another breakaway province in Georgia. There was no agreement on a plan submitted by British Prime Minister Gordon Brown to freeze negotiations with Moscow on a new EU-Russia strategic partnership. France, which had assumed the EU presidency on July 1, urged caution, saying that it did not want "another Cold War." As the United States led the condemnation of Russia, France was in the vanguard of those who urged caution, highlighting Europe's reliance on energy supplies from Russia.

By early autumn, as tensions over Georgia lessened, the global financial and banking crisis was posing fundamental questions of a very different sort for the European Union. Instability in the global financial markets was spreading fears of a severe worldwide economic slowdown. Food and commodity prices had been climbing all year, threatening a surge in inflation, and instability in the value of the U.S. dollar affected the euro. At the same time, there were also calls in member countries for cuts in euro-zone interest rates. The debate remained: whether the EU would establish a joint economic policy to combat the crisis or every country would be responsible for itself as the financial crisis hit home—an approach that would severely undermine the EU's central purpose.

In late September Ireland was criticized by its EU partners for suddenly and unexpectedly announcing plans to guarantee all bank savings, even corporate deposits, in six of its main banks. Other EU countries were furious that the Irish government had not consulted its European partners and that the plan might mean that people across the community would switch their banking to Ireland, which thus would distort the European system.

French Pres. Nicolas Sarkozy called an emergency summit of the "big four" EU nations—France, Germany, Italy, and the U.K.—to discuss the crisis. At this meeting, held in Paris on October 4, the leaders demanded a global gathering to consider the formation of a new world financial system to replace the 1944 Bretton Woods agreement, which had formed the International Monetary Fund and the World Bank. "We need to literally rebuild the international financial system," Sarkozy said. "We want to lay the foundations of entrepreneurial capitalism, not speculative capitalism."

Within hours of that declaration, however, there was consternation in Paris, London, and Rome: Germany had itself established a plan to guarantee its savers' money in German banks that appeared to exceed the perimeters of accepted EU policy. After initially furious protests, tempers cooled as the German government explained that its plan was a far-more-limited measure than that authorized by Ireland, but the row exposed many of the tensions at the heart of the European project.

During October and early November, there was a greater sense of common purpose as the EU backed plans, pushed hard by Prime Minister Brown, to prop up and partially nationalize major banks. Several of the largest European countries—notably the U.K. and Germany—developed proposals for tax cuts to give their economies a fiscal stimulus to encourage people to start spending again. Even the U.K.—traditionally resistant to the idea of a coordinated European fiscal policy—admitted that cooperation within the EU was a vital component in reviving the global economy. In mid-November leaders of the larger EU states took part in a Group of 20 (G-20) summit of major advanced and emerging economies held in Washington, D.C., where it was agreed that the economic crisis required coordinated global action on fiscal policy, including, where possible, tax reductions to jump-start the world economy. The G-20 leaders also decided to try to restart the stalled Doha round of trade talks and to work toward reform of the IMF and the World Bank so that those two institutions could work effectively in the new world of global finance.

On November 5 the EU turned some of its attention to the next phase of EU expansion, declaring that Croatia—another Balkan state—was on course to become the 28th EU member country by the end of 2010 or early in 2011. Serbia was told that it might be able to start membership talks in 2009. Turkey's path toward entry remained strewn with obstacles. In a report on the EU's expansion plans, Olli Rehn, the European commissioner with authority for enlargement, said that there had been "stagnation" in Turkey's efforts to meet the political and economic conditions for entry. At the same time, Sarkozy was subtly applying new pressure on Ireland to hold a second referendum, claiming that there could be no further admissions until all existing member countries had ratified the Lisbon Treaty.

As the year drew to a close, it was clear that despite diplomatic crises on its doorstep, a continuing constitutional wrangle involving its own rule book, and a global economic crisis that had raised questions about its plans for common economic policies, the EU was still a club that many ambitious countries wanted to join. Membership offered a sense of stability in an unstable world and a say in an international organization that was using the weight of its collective membership to argue for global solutions to many global problems.

(TOBY HELM)

MULTINATIONAL AND REGIONAL ORGANIZATIONS

In mid-November 2008, leaders of the Group of 20 (G-20) major advanced and emerging economies met in Washington, D.C., to discuss the growing global financial crisis. At this summit—and at a meeting of G-20 finance ministers held a week earlier in São Paulo—less-developed countries expressed the desire to have a greater voice, while developed countries were divided on their views of international financial market regulations. Among the decisions that were reached, emerging markets were to receive seats on the Financial Stability Forum for the first time as well as more seats in the IMF and the World Bank. A second summit was scheduled for April 2009. The annual Asia-Pacific Economic Cooperation (APEC) summit followed the G-20 meeting by one week and endorsed the latter's plan of action, adding a pledge to ban new protectionist actions for the next year and to revive the stalled Doha round of World Trade Organization (WTO) negotiations.

The economic crisis had a profound effect on members of the Organization of the Petroleum Exporting Countries, for which worldwide drops in oil consumption led to a drastic decrease in

the price of oil per barrel after it reached a record high of $145.29 in July. With prices continuing to drop late in the year, many OPEC countries that used oil revenues to balance their national budgets faced hard economic times. OPEC leaders met twice in the autumn and agreed on a 1.5-million-bbl-per-day production cut, and in mid-December they cut production by 2.2 million bbl a day, a new record.

The Group of Eight (G-8) summit of major developed countries was held in Hokkaido, Japan, in July, before the financial crisis began to unfold. Climate change was a major topic, and the final declaration called for reducing carbon emissions 50% by 2050. Notable was the U.S.'s willingness to agree to this target, although the vague language did not create any binding agreement.

The African Union's (AU's) peacekeeping responsibilities grew with calls for more troops in the Darfur region of The Sudan. (See *The Sudan:* Sidebar, below.) The situation in Somalia also deteriorated, and with too few AU peacekeepers on the ground, it proved impossible to stabilize the region. Renewed violence in the Democratic Republic of the Congo (DRC) prompted speculation in late 2008 that AU peacekeepers would be needed if a cease-fire could not be reached. Meanwhile, the Southern African Development Community (SADC) agreed to assist the DRC government's armed forces with military aid. The SADC attempted to mediate a power-sharing agreement in Zimbabwe between longtime Pres. Robert Mugabe and opposition leader Morgan Tsvangirai but failed to secure a satisfactory outcome. A coup in Mauritania led AU leaders to suspend Mauritania's membership and aid while they dispatched an envoy to meet with coup leaders.

Several prominent Arab countries—notably Saudi Arabia and Egypt—failed to send their heads of state to the Arab League summit in March in Damascus. The snub by 11 of the 22 member countries was to protest the Syrian role in Lebanon's continuing political crisis. On July 19 the league met in a special session to denounce the indictments by the International Criminal Court (ICC) against Sudanese Pres. Omar al-Bashir (*see* BIOGRAPHIES) on charges of war crimes and genocide in Darfur. The league called upon the UN Security Council to block the issuance of an arrest warrant for fear of further violence between the government, rebel forces, and the AU/UN peacekeepers.

Following the cyclone that devastated Myanmar (Burma) in May and the military junta's ban on international relief aid, the Association of Southeast Asian Nations (ASEAN) took the initiative to get an agreement to admit relief supplies and workers from other ASEAN countries. In late October Indonesia became the last member to ratify the ASEAN Charter that would turn the organization into a legal entity. The agreement also set in motion a process to create by 2015 an ASEAN Community that would include the ASEAN Economic Community, Security Community, and Socio-Cultural Community. The charter incorporated human rights for the first time but did not allow ASEAN to apply sanctions or expel a member country for human rights violations. ASEAN also concluded free-trade agreements with India, Japan, Australia, and New Zealand.

Following the August conflict in Georgia, Russia turned to the Shanghai Cooperation Organization (SCO) for recognition of the independence of the breakaway provinces of South Ossetia and Abkhazia. Instead, nervous about the precedent that this might establish for future interventions, the five other SCO members condemned the use of force and called on Russia and Georgia to "solve existing problems peacefully, through dialogue, and to make efforts facilitating reconciliation and talks." In October, with the global financial crisis unfolding, Chinese Premier Wen Jiabao called on the SCO to develop coordinated monetary policy and financial regulations.

In Latin America, efforts by the South American Common Market (Mercosur) and the Andean Community to create a new Union of South American Nations (UNASUR) on the model of the European Union moved a step closer to reality in May with the signing of a constitutive treaty. UNASUR—which would include the Banco del Sur (Bank of the South), launched in 2007—would create a single market by 2019 and establish free movement of people, continental infrastructure development, and a South American Defense Council.

(MARGARET P. KARNS)

DEPENDENT STATES

Europe and the Atlantic. In May 2008 Ilulissat, Greenland, was the site of an international summit on Arctic sovereignty attended by official representatives from the five countries that border the Arctic Ocean: Canada, Denmark, Norway, Russia, and the U.S. The two-page Ilulissat Declaration, released at the end of the summit, provided a legal framework for Arctic development. In November the electorate in Greenland voted resoundingly in favour of greater autonomy from Denmark.

In October *New Scientist* magazine reported the results of a yearlong study of Greenland's Jakobshavn glacier. Time-lapse photographs taken at least every six hours between May 2007 and May 2008 revealed that two rivers of ice on the glacier were draining Greenland's ice sheet and contributing to a rise in sea level. A report from Ohio State University's Byrd Polar Research Center confirmed that a massive 29-sq-km (11-sq-mi) chunk of Greenland's Petermann glacier broke loose in July.

On January 19 the Faroe Islands held its first election to the new 33-seat Logting (legislature) since the 2007 reforms that replaced proportional representation with a single constituency. Although the pro-independence Republican Party won the most seats (eight), the Unionist Party, with seven seats, remained at the head of a coalition led by Prime Minister Jóannes Eidesgaard. On September 26 Kaj Leo Johannesen was sworn in as prime minister in a realigned three-party coalition, with Eidesgaard as finance minister.

A planned cull in April of up to 25 monkeys in Gibraltar triggered international protests. Some of the territory's famed Barbary macaques had invaded tourist areas, and the government ex-

Barbary macaques play at the top of the Rock of Gibraltar in April; a planned cull of some 25 of the famous monkeys sparked international protests.

Anton Meres—Reuters/Landov

pressed concern that the wild monkeys (which had been known to damage property, bite, and carry communicable diseases) were a threat to public safety.

Sark's 600 residents voted in a referendum to endorse a new constitution to replace the Channel Island's feudal system of government (created in 1565) with a 28-member elected legislature. The U.K.'s Queen Elizabeth II approved the change, but several wealthy landowners and the neighbouring island of Guernsey, which claimed sovereignty over Sark, questioned the validity of the new constitution.

(MELINDA C. SHEPHERD)

Caribbean and Bermuda. Puerto Rico's government-owned power company, PREPA, indicated in January 2008 that it wanted to reduce dependence on oil-fired electricity generation to 52% by 2010 and 33% by 2018. In 2008 oil accounted for 73% of generation fuel, with natural gas and coal making up the other 27%. A wind farm was planned for the island's southwest coast.

Puerto Rican Gov. Aníbal Acevedo Vilá was formally charged in March with 19 counts of campaign finance fraud, along with 12 associates in Puerto Rico, Washington, D.C., and the Philadelphia area. The charges included collecting illegal donations to pay off political campaign debts, spending more than reported to U.S. federal election regulators, and using campaign money for personal expenses. Alric Simmonds, onetime deputy chief of staff for former U.S. Virgin Islands governor Charles Turnbull, was jailed for eight years in June for having stolen more than $1.2 million in government funds.

The Dutch parliament in April was told by the minister responsible for kingdom affairs that the December 15 target for the dismantling of the Netherlands Antilles could not be met and that a more realistic timetable was January 2010. Under the disintegration plan, St. Maarten and Curaçao would become autonomous states within the Dutch kingdom, while St. Eustatius and Saba would revert to the status of kingdom municipalities. In November Aruban authorities announced that they had new evidence in the 2005 disappearance of American teenager Natalee Holloway; the highly publicized case remained unsolved after more than three years.

Ramon Tonito Zayas—El Nuevo Dia/AP

Puerto Rico's governor-elect, Luis Fortuño, is mobbed by jubilant supporters after delivering his victory speech on November 4 in San Juan; Fortuño decisively defeated the incumbent governor, Aníbal Acevedo Vilá, who had been indicted for campaign finance violations.

Concern over corruption in the Turks and Caicos government was heightened in March when the UK's House of Commons Foreign Affairs Committee reported that it had received "the largest number of submissions" on the subject from any overseas territory. The British government appointed a commission of inquiry, which late in the year summoned Premier Michael Misick to testify and to produce vital documents. In September Hurricane Ike caused tremendous damage to Grand Turk. Cayman Islands Gov. Stuart Jack in September assured the public that the territory's judicial system would continue to function normally, despite the arrest of a senior judge, Alexander Henderson, for "misconduct in public life." Another judge, Priya Levers, had been suspended from the bench earlier, pending investigation.

In early 2008 Bermuda's Ministry of Finance estimated that GDP would be in the range of 2.5–3% in fiscal 2008–09, with projected revenue of $985 million, but soaring food and oil prices caused the estimate to be downgraded in July to 2–2.5%. The economic downturn in the U.S., Bermuda's leading source of trade and tourism income, pushed the government in November to defer a planned pay hike for MPs.

The Montserrat government switched coalition partners in February, striking up an alliance with the Movement for Change and Prosperity (MCAP) after having been partnered by the New People's Liberation Movement (NPLM) since June 2006. Lowell Lewis remained chief minister, and the new coalition had a majority of 6–3 in the legislative council.

On April 17 Aimé Césaire—poet, politician, and cofounder of the Negritude movement—died in Martinique. (*See* OBITUARIES.) In 2007 the airport there was renamed in his honour.

(DAVID RENWICK)

Pacific Ocean. Niue hosted the 39th Pacific Islands Forum's Leaders' Summit on Aug. 19–21, 2008. Niue's new premier, Toke Talagi, welcomed some 350–400 delegates and others representing the 16 member states, including French Polynesia Pres. Gaston Tong Sang, who was attending his first forum summit. The influx increased the size of Niue's population by some 30% and placed huge pressures on the island's limited accommodations. The Niue meeting was said to be "more intimate and shorter" than previous annual forum meetings.

In French Polynesia, Tong Sang, who had served as president in 2006–07, regained the post in April 2008 after his To Tatou Ai'a coalition won a majority in the January general election and forced a no-confidence vote against Pres. Gaston Flosse just 53 days after Flosse defeated Tong Sang for the presidency. The new French high commissioner, Adolphe Colrat, arrived in Tahiti in July. One of the first challenges he faced was a claim by President Tong Sang for financial compensation from France for planned reductions in the French Pacific Marine Infantry Regiment garrison and air base, both of which were important sources of territorial income. Meanwhile, yet another political party was formed by a member of the ruling coalition, Hiro Tefaarere.

New Caledonia's first national anthem was performed in June to mark the 20th anniversary of the signing of the Matignon-Oudinot Accords, which provided for the territory's progressive movement toward greater autonomy from France and an eventual referendum on self-determination. The UNESCO World Heritage Committee in July named the Lagoons of New Caledonia, some 15,000 sq km (almost

6,000 sq mi) encompassing six lagoons in the world's second largest continuous coral reef, a World Heritage site.

Guam spent 2008 preparing for the most profound transformation in its history. The island's population was expected to increase from 175,000 to some 225,000 between 2010 and 2014 as 8,000 U.S. Marines and 9,000 of their dependents were relocated from Okinawa. Preparations began for a $10.3 billion investment in military bases, housing, and utilities on Guam. The expenditure of the first $200 million in 2008 led to an increase in economic activity, but the planned infrastructure expansion would require significant inflows of skilled labour from beyond Guam.

The highlight of American Samoa's year occurred in late July, when the territory hosted the quadrennial Festival of Pacific Arts. The festival saw some 2,100 artists and performers from 27 Pacific nations gather in Pago Pago for two weeks to demonstrate traditional arts and performances.

The Cook Islands Council of Traditional Chiefs, or House of Ariki, in June strayed from its traditional role, announcing the dismissal of the elected government and asserting its control over the territory's land and sea. The chiefs were forced to renounce their claims several days later, however, after both the government and the public criticized the traditional leaders for jeopardizing the Cook Islands' international reputation for stability. The council reportedly had asserted its power to assume control over potentially lucrative mineral-exploration rights within the Cook Islands' huge exclusive economic zone and the potentially larger continental shelf.

(CLUNY MACPHERSON)

Indian Ocean. Relations between France and the Comoros island group remained strained in 2008. At the UN General Assembly on September 25, Comoros Pres. Ahmed Mohammed Abdallah Sambi raised the issue of Mayotte's constitutional position. France planned to hold a referendum in 2009 on Mayotte's status. Sambi claimed that such a referendum would disrupt the harmony needed between the Comoros' four constituent islands.

The dispute followed a crisis on the island of Anjouan, where Pres. Col. Mohamed Bacar refused to relinquish his presidency when his term of office expired in April. Instead, he held an illegal election, printed his own ballot papers, and in June declared himself the winner. After Comoran and African Union troops toppled his regime, Bacar and five members of his former government fled to Mayotte and thence to Réunion, where they were put under house arrest. (See *Comoros*, below.)

After a 10-year legal fight, families evicted from their homes on Chagos Archipelago lost their battle to return when in October the U.K. House of Lords ruled in favour of the Foreign Office's appeal against a prior court decision that supported their return. The islanders, some of whom traveled to London from their current home on Mauritius for the ruling, were removed from Chagos in the 1970s to accommodate a U.S. military base on Diego Garcia. The disappointed Chagossians' leader, Olivier Bancoult, said that they were considering taking the case to the European Court of Human Rights.

The Australian government in 2008 used the increased capacity of a newly built detention centre on Christmas Island to process asylum seekers. The facility on Christmas Island was Australia's last remaining offshore detention site in the country's Pacific Solution for unauthorized boat arrivals.

(A.R.G. GRIFFITHS)

Dependent States[1]

Australia
- Christmas Island
- Cocos (Keeling) Islands
- Norfolk Island

Denmark
- Faroe Islands
- Greenland

France
- French Guiana
- French Polynesia
- Guadeloupe
- Martinique
- Mayotte
- New Caledonia
- Réunion
- Saint-Barthélemy
- Saint-Martin
- Saint-Pierre and Miquelon
- Wallis and Futuna

Netherlands, The
- Aruba
- Netherlands Antilles

New Zealand
- Cook Islands
- Niue
- Tokelau

United Kingdom
- Anguilla
- Bermuda
- British Virgin Islands
- Cayman Islands
- Falkland Islands
- Gibraltar
- Guernsey
- Isle of Man
- Jersey
- Montserrat
- Pitcairn Island
- Saint Helena
- Tristan da Cunha
- Turks and Caicos Islands

United States
- American Samoa
- Guam
- Northern Mariana Islands
- Puerto Rico
- Virgin Islands (of the U.S.)

[1]Excludes territories (1) to which Antarctic Treaty is applicable in whole or in part, (2) without permanent civilian population, (3) without internationally recognized civilian government (Western Sahara), or (4) representing unadjudicated unilateral or multilateral territorial claims.

ANTARCTICA

Ice averaging roughly 2,160 m (7,085 ft) in thickness covers more than 98% of the continent of Antarctica, which has an area of 14 million sq km (5.4 million sq mi). There is no indigenous human population, and there is no land-based industry. Human activity consists mainly of scientific research. The 47-nation Antarctic Treaty is the managerial mechanism for the region south of latitude 60° S, which includes all of Antarctica. The treaty reserves the area for peaceful purposes, encourages cooperation in science, prescribes environmental protection, allows inspections to verify adherence, and defers the issue of territorial sovereignty.

At the 31st Antarctic Treaty Consultative Meeting (ATCM) held in June 2008, representatives from more than 50 governments and international organizations focused on the environmental stewardship of Antarctica. The delegates designated southwestern Anvers Island and the adjacent Palmer Basin off the western coast of the Antarctica Peninsula as an Antarctic Specially Managed Area (an area where all activities were planned and coordinated to avoid possible conflicts, improve cooperation between parties, and minimize environmental impacts). They also designated Mt. Harding, Amanda Bay, and Marion Nunataks (mountains) as Antarctic Specially Protected Areas (ASPAs) and adopted revised management plans for 10 existing ASPAs. An environmental geographic framework that classified the continent into 21 different environments was adopted to help identify areas that could be designated as ASPAs. Delegates also considered tourism policy and maritime traffic-management issues, including new guidelines for landing at sites frequently visited by tourists.

As part of the ATCM, the Committee for Environmental Protection held its 11th meeting. The committee's most significant discussions focused on the draft environmental evaluation that was prepared by China for the construction and operation of its new station, Dome A, in East Antarctica. Using information provided by the committee, the Chinese government released a final environmental evaluation in August. The committee also discussed and supported a recommendation by the Scientific Committee on Antarctic Research not to add the southern giant petrel to the list of specially protected species.

During the 2007–08 austral summer, about 44,500 tourists traveled to Antarctica by ship, with about three-

fourths of them landing in the Antarctic Treaty area. About 260 visitors participated in multiday land-based expeditions to the continental interior, and 270 passengers made overflights of Antarctica from South America. On Dec. 4, 2008, the MV *Ushuaia*, operated by the Argentine tour company Antarpply Expeditions, ran aground at the entrance of Wilhelmina Bay near Cape Anna with 82 passengers and 40 crew onboard. Although the passengers were not in immediate danger, they were evacuated the next day by the Chilean naval vessel *Aquiles*. The ship was freed on December 8, and after an inspection of its hull by Chilean navy divers showed that the ship was seaworthy, it sailed to the Shetland Islands.

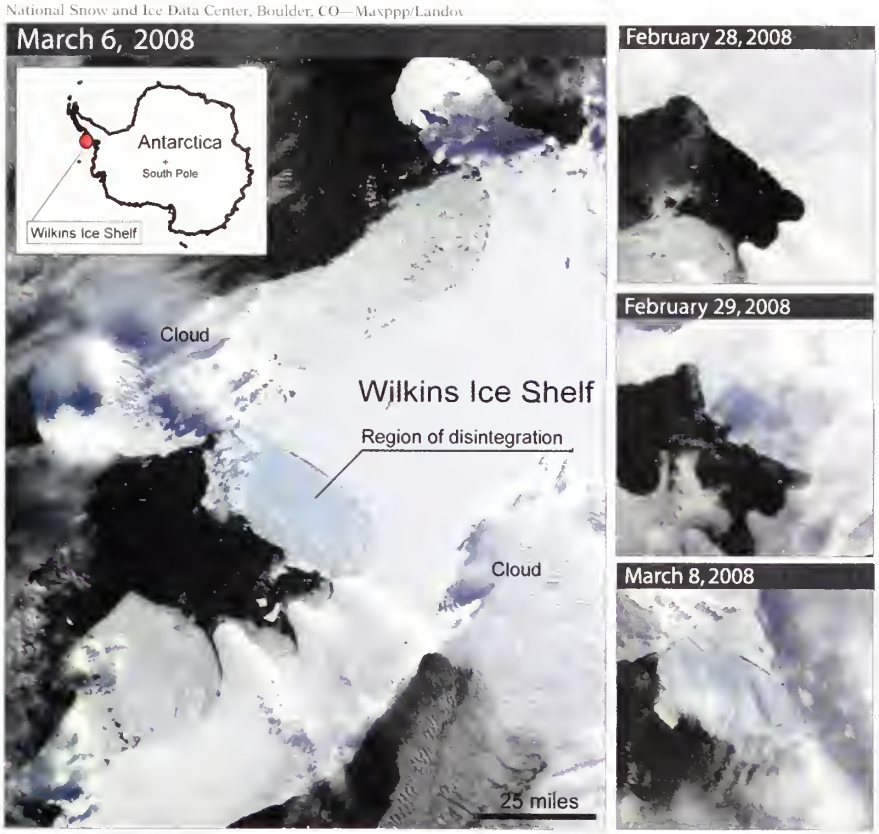
In December 2007 the Australian National Antarctic program landed a passenger jet for the first time on a runway that it had constructed on the surface of a glacier about 70 km (43 mi) from Casey Station. The runway, which could support the landing of large wheeled airplanes or smaller ski-equipped planes every 7 to 10 days, established an air link between Australia and Antarctica.

In 2008 Japan made the environmental cleanup of its Antarctic facilities a priority. After having removed 2,000 tons of garbage over the previous three years, expedition members discovered a landfill full of discarded vehicles, building materials, and old furniture. The entire cleanup was expected to take several years to complete.

In October 2008 the Belgium Antarctic Research Expedition began the final phase of construction of its new station, Princess Elisabeth Antarctica. The first zero-emission research station, it was designed to minimize heating requirements, to make use of recycled water, and to operate on a combination of wind power and solar power.

A biological survey conducted by British and German scientists revealed that the South Orkney Islands near the tip of the Antarctic Peninsula had greater biodiversity than even the Galapagos Islands. After combing land, sea, and shore, they cataloged more than 1,200 known and 5 new species, including sea urchins, free-swimming worms, crustaceans and mollusks, mites, and birds. British Antarctic Survey scientists used a camera-equipped remotely operated vehicle in the deep waters around the Antarctic Peninsula to obtain images of krill—the shrimplike crustacean that is a key element of the Antarctic food web—at depths

National Snow and Ice Data Center, Boulder, CO—Maxppp/Landov



A series of satellite images illustrates the disintegration of the Wilkins Ice Shelf, on the west coast of the Antarctic Peninsula, in February and March.

down to 3,500 m (11,500 ft). Scientists had previously believed that the crustacean lived only in the top 150 m (490 ft) of the Southern Ocean. American researchers discovered freeze-dried fossils of moss as well as fossils of insects, diatoms, and tiny freshwater crustaceans in 14-million-year-old sediment in the McMurdo Dry Valleys. The fossils disappeared from the record at about 13.8 million years, and the researchers believed that this was an indication that Antarctica cooled at least 7.9 °C (14.2 °F) in about 200,000 years.

In February 2008 a 400-sq-km (155-sq-mi) section of ice broke away from the Wilkins Ice Shelf on the west coast of the Antarctic Peninsula in a sudden collapse. As the 2008–09 austral summer began, satellite images showed that new rifts had formed in the ice shelf and that the disintegration had continued. Images from late November 2008 suggested that an ice bridge that had been preventing the remaining ice shelf from breaking away from the peninsula was threatening to collapse.

American, British, Australian, German, and Japanese scientists began an extensive study of the Gamburtsev Subglacial Mountains in the interior of East Antarctica in October. Although the peaks of the mountains rose about 4,300 m (14,100 ft) above their surrounding terrain, they were buried under 4,000 m (13,100 ft) of ice. The region, which was the likely birthplace of the East Antarctic Ice Sheet, was believed to contain some of the oldest ice remaining on the continent. In an attempt to map these ancient mountains, the researchers used survey aircraft equipped with radar to record ice thickness and ice-sheet structure and other instruments to measure gravity and magnetism.

An expedition of American and Australian scientists found evidence in the Transantarctic Mountains that supported the geologic theory that East Antarctica was connected to the western edge of North America 600 million to 800 million years ago as part of the supercontinent Rodinia. Their find consisted of a small boulder of coarse-grained granite that had a chemical composition similar to that of a unique belt of igneous rocks that extended across a part of Rodinia that includes present-day California.

(WINIFRED REUNING)

ARCTIC REGIONS

The Arctic regions may be defined in physical terms (astronomical [north of the Arctic Circle, latitude 66° 30' N], climatic [above the 10 °C (50 °F) July isotherm], or vegetational [above the northern limit of the tree line]) or in human terms (the territory inhabited by the circumpolar cultures—Inuit [Eskimo] and Aleut in North America and Russia, Sami [Lapp] in northern Scandinavia and Russia, and 29 other peoples of the Russian North, Siberia, and East Asia). No single national sovereignty or treaty regime governs the region, which includes portions of eight countries: Canada, the United States, Russia, Finland, Sweden, Norway, Iceland, and Greenland (part of Denmark). The Arctic Ocean, 14.09 million sq km (5.44 million sq mi) in area, constitutes about two-thirds of the region. The land area consists of permanent ice cap, tundra, or taiga. The population (2008 est.) of peoples belonging to the circumpolar cultures is about 535,000 (Aleuts [in Russia and Alaska], more than 4,000; Athabascans [North America], 40,000; Inuits [or Eskimos, in Russian Chukhotka, North America, and Greenland], 155,000; Sami [Northern Europe], 85,000; and 41 indigenous peoples of the Russian North, totaling about 250,000). International organizations concerned with the Arctic include the Arctic Council, the Barents Euro-Arctic Council, the Inuit Circumpolar Council, and the Indigenous Peoples' Secretariat. International scientific cooperation in the Arctic is the focus of the International Arctic Research Center of the University of Alaska at Fairbanks and the University of the Arctic, a circumpolar network of member institutions.

With the rapid onset of climate change—and its related summer sea-ice melt and the prospects of future oil and natural gas development and shorter shipping routes—the Arctic remained a region of political interest throughout 2008. Summer sea ice hit its annual minimum on September 14. It was the second lowest ice extent on record, 34% below the long-term average from 1979 to 2000. Measurements of ice thickness showed that it was continuing to thin. Scientists estimated that the overall volume of Arctic sea ice might be at an absolute minimum. Several ice shelves in the Canadian Arctic Archipelago broke away in 2008, setting adrift approximately 194 sq km (75 sq mi) of shelf. Land-based ice also continued to melt. The Greenland Ice Sheet, the largest ice mass in the Northern Hemisphere, lost 222 cu km (53 cu mi), an increase of 70% in melt over previous years.

In response to the ongoing ice loss, polar bears (which depend on sea ice for their hunting of seals for food) were listed in May 2008 as threatened under the U.S. Endangered Species Act. Alaska challenged the listing, citing a lack of evidence to support the threatened status and noting that some polar bear populations were not in decline. Offshore oil and gas interests coincided with regions that were being considered for designation as critical polar bear habitat.

The U.S. Geological Survey completed a four-year in-depth study on Arctic oil and gas reserves in May. The USGS report, released in July, stated that the "extensive Arctic continental shelves may constitute the geographically largest unexplored prospective area for petroleum remaining on Earth." Overall, the Arctic was estimated to hold 22–23% of the world's oil and gas, about 13% of global oil reserves, and 30% of global gas reserves. Most of the reserves were identified as being on the coastal continental shelves, as opposed to the deep ocean basins, and most of the reserves were as yet unproven.

Early in the year the Arctic Monitoring and Assessment Program (a branch of the Arctic Council) issued the report of its four-year study on the state of oil and natural gas development in the Arctic. Later the report's executive summary, which included policy recommendations on Arctic drilling practices, was released.

In May representatives of the five countries that border the Arctic Ocean met to discuss how overlapping claims to the Arctic Ocean would be resolved. Denmark hosted Russia, Norway, Canada, and the U.S. at the meeting, which was held in Ilulissat, Greenland. Senior political officials agreed to work cooperatively under the UN Convention on the Law of the Sea. In addition, the coastal states agreed that they shared a stewardship role in protecting and preserving the fragile marine environment of the Arctic Ocean. Canada and Denmark continued work in 2008 toward their submissions under the convention, while Russia had submitted its territorial claim in 2007. The U.S., which as of 2008 still had not ratified the convention, did carry out further seabed mapping north of the Beaufort Sea, which was required for any future claim. Circumpolar Inuit leaders met in November to comment on sovereignty and development.

Onshore, the ongoing development of Arctic pipelines showed mixed results. Work on the Far East oil pipeline from Siberia to the Pacific Ocean continued. In August the Alaska Senate approved a state license for TransCanada Corp. to proceed with the planning and permit stages of the 2,700-km (1,700-mi) natural gas pipeline. In the meantime, the Mackenzie Valley gas pipeline in Canada was again delayed, with regulatory approval awaiting a report delineating the environmental and socioeconomic impacts of the pipeline. The report was due in 2009.

World oil prices rose in 2008 from $90 per barrel at the beginning of the year to a high of $145.29 per barrel in July and back down by year's end to $44.60 per barrel as a result of the global credit crisis that originated in the U.S. Circumpolar economies remained largely resource based and fossil-fuel dependent. As a result, regional activity was heavily affected by this volatility and by the downturn in commodity prices.

Arctic marine traffic was up in 2008, including commercial shipping, research vessels taking part in the International Polar Year, search and rescue missions, and Arctic tourism. For the first time, both the Northwest Passage in North America and the Northeast Passage in Eurasia opened concurrently, and it was thus possible to circumnavigate the Arctic Ocean. New icebreakers were being planned in Russia and were under discussion in Canada and the U.S. There were plans for a major Arctic Ocean shipping-lane oil-spill rehearsal to take place in the Barents Sea in 2009.

Nearly 20 years after the worst oil spill in U.S. history, a final compensation settlement was reached. On March 24, 1989, the tanker *Exxon Valdez* ran aground on Bligh Reef in Prince William Sound, Alaska, releasing more than 200,000 bbl of crude oil. The resulting slick contaminated about 1,770 km (1,100 mi) of coastline, killed thousands of animals, and seriously disrupted the Alaska fishing industry. The original settlement of $5.2 billion awarded by an Alaska jury in 1994 was reduced on repeated appeals to $2.5 billion. In June 2008 the U.S. Supreme Court slashed that amount to $507.5 million. Alaska Gov. Sarah Palin (*see* BIOGRAPHIES) expressed disappointment in the ruling, and lawyers for the plaintiffs claimed that ExxonMobil Corp. owed an additional $488 million in interest, owing to the two-decade delay. The settlement was scheduled to be divided among more than 32,000 plaintiffs, predominantly Alaska fishermen, but further legal delays were likely.

(JOHN STREICKER)

AFGHANISTAN

Area: 645,807 sq km (249,347 sq mi)
Population (2008 est.): 28,266,000 (including about 2,000,000 Afghan refugees in Pakistan and about 900,000 Afghan refugees in Iran)
Capital: Kabul
Chief of state and head of government: President Hamid Karzai

Afghanistan in 2008 saw a surge of violence from militants using relentless and brutal attacks against the U.S.-backed Kabul government. This drew increased attention to tribal areas in northwestern Pakistan that were being used as a base and sanctuary for Taliban operations in Afghanistan.

By the end of 2007, NATO forces had driven Taliban militants from their base in Helmand province following months of combat. Guerrilla ambushes and massed attacks continued, and Taliban influence remained strong in rural areas. In March 2008 the U.S. sent 3,600 Marines to assist in the fighting in the south.

The number of roadside bombs in Afghanistan increased to some 2,000 in 2008, double the number from a year earlier. Increased use of suicide attacks and roadside bombs suggested that the Taliban was adopting strategies from fighting in Iraq, and bold operations in Afghanistan reflected more aggressive Taliban and al-Qaeda activity inside Pakistan. Isolated attacks were opportunities for Taliban hostage taking, and reprisals by foreign troops, especially air strikes, often resulted in civilian casualties. Planned assaults in cities discredited the government of Pres. Hamid Karzai.

In January eight people were killed by suicide bombers in a luxury hotel in Kabul. A suicide bomber in February killed up to 80 people at an outdoor dog fight in Kandahar. To make communications between foreign forces more difficult, the Taliban demanded that mobile phone companies shut down at night, and by the end of February it had begun destroying signal towers to force compliance. An assassination attempt on President Karzai at a large public ceremony in Kabul on April 27 failed, but several people, including a parliamentarian and a young boy, were killed during the ensuing gun battle.

In June suicide bombers blew open a prison in Kandahar, freeing more than 800 prisoners, including almost 400 Taliban fighters who escaped in waiting minibuses. A bomb at the Indian embassy in Kabul left more than 40 dead in July. Both the Taliban and Pakistani authorities denied involvement, but in the face of intelligence presented by Afghanistan, India, and the U.S., Pakistan's government agreed to investigate possible involvement by its own officers.

Calls by President Karzai grew stronger for U.S. and NATO forces to tackle the al-Qaeda and Taliban threat at its roots in northwestern Pakistan. Afghans who had sided with the resistance, it was argued, were not so grave a danger to the country and could be overcome and reconciled if only support and encouragement from outside Afghanistan were stopped. The U.S. was reluctant to push the issue to an outright break with one of its important allies, even as coalition ground forces pushed the front ever closer to the Pakistani border. Pakistan several times protested officially that its territory had been violated, and U.S. officials admitted that artillery and unmanned aircraft were used inside Pakistan, but only in cooperation with Pakistan's military. In September, U.S. forces adopted a more aggressive strategy, including the launch of commando raids that targeted Taliban and al-Qaeda leaders inside Pakistan's tribal areas. In October the UN reported that 20,000 refugees had fled into Afghanistan's Kunar province from Pakistan to escape fighting between Pakistani and Taliban forces.

Strained relations between Karzai and his Western allies appeared early in the year when Karzai blocked the appointment of a UN envoy to Afghanistan because he felt that his government was being excluded from key decisions, including diplomatic contacts with Taliban elements. Karzai's loudest complaint, however, was on the numbers of civilian casualties resulting from foreign military operations. Official Afghan investigations concluded that the 47 people killed in a coalition air strike were civilians belonging to a wedding party. According to Afghan and UN reports, another strike in August claimed up to 90 civilians. U.S. authorities initially asserted that only seven civilians died but invited a joint investigation. Public outrage at numerous such incidents caused some government figures to fear that these tactics would become counterproductive in confronting Taliban influence.

The UN reported that land planted in opium dropped by 19% from 2007, although yield per hectare was up. Areas of greatest Taliban penetration accounted for 98% of the production. Global and local conditions driving up food prices made wheat an increasingly attractive alternative, and the income ratio of opium to wheat per hectare fell from 10:1 to 3:1.

Except for certain problems with Pakistan, Afghanistan was on good terms with its neighbours. Indian development assistance included completion of a road in southwestern Afghanistan linking Kabul with the Iranian port of Chah Bahar, which would enable India to reach Afghanistan and Central Asia by land. (STEPHEN SEGO)

An Afghan policeman consoles a relative of the provincial governor who was killed along with three others in a roadside bombing carried out by the Taliban in Paghman, west of Kabul, in September.

Rafiq Maqbool/AP

ALBANIA

Area: 28,703 sq km (11,082 sq mi)
Population (2008 est.): 3,194,000
Capital: Tirana
Chief of state: President Bamir Topi
Head of government: Prime Minister Sali Berisha

APTN, Top Channel TV/AP

Fire rages after an explosion at an arms-conversion plant in the village of Gerdec, near the Albanian capital of Tirana, on March 15.

On April 3, 2008, Albania reached a key goal in its efforts to achieve Euro-Atlantic integration when it was invited (along with Croatia) to join NATO; the overture was made at the alliance's summit meeting in Bucharest, Rom. The NATO Council and the foreign ministers of both countries signed the accession protocols on July 9. The invitation reflected both Albania's progress in developing stable democratic institutions and rule of law and its achievements in transforming the military into a small professional force able to contribute to NATO's collective defense. The government pledged to contribute 2% of its GDP for defense spending by 2009. Albania also increased its contributions to international peacekeeping operations. On July 16 Defense Minister Gazmend Oketa announced that the number of troops serving in Mosul, Iraq, would be raised from 120 to 215. Albania also continued its involvement with small army units in Bosnia and Herzegovina and Afghanistan and pledged to send troops to Chad and the Central African Republic as part of an EU mission to protect refugees streaming in from Darfur, a region in The Sudan. (See *The Sudan:* Sidebar, below.)

The NATO invitation was overshadowed, however, by a series of explosions on March 15 in an arms-conversion plant in the village of Gerdec; 26 people were killed, more than 300 were injured, and more than 5,500 homes were destroyed or damaged. Defense Minister Fatmir Mediu, who took personal responsibility for the blast, resigned two days later. Media reports claimed that unqualified personnel, including children, were employed to dispose of ammunition that dated back several decades. The investigation was supported by FBI experts from the United States, but had not concluded by the end of the year.

The Albanian government continued to pursue EU integration, and during an interview on September 11, Prime Minister Sali Berisha said that the country could apply for membership as early as 2009. Four days later, however, EU Enlargement Commissioner Olli Rehn stressed that more needed to be done in Albania to foster democratic culture, the independence of institutions, rule of law, and the fight against organized crime and corruption. Nevertheless, Rehn acknowledged improved cross-party cooperation on judicial and electoral reform as well as the country's steady economic growth. On November 20 the governing Democrats and the rival Socialists joined forces to pass a new electoral law based on regional proportional representation. Cooperation between the two main parties was short-lived, however. On December 22 the Democrats passed a law banning from public office any persons linked to the communist-era secret service. The Socialists opposed this law, arguing that it would remove attorneys investigating the Gerdec tragedy and an ongoing corruption case against Foreign Minister Lulezim Basha. During 2008, unemployment stood at 13%, down slightly from 2007; real GDP growth remained at 5%. In relation to Kosovo, the government perceived its ongoing diplomatic efforts as successful following the widespread recognition of the region as a sovereign state by Western countries. Albania recognized Kosovo's sovereignty on February 18, one day after its declaration of independence. In other news, on September 4 Albania introduced a visa-free travel regime with neighbouring Macedonia.

(FABIAN SCHMIDT)

ALGERIA

Area: 2,381,741 sq km (919,595 sq mi)
Population (2008 est.): 34,574,000
Capital: Algiers
Chief of state: President Abdelaziz Bouteflika
Head of government: Prime Ministers Abdelaziz Belkhadem and, from June 23, Ahmed Ouyahia

Throughout 2008, Algerians awaited news of Pres. Abdelaziz Bouteflika's plan to amend the constitution by removing the bar on more than two presidential terms for an incumbent, lengthening the presidential term to seven years, appointing a vice president, and making the government answerable to the president rather than to the parliament. Normally, approval for constitutional amendments was secured through a referendum, but this time the parliament, which was given a salary increase of 300% (presumably to ensure passage), was dealt the task; as expected, the parliament approved the proposed amendments by a wide margin, a vote of 500 in favour to 21 opposed, in November. In June, Abdelaziz Belkhadem was replaced as prime minister by his predecessor, Ahmed Ouyahia, and the government was restructured.

The change in government was precipitated partly by the worsening security situation. Although there was relative calm following the devastating bombings in Algiers in December 2007, the summer of 2008 was violent, with several serious bomb attacks in June and August and at least 68 deaths. Calm during Ramadan was shattered at the end of September by another bomb blast at Dellys. The violence also spread into Skikda, Jijel, and Ain Defla provinces.

The government took action against evangelical churches in Algeria, partly because of fears of proselytizing but also, according to the religious affairs minister, because of their alleged involvement in terrorism. In addition, there were riots over food and energy price rises in Oran, Chlef, and Berriane. Prices overall rose by 6%, and food prices jumped by 9.7% year-on-year in May; government expenditure increased by 10% to cover subsidy costs. Food imports climbed 64% by value to more than $5 billion and were expected

to reach $9 billion in 2009. Algeria's foreign reserves surged to $125.9 billion, the equivalent of 67.5 months of imports. Foreign investment in Algeria faced additional constraints as the government complained of inadequate technology transfer and employment creation.

Despite expansions in electricity provision, unseasonably hot weather in September led to supply failures, which also affected water supply to urban areas. A four-year drought in the M'zab valley suddenly broke in early October with torrential rains that led to 30 deaths in Ghardaia.

In April, President Bouteflika visited Kuwait and Qatar, and in July he attended the opening summit of France's Union for the Mediterranean, despite Algerian skepticism over the project. The French premier arrived in Algiers in June to tie up details of the contracts agreed during French Pres. Nicolas Sarkozy's state visit in December 2007. An arms deal with Russia was renegotiated during Bouteflika's February visit to Moscow; Algeria had rejected the aircraft supplied as defective. Despite overtures from Morocco, Algeria's border with that country remained closed owing to the dispute over the Western Sahara. Algeria's corruption rating improved slightly as Transparency International rated Algeria 92nd of 180 countries (it had been rated 99th in 2007). (GEORGE JOFFÉ)

ANDORRA

Area: 464 sq km (179 sq mi)
Population (2008 est.): 84,100
Capital: Andorra la Vella
Chiefs of state: Co-princes of Andorra, the president of France and the bishop of Urgell, Spain
Head of government: Chief Executive Albert Pintat Santolària

Andorra in 2008 worked to enhance closer ties with other European countries. A principal goal of Chief Executive Albert Pintat Santolària's government was to institute the reforms needed to remove the country from the Organisation for Economic Co-operation and Development's list of tax havens. In 2008 Andorra signed on to the Proliferation Security Initiative to prevent trafficking in weapons of mass destruction. Pintat announced that the Future of Europe Summit would take place in Andorra on November 27–28. The summit was designed to provide a forum in which to brainstorm ideas to maximize Europe's role as a world leader in economic sustainability.

Only 36% of the country's residents in 2008 were Andorran citizens. The literacy rate was 100%, and the skills level was high. In contrast to the problem of brain drain in some parts of Europe—losing students to other countries, especially to the United States—Andorra had gained expertise. The large number of foreign residents, however, was an ongoing concern, especially since Andorran citizenship required 25 years of residency. Noncitizens were limited to holding a 33% share of a local company for 20 years, but a bill pending in the legislature would reduce that number to 10 years. (ANNE ROBY)

ANGOLA

Area: 1,246,700 sq km (481,354 sq mi)
Population (2008 est.): 12,531,000
Capital: Luanda
Chief of state and head of government: President José Eduardo dos Santos, assisted by Prime Ministers Fernando da Piedade Dias dos Santos and, from September 30, António Paulo Kassoma

Angola's general election, which was held on Sept. 5–6, 2008, was the first since 1992 and secured the position of the ruling Popular Movement for the Liberation of Angola (MPLA), which claimed victory in a landslide, with over 80% of the vote; the second-place finisher, the opposition National Union for the Total Independence of Angola (UNITA), won a meagre 10%. Although UNITA initially called for a rerun of the balloting following administration confusion in Luanda, its leader eventually conceded victory to the MPLA and declared the vote a victory for democracy.

Earlier in the year, in January, heavy rains caused severe flooding in the south, where 10,000 people were affected and forced to seek temporary accommodation. This tragedy was accompanied by better news that same month—the discovery of another extensive offshore oil field, which boosted Angola's prospects of remaining among the world's top 10 fastest-growing economies, a status that was reflected in the efforts of a number of countries to establish closer relations. In April alone leading government figures from Vietnam, Singapore, South Africa, Benin, Spain, and the Czech Republic visited Luanda intent upon promoting cooperation with Angola in the fields of science, technology, education, and economics.

In March the UN High Commissioner for Human Rights commended the government's efforts to consolidate democracy but was forced to close its office in Luanda in May owing to a lack of cooperation from the govern-

Angolan Education Minister Antonio Burity da Silva (centre) attends a ceremony in February marking the handover of the Chinese-funded Huambo (Angola) Agricultural Institute to the control of the Angolan government.

Xinhua/Landov

ment. As an earnest of the government's efforts to assist recovery from the civil war, the social welfare minister claimed in April that 410,000 of the 465,000 Angolan nationals who had been driven out of the country by the conflict had now returned home, while nearly 4 million of the 4.2 million internally displaced persons had also been reinstated. These figures were challenged by the growing disquiet in Luanda, where thousands of displaced persons—most of them agriculturalists who were unable to find employment in an urban setting—remained in shantytowns bordering the capital. There was also considerable success in clearing the countryside of land mines.

The wealth accrued from sales of oil remained in the hands of a small number of people and had not brought noticeable benefit to the population as a whole. Countrywide, unemployment remained extremely high, and the foreign minister felt it necessary in April to attempt to justify the heavy involvement of Chinese construction companies and Chinese labour in the reconstruction made necessary by the civil war. China, he said, was Angola's biggest trading partner and offered the cheapest high-level technology available. Nevertheless, in July the government decided that foreign workers would be employed in the oil industry only when no qualified Angolan was available. In the same month, a countrywide campaign was also launched—the third of the year—to vaccinate children against poliomyelitis; the infant mortality rate from all causes remained high, at more than 18%. (KENNETH INGHAM)

ANTIGUA AND BARBUDA

Area: 442 sq km (171 sq mi)
Population (2008 est.): 87,500
Capital: Saint John's
Chief of state: Queen Elizabeth II, represented by Governor-General Louise Lake-Tack
Head of government: Prime Minister Baldwin Spencer

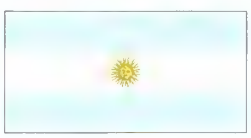
The announcement in January 2008 that an extensive examination of Antigua and Barbuda's Internet gambling regulations had failed to earn the country a place on the U.K.'s "white list" meant that the country's Internet gambling companies were effectively excluded from advertising their wares in Britain. Antigua and Barbuda Finance Minister Errol Cort described the designation as "premature," however, and expressed confidence that the country would qualify for the list in the "very near future."

Meanwhile, Antigua and Barbuda persisted throughout the year in trying to solve its long-standing Internet gambling dispute with the U.S. The World Trade Organization's (WTO's) dispute settlement body in December 2007 had awarded Antigua and Barbuda $21 million annually in compensation from the U.S., which had passed a law in 2006 that banned American banks and credit-card companies from processing payments to online gambling businesses outside the country. The WTO-mandated compensation took the form of trade sanctions against the U.S.

Antigua and Barbuda was rocked by the murder in July of a British couple on their honeymoon, and it was feared that the incident could severely damage the tourist trade. The IMF predicted that Antigua and Barbuda's economy would grow by only 2.1% in 2008, compared with 6.1% in 2007.

(DAVID RENWICK)

ARGENTINA



Area: 2,780,403 sq km (1,073,520 sq mi)
Population (2008 est.): 39,737,000
Capital: Buenos Aires
Head of state: President Cristina Fernández de Kirchner

Argentine Pres. Cristina Fernández de Kirchner began her second month in office in January 2008 with high public-opinion approval ratings (in the low 50th percentile), a large and disciplined majority in the Senate (48 of 72 seats) and Chamber of Deputies (155 of 257 seats), the support of 20 of the country's 24 governors, and an iron control (in concert with her political partner and husband, former president Néstor Kirchner [2003–07]) of the governing Justicialist Party (also referred to as the Peronist party). Her political honeymoon was to be short-lived, however.

On March 11 Minister of Economy Martín Lousteau introduced administrative Resolution 125/2008, which modified tax rates and regulations governing Argentina's principal export crop, soybeans and soy-related products. Participants in the country's agricultural sector—increasingly resentful of what they viewed as the national government's excessive taxation, price controls, and arbitrary interference in the sector's business practices—banded together to protest the modifications, particularly the imposition of a dramatic tax increase and a virtual ceiling placed on future profits. Never before had Argentina's disparate agricultural producers, which ranged from large landowners and multinational corporations to small-scale farmers, joined in such a unified manner to oppose national government policy.

The four-month conflict between the government and the agricultural sector included roadblocks by the agricultural producers and resulted in food shortages in the urban centres; government negotiations with the agricultural organizations eventually reached an impasse. Meanwhile, a bill that was drafted by the government in June to pass into law Resolution 125/2008 came to a formal vote on July 17 in the Senate, where 36 senators approved the measure and 36 senators, including many Peronists, rejected it. The tie was broken by Argentine Vice Pres. Julio Cobos, who voted against the bill.

This crushing defeat in the Senate represented the first important political setback for Kirchner and Fernández de Kirchner in their five years in power. The government that emerged on July 17 at the end of this political conflict with the agricultural sector was much weaker than the one that existed prior to March 11. Between March and July, President Fernández de Kirchner saw her public-approval ratings plummet to less than half of their January values, her (and her husband's) control over Peronism weaken (with numerous prominent Peronists now actively challenging her administration), and her relationship with Cobos become irrevocably damaged.

In addition to difficulties in the political realm, Argentina also faced serious economic challenges. These included an annual inflation rate of about 25% (an estimate by independent sources; the national and international community no longer considered the government-calculated inflation rate credible) and a decelerating economic growth

Alejandro Pagni—AFP/Getty Images

Agricultural producers and their supporters stage a demonstration against Argentine Pres. Cristina Fernández de Kirchner in the city of Córdoba on March 26.

rate of 7% (with a 5% growth rate projected for 2009). In an effort to spur foreign investment, President Fernández de Kirchner announced in September that Argentina would begin paying back the country's overdue loans from the Paris Club of creditor nations.

(MARK P. JONES)

ARMENIA

Area: 29,743 sq km (11,484 sq mi). About 16% of neighbouring Azerbaijan (including the 4,400-sq-km [1,700-sq-mi] disputed region of Nagorno-Karabakh [Armenian: Artsakh]) has been under Armenian control since 1993.
Population (2008 est.): 2,996,000 (plus 138,000 in Nagorno-Karabakh)
Capital: Yerevan
Chief of state: Presidents Robert Kocharyan and, from April 9, Serzh Sarkisyan
Head of government: Prime Ministers Serzh Sarkisyan and, from April 9, Tigran Sarkisyan

Nine candidates, including former president Levon Ter-Petrosyan, registered to participate in the Feb. 19, 2008, Armenian presidential ballot; the constitution barred incumbent Robert Kocharyan from seeking a third term. Official returns gave outgoing prime minister Serzh Sarkisyan 52.82% of the vote, compared with 21.51% for Ter-Petrosyan; the former parliament speaker Artur Baghdasaryan polled third with 16.69%, and Vahan Hovannisyan of the Armenian Revolutionary Federation (HHD; also known as Dashnak) secured 6.18% of the vote. International observers described the balloting as valid despite detecting some serious irregularities.

Claiming the results were rigged, thousands of Ter-Petrosyan's supporters convened daily protests in Yerevan to demand repeat elections. Police intervened on March 1 to disperse the demonstrators, and eight people were killed in violent clashes that evening; two others died later of their injuries. Dozens of Ter-Petrosyan supporters, including former foreign minister Alexander Arzumanyan, were arrested; some were charged with plotting to overthrow the government. Kocharyan declared a 20-day state of emergency.

On March 21 the ruling Republican Party of Armenia (HHK) signed an agreement with the Prosperous Armenia party to form a coalition government with the HHD and the Rule of Law Party. Sarkisyan was inaugurated on April 9 and immediately named Central Bank Chairman Tigran Sarkisyan (no relation) prime minister.

In response to international pressure, President Sarkisyan also created an ad hoc parliamentary commission to probe the causes of the March 1 violence. Sarkisyan and Ter-Petrosyan were never able to establish a dialogue, however, and the latter declined to nominate a representative to the commission. Instead, Ter-Petrosyan supporters staged more antigovernment protests in Yerevan on June 20, July 4, August 1, and September 15. Sixteen small political groups that backed Ter-Petrosyan aligned in a new Armenian National Congress. Meanwhile, on September 16, Tigran Torosyan announced that he would step down as parliament speaker. Hovik Abrahamyan was named to succeed him.

Prime Minister Sarkisyan took decisive measures to eradicate corruption and tax evasion and to curb inflation. GDP grew by 10.3% during the first six months of 2008, but the August war between Russia and Georgia disrupted transportation and inflicted serious short-term economic damage. In the realm of foreign affairs, Turkish Pres. Abdullah Gul accepted an invitation from President Sarkisyan to attend a September 6 soccer match in Yerevan between the Armenian and Turkish national teams.

(ELIZABETH FULLER)

AUSTRALIA

Area: 7,692,208 sq km (2,969,978 sq mi)
Population (2008 est.): 21,338,000
Capital: Canberra
Chief of state: Queen Elizabeth II, represented by Governors-General Michael Jeffery and, from September 5, Quentin Bryce
Head of government: Prime Minister Kevin Rudd

Domestic Affairs. Kevin Rudd, the newly elected Australian prime minister, faced difficult problems in almost every area of his responsibility in 2008. The electorate, which had rejected the conservative Liberal-National Party coalition at the 2007 general election and replaced it with Rudd's Australian Labor Party (ALP) team, expected changes and improvement to follow their voting choice. The new government began well, and the country celebrated in February as never before when Prime Minister Rudd said "sorry" to the country's indigenous citizens. Rudd declared that "business as usual" was not working and set benchmarks, which pledged that within five years every Aborigine living in a remote community would attend an early childhood centre and that Aboriginal mortality would be halved to close the massive 17-year gap in life expectancy between Aboriginal and non-Aboriginal Australians.

Public opinion was deeply concerned about Aboriginal living conditions and the injustices Aborigines had suffered and approved Rudd's actions, but Australians were divided on his second major challenge: how to deal with climate change and global warming. Rudd chose Ross Garnaut to shed expert light on the issue, and Garnaut issued a report in which he proposed that the gov-

ernment set limits on the level of carbon emission that companies could generate. Garnaut recommended the introduction of a "carbon tax," which Rudd's opponents argued would injure emissions-intensive industries, including liquefied natural gas, minerals processing, steel, cement, and paper production, as well as damaging such major employers as the coal-producing electricity generators on which Australia largely relied. Although the resulting anticipated higher prices for food and transport were likely to be passed on to the consumers, Garnaut threatened that if Rudd failed to act, the country's food bowl would collapse, along with the Murray-Darling River system. In addition, farming and wine regions would be destroyed, and natural treasures such as the Great Barrier Reef would be lost.

Rudd followed Garnaut's report with a Green Paper and accepted Garnaut's recommendation that Australia act as soon as possible rather than wait for a global response. The prime minister set a time limit for detailed decisions to be taken, and action to begin the political process of combating global warming was expected before the end of 2008. The ultimate aim was to reduce emissions by 60% by 2050.

William West—AFP/Getty Images

Outside the Japanese consulate in Melbourne, a protester covered in fake blood sits on a Japanese flag as part of a demonstration in January against Japan's decision to resume its whale kill.

The Economy. The global financial turmoil presented a challenge to the new ALP economic managers. Treasurer Wayne Swan began his first budget with an ambitious reform program involving taxation changes, improvements to the health system, infrastructure development, better management of water resources, and improvements in state-commonwealth relations. Swan's approach was approved by the IMF, which assessed Australia as having "a strong position, an enviable situation by international standards." The IMF supported Swan's budget strategy of saving windfall revenue from the commodities boom to stabilize the economy in future years.

Unemployment fell to its lowest level since the mid-1970s. The Australian dollar's flexible exchange rate initially saw the currency increase in value, driven by better terms of trade and interest rate differentials, only to fall as the year progressed. Despite early positive trends, general economic activity was reduced, and pessimism grew steadily as the share market collapsed and gasoline prices rose. By July optimism about the future of Australian business conditions had reached its lowest level since the terrorist attacks in the U.S. in 2001. Despite tax cuts of $A 7 billion ($A 1 = about U.S.$0.97) and a bonus payment to senior citizens, in the face of interest rates at a 13-year high, consumer confidence tumbled. The Australian Fair Pay Commission tried to address higher costs for food, fuel, and housing by awarding Australia's 1.3 million low-paid workers a boost in their minimum weekly wage from $A 522 to $A 544. On the other hand, the Reserve Bank of Australia (RBA) in response raised interest rates to deflate the Australian economy and fight inflation, only to be compelled to reduce rates in September. The RBA announced the first interest rate reduction in seven years with its cut of 25 basis points, lowering interest rates to 7% on September 2.

Foreign Affairs. By signing the Kyoto Protocol and withdrawing Australian troops from Iraq, Prime Minister Rudd distanced himself from the policies of his predecessor, John Howard. ALP MPs celebrated the withdrawal as a milestone fulfilling an election commitment. Iraq's ambassador to Australia confirmed that relations between the two countries would not be damaged when the last Australian soldier left Iraq. Defense Minister Joel Fitzgibbon welcomed the troops home in June.

In this new strategic situation, the ALP trod carefully overall, stressing its pivotal relationship with the U.S. Maintaining the crucial alliance with the U.S. was such a priority that the prime minister visited Washington, D.C., at the beginning of a 17-day overseas tour aimed at explaining Australian foreign policy under the new administration. During Rudd's talks with U.S. Pres. George W. Bush in March, Bush said that he understood that Australia was withdrawing troops from Iraq as part of an election promise. Both leaders agreed that their meeting had reinforced the close bilateral relationship between the U.S. and Australia. They also observed that they were agreed on the situation in Afghanistan. Rudd went farther and supported U.S. policy toward Iran "of keeping the military option on the table."

China's treatment of the Tibetan question proved ticklish when Rudd joined with Bush to urge China to agree to talks with representatives of the Dalai Lama. While Rudd was well aware that Australia's resources boom and balance-of-payments surplus were due in no small way to exports to China, he was concerned also that national interests would be damaged if major foreign customers acquired mining companies or controlled their assets. Swan signaled that China would not be allowed to buy controlling shares in Australian resources companies.

At a time when Japan was concerned that the new ALP government was becoming too dependent on trade with China, anti-Japanese sentiment surfaced in Australia when Japan resumed its whale kill. Although Rudd and Japanese Prime Minister Yasuo Fukuda "agreed to disagree" on whaling, Australia called on Japan to suspend its scientific whaling program and refused to rule out taking Japan to the International Court. (A.R.G. GRIFFITHS)

AUSTRIA

Area: 83,871 sq km (32,383 sq mi)
Population (2008 est.): 8,338,000
Capital: Vienna
Chief of state: President Heinz Fischer
Head of government: Chancellors Alfred Gusenbauer and, from December 2, Werner Faymann

Dieter Nagl—AFP/Getty Images

After leading the Social Democratic Party to victory in Austria's parliamentary elections on September 28, Werner Faymann (left) appears at a press conference in Vienna with Austrian Pres. Heinz Fischer, who invited Feymann to form a new government.

In the first half of 2008, Austrian politics were characterized by deep distrust between the two governing coalition partners, the Social Democratic Party (SPÖ) and the centre-right Austrian People's Party (ÖVP), which resulted in the collapse of the federal government in July. Relations between the SPÖ and the ÖVP had been strained from the government's inception in January 2007, largely as a result of the ÖVP's refusal to acknowledge its role as the "junior" partner in the coalition. The government fell when the two coalition partners failed to agree on health care reforms and on EU policy, with the SPÖ insisting that all future EU treaties be subject to a referendum. An early election was held on September 28, with the SPÖ emerging as the largest party (29.3% of the vote) and the ÖVP (26%) as the second largest. The Freedom Party (FPÖ) and the Alliance for the Future of Austria (BZÖ) performed well, winning 17.5% and 10.7% of the vote, respectively, while the Green party received only 10.4% of the vote. On October 11 the BZÖ's charismatic leader, Jörg Haider (*see* OBITUARIES), died in a car crash; the party's future without Haider remained uncertain.

Following nearly two months of negotiations, on November 23 a "grand" coalition was revived between the SPÖ and the ÖVP. The distribution of ministries between the two parties remained largely unchanged, but the new grand coalition was likely to be characterized by more cooperation than the previous one. Both parties made significant concessions in the coalition negotiations, and the new chancellor, Werner Faymann of the SPÖ, and vice-chancellor, Josef Proll of the ÖVP, had a good working relationship. Several new ministers had previously represented social partners, which indicated a return to the traditional consensual approach that dominated Austrian politics until 2000.

Despite the political turmoil in 2008, the old and new coalition governments both reached agreement on a number of reforms. On March 5 the Ministry for Transport, Innovation and Technology earmarked €10.7 billion (€1 = about $1.50) for railway improvements and €8.1 billion for motorway expansion and renovation by 2013. The largest infrastructure project was the creation of a tunnel under the Brenner Pass, linking Italy with southern Tyrol. The completion of this tunnel would help to shift some of the transport between Germany and Italy from roads to railways. This would reduce Austria's carbon dioxide emissions, a significant concern since Austria was on track to miss its Kyoto Protocol targets. The ÖVP-SPÖ coalition also developed a package of measures aimed at boosting consumer purchasing power in the face of high inflation. This package reduced price hikes for apartment rents (many of which were still regulated), as well as for some services such as railway tickets. In October the new coalition agreed on a set of measures to shore up liquidity in the banking sector, offering up to €100 billion in aid to commercial banks, of which €85 billion would be in deposit guarantees and the remaining €15 billion in the form of new equity to boost banks' capital levels. On November 6 the SPÖ and the ÖVP agreed on a new medium-term fiscal framework that aimed to stimulate the economy while keeping the general government budget deficit below 3% of GDP through 2013. The new government also agreed on the main points of income tax reform, to be implemented in 2009 instead of 2010 as originally agreed by the previous government.

The economy slowed significantly in 2008 as household spending and investment demand declined in the face of high inflation and tight credit-lending conditions. After years of robust business investment in Austria's booming manufacturing sector, there was a slowdown in manufacturing in 2008. Demand for Austrian exports slowed as well but nevertheless remained strong, particularly from neighbouring Germany. Employment growth increased in 2008, while unemployment fell.

(MEGAN GREENE)

AZERBAIJAN

Area: 86,530 sq km (33,409 sq mi), including the 5,500-sq-km (2,100-sq-mi) exclave of Nakhichevan and the 4,400-sq-km (1,700-sq-mi) disputed region (with Armenia) of Nagorno-Karabakh
Population (2008 est.): 8,178,000
Capital: Baku
Head of state and government: President Ilham Aliyev, assisted by Prime Minister Artur Rasizade

In 2008 the Council of Europe's Venice Commission continued discussions begun in 2006 with the Azerbaijani authorities to amend the country's election law prior to the presidential

balloting scheduled for October 15. The amended legislation that was passed by the parliament on June 2, however, not only failed to meet opposition demands for parity representation on election commissions but also shortened the election campaign from four months to 75 days. Even before the amendments were passed, the opposition Freedom bloc declared that it would boycott the election in light of restrictions on the independent media and on public meetings. The opposition New Equality Party and Eldar Namazov (of the movement In the Name of Azerbaijan) said in August that they would not participate in the elections. In early September, Freedom, the New Equality Party, and In the Name of Azerbaijan formed a Center for Opposition Cooperation.

Only 7 of 21 would-be presidential candidates succeeded in registering for the ballot. Incumbent Pres. Ilham Aliyev was duly reelected for a second term, with 88.7% of the vote; Hope Party Chairman Iqbal Agazade placed second with 2.86%; and Great Creation Party chairman Fazil Gazanfaroglu came in third with 2.47%. Voter turnout was 75%. International observers registered some violations in the vote count and deplored the opposition boycott. On October 28 President Aliyev asked incumbent Prime Minister Artur Rasizade to head the new government. A factor cited in Aliyev's reelection was the booming economy. Despite falling world oil prices and Azerbaijani annual inflation that exceeded 20% for the second consecutive year, economic growth increased by 15% during the first nine months.

The parliament failed to enact anticipated new legislation on freedom of assembly and free speech. Bowing to international pressure, however, President Aliyev pardoned five of eight jailed journalists in the last days of 2007. In October a human rights group asked him to free the three remaining journalists and release ill prisoners.

On August 17 three people were killed in Baku following an explosion at the Abu-Bakr mosque, whose congregation included suspected Muslim radicals. On October 2 Azerbaijan's prosecutor general announced the arrest of 25 suspects who were identified as belonging to a group of militants with links to neighbouring Dagestan, a republic in southern Russia.

Russian Pres. Dmitry Medvedev and Turkish Pres. Abdullah Gul visited Baku in July and September, respectively. Following visits in January and June to Armenia and Azerbaijan by Minsk Group mediators of the Organization for Security and Co-operation in Europe, Aliyev and his Armenian counterpart, Serzh Sarkisyan, on November 2 signed a declaration in Moscow, together with President Medvedev, affirming their shared commitment to a peaceful solution to the Nagorno-Karabakh conflict.

(ELIZABETH FULLER)

BAHAMAS, THE

Area: 13,939 sq km (5,382 sq mi)
Population (2008 est.): 335,000
Capital: Nassau
Chief of state: Queen Elizabeth II, represented by Governor-General Arthur Dion Hanna
Head of government: Prime Minister Hubert Ingraham

Bahamian Prime Minister Hubert Ingraham announced in January 2008 that the government was drawing up a new energy strategy to reduce the country's dependence on fossil fuels; the measure was designed to make it easier and far more economical for consumers to access alternative energy sources and more energy-efficient technologies generally. That same month the U.S. rating agency Standard and Poor's lowered its outlook on The Bahamas from positive to stable following a reassessment of the country's growth and investment prospects, given its close tourism, financial, and trade links with the U.S.

Agreement was reached in February for the Venezuelan-owned BORCO (Bahamas Oil Refining Co.) oil-storage terminal in Grand Bahama to be taken over by a partnership of private equity company First Reserve Corp. and Dutch firm Royal Vopak, holding 80% and 20%, respectively. The long-term plan was to spend $550 million to make the terminal a key oil-transhipment hub in the Americas. The Bahamas seemed ambivalent, however, about having liquid natural gas regasification plants located in the country; a government spokesman insisted in July that LNG was "not a priority."

Amnesty International in May criticized The Bahamas for its treatment of Haitian immigrants. AI pointed out that Haitians arriving in the country were "ill-treated" and were being "deported in large numbers."

(DAVID RENWICK)

BAHRAIN

Area: 728 sq km (281 sq mi)
Population (2008 est.): 1,084,000
Capital: Manama
Chief of state: King Hamad ibn Isa al-Khalifah
Head of government: Prime Minister Khalifah ibn Sulman al-Khalifah

Sectarian tension between the Shi'ite majority (some 65% of the population) and the Sunni minority surfaced in Bahrain during 2008. Denunciations and exchanges of grievances between the two sects dominated discourse in the parliament, in the press, and among mosque preachers; the conflict spilled into the streets in political agitation, which was brutally suppressed by the police. The Shi'ites asked for greater participation in running the country—specifically less control over the cabinet by the Sunni ruling family, al-Khalifah, and increased numbers of Shi'ite ministers. On more than one occasion, King Hamad ibn Isa al-Khalifah called for national unity, harmony, and tolerance among Bahrainis regardless of sect or religion. He declared a general amnesty on July 31 that affected most prisoners, political and nonpolitical. To demonstrate tolerance, on July 3 the king appointed Huda Nonoo, a Bahrain Jew, as ambassador to the U.S.—the first Jewish person ever appointed as ambassador by any Arab country.

Security dominated Bahraini discussions when the heads of two powerful states, which were both jockeying for position in the Gulf region, visited Bahrain. U.S. Pres. George W. Bush arrived in January 2008, some two months after Iranian Pres. Mahmoud Ahmadinejad's visit. Bahrain, wary of increased Iranian influence in the Gulf region, remained a staunch ally of the United States.

Bahrain's economy benefited from the oil boom early in 2008, but by the end of the year its banking and real estate sectors had been affected by the global recession.

(LOUAY BAHRY)

BANGLADESH

Area: 147,570 sq km (56,977 sq mi)
Population (2008 est.): 142,547,000
Capital: Dhaka
Chief of state: President Iajuddin Ahmed
Head of government: Chief Adviser Fakhruddin Ahmed

If the year 2007 was a period of doing, the year 2008 was one of undoing for Bangladeshi politics. The steam with which the 2007 military-backed interim caretaker government had started its antigraft and political-reform program—by accelerating the widespread arrest of politicians and businessmen suspected of corruption involvement—suddenly ran out in 2008. One by one, politicians who had been behind bars for months were released on bail.

The height of the new direction occurred when former prime ministers Sheikh Hasina Wazed and Khaleda Zia, the topmost leaders of the two main political parties—Awami League and Bangladesh Nationalist Party (BNP), respectively—were released from jail. Hasina was discharged on parole in June, and Khaleda was released on bail in September. Both leaders were freed in the expectation that their parties would take part in elections slated for December.

The trials of the politicians that did occur were quick, and the verdicts were almost predictable and identical; for all but a few, jail terms of 13 years were handed down, and spouses were sentenced to 3 years. Some defendants were sentenced for having possessed liquor; in a Muslim society alcohol consumption was deemed a crime.

The caretaker government, which had initially embarked on a "Minus Two" policy to rid Bangladesh's political arena of Hasina and Khaleda, changed course and encouraged the two battling begums to establish a dialogue on peaceful coexistence; the government also continued to purge politicians who had earned a public perception of corruption. Much of the credibility of the caretaker government was dented, however, when Khaleda's son, Tarique Rahman, who was imprisoned on corruption charges, was released on bail in September.

In July the authorities established new electoral rules, which, among other reforms, mandated that political parties register to take part in elections and that voters could reject all proposed candidates and select a "no vote" option. That same month the Election Commission undertook an $80 million overhaul of the country's voter list, which was purged of 13 million names. More than 80 million voters were fingerprinted, photographed, and later issued identity cards. The election took place on December 29 and resulted in a lopsided victory for the Awami League, which took 230 of the 299 contested seats; the BNP won only 32.

On the economic front, it was a year of slight recovery from the previous year's torpor. Imports grew by 26% during the 2007–08 fiscal year, and exports climbed by 16%, although much of the rise resulted from high international commodity prices. Revenue earnings grew by a robust 27%, mainly owing to income-tax collection. Nevertheless, high commodity prices prompted a rise in inflation, which peaked to double digits despite a good agricultural output. A number of food riots occurred throughout the country, putting fresh wage pressure on industries.

A huge blow was dealt to the $8 billion "manpower" export as Bangladeshi workers in a number of key Middle Eastern countries staged violent protests against low wages and exploitation. Several of these countries, including Saudi Arabia and Kuwait, decided to stop taking in any more workers from selective sectors in Bangladesh. Thousands were also deported. (INAM AHMED)

Former Bangladeshi prime minister Khaleda Zia waves to supporters after her release from jail in Dhaka in September.

Pavel Rahman/AP

BARBADOS

Area: 430 sq km (166 sq mi)
Population (2008 est.): 282,000
Capital: Bridgetown
Chief of state: Queen Elizabeth II, represented by Governor-General Sir Clifford Husbands
Head of government: Prime Ministers Owen Arthur and, from January 16, David Thompson

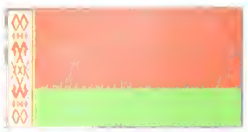
The opposition Democratic Labour Party (DLP), led by attorney David Thompson, achieved a decisive return to power in January 2008 when it defeated the incumbent Barbados Labour Party (BLP) in the Barbados general election; the DLP captured 20 seats in the House of Assembly to the BLP's 10. Nine BLP ministers lost their seats, though party leader Owen Arthur retained his.

Barbados reaffirmed in February its decision not to join Venezuelan Pres. Hugo Chávez's PetroCaribe initiative, under which Caracas provided petroleum products and crude oil to Caricom countries on a deferred-payment basis for a portion of supplies. Prime Minister Thompson called on his Caricom colleagues in June to draw up a common energy policy.

That same month Barbados asked the United Nations to agree to a further extension of its 200-nautical-mile exclusive economic zone (EEZ) by another 150 miles, as provided under the UN Convention on the Law of the Sea. It was only two years earlier that the UNCLOS arbitration panel had defined the EEZ limits between Barbados and Trinidad and Tobago.

In July, Venezuelan Energy Minister Rafael Ramírez publicly declared that 2 of the 24 blocks in Barbados's first offshore block auction were partly in Venezuelan waters. Officials said that this revelation could have implications for the success of the auction. (DAVID RENWICK)

BELARUS



Area: 207,595 sq km (80,153 sq mi)
Population (2008 est.): 9,675,000
Capital: Minsk
Head of state and government: President Alyaksandr H. Lukashenka, assisted by Prime Minister Syarhey Sidorski

The year 2008 in Belarus was dominated by turbulent foreign relations between Belarus and Russia, the EU, and the U.S. and by parliamentary elections that were held on September 28. In addition, the U.S. sanctions imposed (Nov. 13, 2007) on the oil-processing firm Belnaftkhim were expanded in the spring owing to the refusal of Belarus to release all designated political prisoners. On March 12, U.S. Ambassador Karen Stewart left the country, and at Belarus's behest the respective embassies in Minsk and Washington, D.C., were reduced to a skeleton staff of five people.

The departure of diplomatic personnel coincided with the violent dispersal of the traditional opposition rally held on March 25, which in 2008 marked the 90th anniversary of the Belarusian National Republic. The authorities offered some recognition of that occasion by publishing in the newspaper *Sovetskaya Belorussiya* a debate among historians as to its significance. The political row with the U.S. was partially resolved when Belarus released former presidential candidate Alyaksandr Kazulin from Vitsebsk penal colony on August 16 and four days later freed the last two political prisoners, Syarhey Parsyukevich and Andrei Kim.

The political opposition was divided over how to approach the parliamentary elections. In contrast to the 2006 presidential elections, it split into four distinct groupings: the United Democratic Forces (comprising the Popular Front, the United Civic Party, the Party of Communists, and one wing of the Social Democrats); the movement "For Freedom" under former presidential candidate Alyaksandr Milinkevich, which remained unregistered by the state; the Euro-alliance led by Mikola Statkevich and including Charter 97 led by Andrei Sannikau; and the rival branch of the Social Democrats under Stanislau Shushkevich, a former chairman of the parliament. Of the 448 candidates who ran for office, however, 334 had no party affiliation.

The Organization for Security and Co-operation in Europe (OSCE), which sent 450 monitors to Belarus, was denied access to about one-third of polling stations and reported several cases in which results were falsified. The OSCE declared that overall the election could not be considered "free and fair." According to the Central Election Commission, the turnout was 75.3%, but the opposition delegates—some of whom had proposed boycotting the election—did not win any seats. On the evening of September 28, Kazulin, Milinkevich, and other leaders held a protest in Kastrichnitskaya Square in central Minsk.

Demonstrators march in Minsk on September 28 to protest Belarus's parliamentary elections, which opposition leaders insisted were rigged.

Sergei Grits/AP

Despite the controversial nature of the election, the EU subsequently, on October 13, lifted a travel ban (for a trial six-month period) on Lukashenka and 35 members of his government. The move followed Lukashenka's refusal to assist Russia in its conflict with Georgia and Belarus's lack of recognition for an independent Abkhazia and South Ossetia, two breakaway regions in Georgia.

The Belarusian economy performed well. In the period January–September 2008, GDP rose by 10.7% (the annual projected rate was 8–9%), industrial output increased by 30.2%, and agriculture improved 8.6% compared with 2007. Nonetheless, during a period of international economic uncertainty, Belarus was forced to negotiate a new $2 billion loan from Russia, and Moscow continued to demand that Belarus begin using the Russian ruble as a common currency. (DAVID R. MARPLES)

BELGIUM

Area: 30,528 sq km (11,787 sq mi)
Population (2008 est.): 10,697,000
Capital: Brussels
Chief of state: King Albert II
Head of government: Prime Ministers Guy Verhofstadt, from March 20, Yves Leterme, and from December 30, Herman Van Rompuy

The longest-running political crisis in Belgium's history formally ended in March 2008 when Flemish Christian Democrat Yves Leterme's five-party coalition government was sworn in—nine months after the country's general election in June 2007. Leterme took over from former prime minister Guy Verhofstadt, who since before Christmas had led an interim government.

The partnership between the French- and Dutch-speaking Christian Democrats and Liberals and the French-speaking Socialists was far from smooth, however, as the parties negotiated possible constitutional reforms that would affect the future status of the bilingual Brussels-Halle-Vilvoorde (BHV) constituency, and devolve more power to the country's three regions. In mid-July, Leterme submitted his resignation for a third time when he failed to meet a deadline set by his

own party, the Flemish Christian Democrats (CD&V), for issuing a proposal to resolve the constitutional deadlock. King Albert II refused to accept the prime minister's resignation, but he did on December 22 when Leterme offered to resign a fourth time after accusations that aides had tried to influence a ruling by the country's appeals court.

The court case had been brought by shareholders in Fortis NV, which, with operations in Belgium, Luxembourg, and The Netherlands, in late September became the first European bank to fail amid the global credit crisis. Each of the three governments had agreed to take a 49% share in its respective country of the operations of the bank, whose origins predated the creation of the Belgian state in 1830. Within days, however, the Dutch government nationalized the bank's holdings in The Netherlands and the Belgian government sold three-quarters of its 51% stake in Fortis Belgium to France's BNP Paribas—a decision which the shareholders had decided to challenge though the courts. Soon after the initial Fortis rescue package, the Belgian and Luxembourg governments—this time working with France—stepped in again to prop up another of Belgium's leading banks, Dexia. After an initial cash injection by the three countries of €6,376,000,000 (€1 = about $1.40) had failed to prevent the bank's shares from plummeting, they announced that between them they would guarantee all new issues of obligations by the bank, interbank deposits, and institutional investments until the end of October 2009.

Two other Belgian companies were involved in major international deals during the year. InBev, which was formed in 2004 when Belgian company Interbrew merged with Brazil's AmBev, continued on the acquisition trail. In July it paid $52 billion for Anheuser-Busch, which accounted for almost half of all U.S. beer sales. The new company, called Anheuser-Busch InBev, was looking to produce 460 million hectolitres (about 12 billion gal) of beer a year—about a quarter of global beer consumption. Brussels Airlines—which was created in 2006 after a merger between SN Brussels Airlines (the successor to the bankrupt national carrier SABENA) and Virgin Express—formed an alliance with Germany's Lufthansa, Europe's second largest airline. Under the deal, signed on September 15, the German carrier agreed to buy 45% of the Belgian airline for €65 million, with the option of acquiring the whole company in 2011 for a maximum price of €250 million.

Hugo Claus, a colossus on the Belgian literary landscape, died on March 19. (*See* OBITUARIES.) Claus, who suffered from Alzheimer disease, chose to die by euthanasia, taking advantage of liberal legalization that had been introduced six years earlier. (RORY WATSON)

BELIZE

Area: 22,965 sq km (8,867 sq mi)
Population (2008 est.): 323,000
Capital: Belmopan
Chief of state: Queen Elizabeth II, represented by Governor-General Sir Colville Young
Head of government: Prime Ministers Said Musa and, from February 8, Dean Barrow

On Feb. 7, 2008, the opposition United Democratic Party (UDP) claimed victory in the Belize general elections, bringing to an end the 10-year administration of the People's United Party (PUP). With an overwhelming majority in the National Assembly, the UDP legislated constitutional amendments to curb what it referred to as the excesses of the PUP. In the realm of foreign policy, however, the new government continued to retain close ties with friendly states, notably Taiwan, which continued to provide much-needed financial and technical assistance. Although petroleum exports to the U.S. outpaced tourism and agriculture as the primary source of foreign exchange, Belize's vulnerability to world economic shocks led during the first half of 2008 to a record increase (6.9%) in the consumer price index. Prices for staples increased substantially: wheat flour (51.5%), gasoline (7.8%), and diesel fuel (35.4%). In June Tropical Depression Arthur brought historic flooding to the mid-south of the country, with estimated damages of at least $60 million, excluding the cost of road infrastructure.

Belizeans converged in the thousands in January for the state funeral of 47-year-old musician Andy Palacio (*see* OBITUARIES). His meteoric rise to the pinnacle of world music had catapulted Belize to international prominence.

(JOSEPH O. PALACIO)

BENIN

Area: 112,622 sq km (43,484 sq mi)
Population (2008 est.): 8,295,000
Capital: Porto-Novo (executive and ministerial offices remain in Cotonou)
Head of state and government: President Thomas Yayi Boni

On March 7, 2008, ministers from Benin and Burkina Faso reached agreement on lowering tensions in a 68-sq-km (26-sq-mi) border area claimed by both. Meeting at Porga in northern Benin, the delegations agreed that neither would attempt to establish sovereignty over the disputed region and that joint border patrols would operate to maintain security.

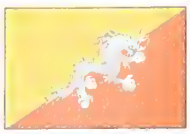
On February 16, U.S. Pres. George W. Bush began his five-nation tour of Africa in Cotonou, where he received the Grand Cross of the National Order of Benin from Pres. Thomas Yayi Boni. Local elections held on April 20 gave the presidential party, Cowry Forces for an Emerging Benin, control of 66% of municipal councils. Former president Nicéphore Soglo's Benin Renaissance Party retained control in the capital.

On March 5 a joint study conducted by the UN in conjunction with the Ministry of the Family and Children revealed that more than 40,000 children, 93% of whom were Beninese, were trafficked in 2006. The government vowed to stop the trade and give aid to its victims.

Throughout the year, prices of basic foodstuffs rose sharply, more than doubling in the case of some commodities. Despite the government's May 1 removal of the value-added tax on food, consumers saw little improvement. Consequently, trade unions planned protest marches calling for higher wages. On July 15 President Yayi responded by calling for "economic patriotism" and wage restraint to help resolve the crisis. Violent crime against small businesses increased alarmingly as small-arms weaponry was readily available through local manufacturers or smugglers. Although the production of cotton, Benin's major export crop, rose by 12% and GDP was expected to achieve a growth rate of 7%, the explosion of global food and energy prices had offset economic progress.

(NANCY ELLEN LAWLER)

BHUTAN



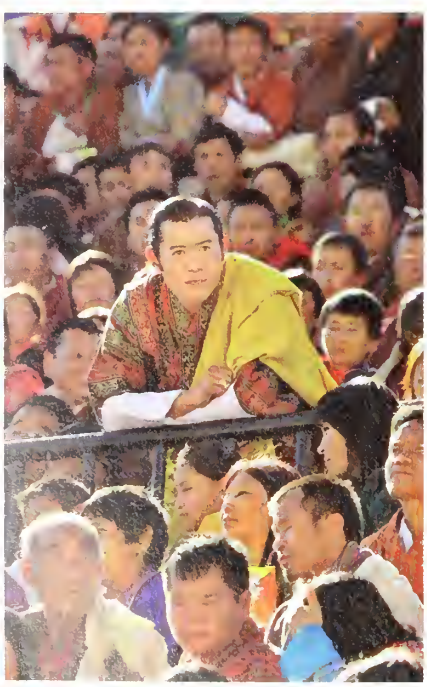
Area: 38,394 sq km (14,824 sq mi)
Population (2008 est.): 682,000 (excluding more than 100,000 refugees in Nepal)
Capital: Thimphu
Head of state: Druk Gyalpo (King) Jigme Khesar Namgyal Wangchuk
Head of government: Prime Ministers Lyonpo Kinzang Dorji and, from April 9, Lyonchen Jigmi Thinley

The year 2008 was a historic one for Bhutan, which on March 24 held its first democratic elections for the lower house of the parliament and thereby transformed from an absolute monarchy to a constitutional democracy. In the election more than 250,000 voters cast their ballots, and the Bhutan Peace and Prosperity Party (DPT), led by Lyonchen Jigmi Thinley, won 45 seats, while the People's Democratic Party (PDP) captured 2 seats. Thinley was sworn in as prime minister on April 9. On July 18 Bhutan promulgated a new constitution. The transition to democracy was initiated by former king Jigme Singye Wangchuk. In 2006 he abdicated in favour of his Oxford-educated eldest son, Jigme Khesar Wangchuk, who would remain king in a largely ceremonial role.

Meanwhile, more than 100,000 Bhutanese, who had been forced to leave the country in the early 1990s when strict citizenship rules were enforced, were living in refugee camps in Nepal and were barred from voting. According to the International Organization for Migration, more than 3,000 refugees had been resettled in the U.S., New Zealand, Denmark, Australia, and The Netherlands.

Thanks to a boom in tourism and hydropower, Bhutan's economic growth rate stood at 8%. Living standards were among the region's highest, with an average per capita income of more than $1,400. Hydropower exports to India drove GDP growth to above 20% in 2007, and total exports to India in 2006–07 amounted to about $200 million. Indian Prime Minister Manmohan Singh visited Bhutan in May and addressed a joint session of the parliament. (KESHAB POUDEL)

Bhutan's 28-year-old king, Jigme Khesar Wangchuk (centre, in yellow robe) interacts with members of the audience during celebrations that followed his coronation ceremony in Thimphu on November 7.



Gurinder Osan/AP

BOLIVIA

Area: 1,098,581 sq km (424,164 sq mi)
Population (2008 est.): 9,694,000
Capitals: La Paz (administrative) and Sucre (judicial)
Head of state and government: President Evo Morales Ayma

Violent clashes over constitutional reform erupted in September 2008 as ethnic and regional divisions hardened to the point where some observers believed that they were threatening Bolivia's survival as a country. The conflict began after Pres. Evo Morales easily survived a recall referendum in August. Morales, one of a new generation of Latin American leaders seeking to remold political institutions and curb the power of traditional elites, won 67% of the vote—substantially higher than the 53.7% he obtained in the 2005 presidential election. Then, declaring that the vote had confirmed support for his nationalization policies, he said that he would submit a new constitution and land-reform measures to a popular vote early in 2009.

Dado Galdieri/AP

Antigovernment protesters take to the streets in Santa Cruz, Bol., in September following Pres. Evo Morales's proposal for a new constitution and land-reform measures.

This announcement outraged most of Morales's opponents in the ranching and natural-gas-producing eastern lowlands. They were led by provincial governors who demanded a greater share of gas-export profits for their provinces and opposed Morales's determination to spend gas tax revenue on financial assistance for the elderly. The governors' mandates had been reconfirmed by wide margins in the referendum, and voters in four provinces had approved proposals for greater provincial autonomy.

On September 10, anti-Morales protesters seized a gas field and caused a leak and explosion in a key export pipeline. The next day at least 18 people died in clashes between pro- and antigovernment groups in Cobija, the capital of Pando. Government officials and witnesses said that most of the victims were pro-Morales farmers who were attacked by opposition gunmen as they sought to reclaim national government offices that had been ransacked by the president's opponents. Morales accused the U.S. of conspiring with the eastern governors in an effort to destabilize Bolivia, an allegation that the U.S. denied. In September, after violent protests broke out at gas facilities in the eastern provinces, Morales ordered U.S. Ambassador Philip Goldberg to leave the country. In return, the U.S.

declared Bolivian Ambassador Gustavo Guzman persona non grata.

Morales had nationalized most of the petroleum industry in 2006 and, at a time of high world energy prices, remained determined to distribute export revenues widely among Bolivians. The resulting stimulus led Bolivia's GDP in the first quarter of 2008 to grow by 6% over the same period in 2007. Strong domestic demand for energy coupled with investment shortfalls led Bolivia to warn early in the year that it would not be able to meet export commitments to its South American neighbours. In July the government launched an exploration effort to increase gas reserves by 20% with the help of a drilling rig and $888 million in investment from Venezuela. The economic horizon clouded when the U.S. hinted strongly that it would suspend Bolivia's access to the trade privileges given to Andean countries.

There was further discord in the battle against the illegal cocaine trade. In November Morales ordered the suspension of activities by the U.S. Drug Enforcement Administration. The government announced that it would take over the distribution of U.S. antinarcotics funds. Vice Minister of Social Defense Felipe Cáceres, who like Morales owned a coca plot, said that Bolivia remained committed to fighting cocaine production and trafficking but also to maintaining the traditional market for coca leaf, which was used to relieve hunger pangs and altitude sickness. Despite the tensions, Bolivia continued to rely on U.S. military aid for its antidrug army units. (PAUL KNOX)

BOSNIA AND HERZEGOVINA

Area: 51,209 sq km (19,772 sq mi)
Population (2008 est.): 3,858,000
Capital: Sarajevo
Heads of state: Nominally a tripartite (Serb, Croat, Muslim) presidency with a chair that rotates every eight months; members in 2008 were Nebojsa Radmanovic (Serb), Zeljko Komsic (Croat; chairman), and Haris Silajdzic (Muslim; chairman from March 6). Final authority resides in the Office of the High Representative and EU Special Representative, Miroslav Lajcak (Slovakia)
Head of government: Prime Minister Nikola Spiric

Bosnia and Herzegovina continued in 2008 to face a multitude of economic, political, and social problems that were exacerbated by the persistent lack of cooperation between the republic's Bosniaks (Muslims), Serbs, and Croats. Paddy Ashdown, the former high representative and EU special representative for Bosnia and Herzegovina, warned that the country was on the edge of "disintegration," blaming spiraling ethnic tensions, the lack of EU interest in the area, and the Bosnian Serb pressure toward secession following Kosovo's declaration of independence from Serbia in February. Miroslav Lajcak, the current high representative, also warned that despite "significant progress" over the first six months of the year, "nationalist forces remain strong." The U.S. Department of State's annual report on global terrorism characterized Bosnia and Herzegovina as a "weak, decentralized state" where "ethnically based political confrontations continued to undermine national government." The report also warned that the country's vulnerability could serve as a potential staging ground for terrorist operations in Europe. An initiative by regional nongovernmental organizations to hold Bosnia and Herzegovina's first truth commission on war crimes failed to materialize, largely owing to government indifference and lack of public interest; the Dayton accords had been signed 13 years earlier, and the establishment of a truth commission was seen as a step toward reconciliation.

Nationalist sentiment was confirmed by results of local elections held on October 5; Serbs, Muslims, and Croats voted mostly along ethnic party lines. More than 29,000 candidates, representing 72 political parties and dozens of coalitions and independent lists, competed for 140 mayoral offices in 78 municipalities in the Muslim-Croatian federation and 62 municipalities in the Republika Srpska (RS). Overall turnout was about 55% in the two entities, but the response in major cities was relatively low, which local media reports attributed to the disdain held toward nationalist rhetoric and the absence of political programs not based on ethnic lines.

Labour leaders expressed concern over growing public unrest and the government's inability to deal with the country's problems amid a worsening global economic situation and soaring prices on goods and services. Sharp criticism was leveled against the governments of both entities for blocking privatization efforts and reforms, and both were accused of corruption. Transparency International, a Berlin-based corruption watchdog group, closed its offices in Bosnia and Herzegovina owing to what it called "concerns for the safety of its staff" after RS Prime Minister Milorad Dodik accused the agency of fraud. The Bosnia and Herzegovina central bank governor, Kemal Kozaric, leveled criticism on leaders of both entities for "not being adequately engaged" in keeping the country's economy in line with EU membership requirements.

Bosnia and Herzegovina's signing in June of the Stabilization and Association Agreement (SAA) signaled the first concrete step in the country's path toward EU membership. Both entities approved laws for police reform, a requirement that needed to occur prior to the SAA signing. Constitutional reform was another key requirement that had to be addressed before the country could achieve EU integration. (MILAN ANDREJEVICH)

BOTSWANA

Area: 582,356 sq km (224,848 sq mi)
Population (2008 est.): 1,842,000
Capital: Gaborone
Head of state and government: Presidents Festus Mogae and, from April 1, Ian Khama

After completing two five-year terms in office, Pres. Festus Mogae turned over power on April 1, 2008, to Vice Pres. Ian Khama. Though the new president promised to uphold the traditions of his predecessor, he showed a spirit of independence in the puritan and teetotal tradition of his famous great-grandfather Khama III (*c.* 1835–1923). President Khama appointed as vice president Mompati Merafhe, a military colleague and former foreign minister; adopted dignity and discipline as his slogan; and courted widespread popularity by touring remote villages and upbraiding government employees. He prompted widespread opposition, however, when, in an effort to combat alcoholism, he announced a 30% levy on alcoholic beverages. Though beer manufacturers obtained an injunction in the High Court at Lobatse against im-

Workers sort diamonds at Botswana's new rough-diamond sorting centre in Gaborone in March.

plementation of the hike, the legal challenge was later dropped, and the levy went into effect on November 1.

Relations with Zimbabwe were soured by Botswana's refusal to accept the presidential election in that country as free and fair and by Gaborone's withdrawal in June of recognition that Robert Mugabe was the legal president of Zimbabwe. Nevertheless, the tide of Zimbabwean refugees and visiting shoppers continued. Botswana's boycott of the Zimbabwe regime ended on September 15 when President Khama attended the reconciliation ceremony between Zimbabwe's three main political parties.

Botswana's new rough-diamond sorting centre was opened in March, though operations were limited by delays in the construction of a new suburb near the Gaborone airport. The Botswana government continued to narrowly interpret the High Court judgment permitting Bushmen to return to live in the Central Kalahari Game Reserve as applying only to named litigants and their immediate relatives. (NEIL PARSONS)

BRAZIL

Area: 8,514,877 sq km (3,287,612 sq mi)
Population (2008 est.): 187,163,000
Capital: Brasília
Head of state and government: President Luiz Inácio Lula da Silva

Having suffered in December 2007 his first major policy defeat in five years—the termination of the Provisional Contribution on Financial Transactions (CPMF) tax—Brazilian Pres. Luiz Inácio Lula da Silva began 2008 by raising the Financial Operations tax as well as the Social Contribution on Net Profits tax in order to compensate for the loss in revenues from the CPMF. Throughout the year Brazil benefited from a wave of high commodity prices, new infrastructure investment programs, a burgeoning domestic market, and record state and federal revenues. On April 30 Standard & Poor's became the first rating agency to upgrade Brazil to investment-grade status; Fitch Ratings followed suit on May 29. After riding the commodity boom to its peak in July, Brazil later witnessed declining liquidity and tighter credit markets as the global economy began its downturn. Nonetheless, the Lula administration forged ahead with its ambitious Growth Acceleration Program (PAC), which aimed to accelerate Brazil's economic growth to 5% annually; the PAC was spearheaded by Lula's chief of staff, Dilma Rousseff, who was viewed as a leading candidate to succeed Lula as the standard-bearer of the Workers' Party (PT) in the presidential elections scheduled for 2010.

In 2008 there were few but significant changes in the composition of Lula's cabinet. On January 21, in a move to satisfy the Lula administration's coalition ally, the Brazilian Democratic Movement, Sen. Edison Lobão of Maranhão state was sworn in as the new minister of mines and energy, in which post he would preside over one of Brazil's largest ministerial budgets. On May 13 Minister of Environment Marina Silva resigned and returned to her seat as senator representing the state of Acre. Silva had seen her conservation agenda weakened following the 2007 split of the Brazilian Environmental Institute (IBAMA) into two units, one responsible for conservation and the other responsible for environmental-impact assessments, authorizations, and licenses. Her replacement, Carlos Minc, formerly the secretary of environment for the state of Rio de Janeiro, was sworn in on May 27. Minc would have as his major challenge shepherding Brazil's numerous infrastructure-development projects through the country's stringent environmental-licensing processes.

More than 110 million voters went to the polls on October 5 to elect mayors and town councils in Brazil's 5,563 municipalities. The most important mayoral race—in Brazil's most populous city, São Paulo—featured Lula's preferred candidate, former tourism minister Marta Suplicy of the PT, incumbent Mayor Gilberto Kassab of the Democratas (formerly the Liberal Front Party), and 2006 presidential runner-up Geraldo Alckmin of the Brazilian Party of Social Democracy. In a hotly contested first round, Kassab narrowly defeated Suplicy, winning 33.61% of the valid vote to Suplicy's 32.79%, while Alckmin trailed in third with 22.48%. With no candidate reaching an absolute majority, a runoff election between Kassab and Suplicy was held on October 26. This time Kassab—with the support of Alckmin and José Serra, the governor of São Paulo state and the 2002 presidential runner-up—soundly defeated Suplicy, garnering 60.7% of the valid vote to Suplicy's 39.3%. The election result was seen by many observers as strengthening Serra as he positioned himself to run in the 2010 presidential elections.

Throughout the year Brazil's Supreme Court heard the case for demarcation of the Raposa Serra do Sol Indian Reserve, located in the northern state of Roraima near the Venezuelan and Guyanese borders. Lula had signed a decree in 2005 that delimited the reserve as "continuous"—all non-Indian communities within the reserve would have to be abandoned—but many non-Indians, including rice growers, miners, and ranchers, resisted withdrawal. Although 8 of the 11 Supreme Court judges were in favour of continuous demarcation of the reserve and for the removal of non-Indians, the president of the court, Gilmar Mendes, on December 10 granted a request by one of the judges, Marco Aurelio Mello, for more time to deliberate; final judgment on the matter would be rendered in February 2009, when the Supreme Court returned from its holiday recess.

Notwithstanding the global financial crisis, the Brazilian economy showed continued signs of growth. For the 12-month period ended in September, GDP grew an estimated 6.3%. With the central bank's Open Market Committee maintaining high benchmark discount interest rates (13.75% at year's end), accumulated inflation through November as measured by the National Consumer Price Index reached only 5.61%. Global volatility, however, did affect the Brazilian stock market, which fell nearly 60% from its highest close of

2008—73,517 points on May 20—to its lowest of the year, 29,435 on October 27. By December 30, the last day of 2008 trading, the stock market had recovered slightly, closing that day at 37,550.

To prepare for further economic turbulence, the Brazilian government took steps to give the central bank as well as state banks more interventionary powers. On October 7 and October 22, Lula issued Provisional Decrees 442 and 443, respectively. Provisional Decree 442 gave the central bank the power to sell international reserves, buy banks, and extend credit lines, and Provisional Decree 443 empowered the two principal state banks (Bank of Brazil and Caixa Economica) to buy banks, insurance companies, and pension funds, if necessary. Despite the market turmoil, Lula finished the year with the highest approval ratings of his administration—80.3% in the Sensus Institute's December opinion polling, which was commissioned by the National Confederation of Transportation.

Severe flooding wreaked havoc in the southern state of Santa Catarina in late November. (*See* DISASTERS.) The flooding resulted in the deaths of more than 130 people and left tens of thousands homeless and more than one million without power.

(JOHN CHARLES CUTTINO)

BRUNEI

Area: 5,765 sq km (2,226 sq mi)
Population (2008 est.): 400,000
Capital: Bandar Seri Begawan
Head of state and government: Sultan and Prime Minister Sir Haji Hassanal Bolkiah Mu'izzaddin Waddaulah

In a bid to promote industrial investment in nonenergy sectors, Brunei signed an agreement in January 2008 with the American company Alcoa to study the feasibility of building an aluminum-smelting plant. Similarly, in August the Brunei National Petroleum Co. (through its subsidiary PB Logistics) initialed joint-venture agreements with two Japanese firms, Kokuka Sangyo and ITOCHU Corp., to form a company for the Methanol Tanker Project. Brunei also inaugurated Wawasan Brunei 2035, a strategic economic development plan that by 2035 would vault the sultanate to rank in the top 10 countries in the world in terms of GDP per capita.

The royal imbroglio continued regarding the mismanaged state coffers; the High Court of London issued an arrest warrant for Prince Jefri, the youngest brother of the sultan and former minister of finance. Jefri had absconded and violated a London court order to turn over £3 billion (about $5.4 billion) to the Brunei government.

The International Olympic Committee disqualified Brunei from participating in the 2008 Beijing Olympics owing to the alleged failure of the Ministry of Sports to register the team on time. This oversight apparently resulted in a minor cabinet reshuffle involving the minister of sports, who became the new minister for energy.

In August Malaysian Prime Minister Abdullah Ahmad Badawi and the sultan held their 12th annual bilateral talks in Johor, Malay. The two pledged closer cooperation and discussed issues pertaining to global food and energy security.

In January the sultan and his second wife, Azrinaz Mazhar, welcomed their second child, Princess Ameerah Wardatul Bolkiah. The couple's firstborn was a son.

(B.A. HUSSAINMIYA)

BULGARIA

Area: 111,002 sq km (42,858 sq mi)
Population (2008 est.): 7,569,000
Capital: Sofia
Chief of state: President Georgi Purvanov
Head of government: Prime Minister Sergey Stanishev

In 2008 Bulgaria's economic and political outlook were mixed. GDP rose 7% for the second quarter of the year, largely fueled by the services and construction sectors; tourism boomed by 12.1%, and real-estate prices were valued more than 30% higher than in the same period of 2007. Nevertheless, experts pointed to the slowdown in health care reform as one of the biggest risk factors for Bulgaria's long-term economic development. Moreover, the country continued to face a large trade deficit and a persisting pattern of emigration among Bulgaria's young qualified professionals.

After six attempts by Bulgaria's National Assembly to remove Prime Minister Sergey Stanishev's cabinet from power, midyear structural changes were triggered by scandals involving connections of top Interior Ministry officials to organized crime figures. Bulgaria's governing institutions received a poor evaluation from the European Commission, which released its second report on Bulgaria's progress as an EU member. The report concluded that Bulgaria had failed to make reasonable strides in reforming the judiciary, combating corruption, and fighting organized crime.

Bulgaria's energy sector made some long-term investments, which include participation in the South Stream project, a gas pipeline proposed by Russia's Gazprom and Italy's Eni that was projected to supply 30 billion cu m (1.1 trillion cu ft) of natural gas annually to Romania, Hungary, the Czech Republic, Italy, Austria, and Serbia, starting in 2013. In addition, the construction of the nuclear energy plant Belene was entrusted on Jan. 18, 2008, to the Russian firm Atomstroiexport. Bulgaria and Russia also signed agreements on the construction of the Burgas-Alexandroupolis oil pipeline.

Hundreds of millions of dollars in funding under the European Commission programs Phare, ISPA (Instrument for Structural Policies for Pre-Accession), and SAPARD (Special Accession Programme for Agriculture and Rural Development) were frozen by the EC owing to suspicions of Bulgarian misappropriation and involvement in corrupt deals. Two Bulgarian government agencies were barred from involvement in contracts for EU funds. The funding, originally meant to stimulate infrastructure, was partially substituted by similar amounts drawn from the Bulgarian budget surplus.

Bulgarian sports results were also mixed. Although rower Rumyana Neykova won a gold medal for Bulgaria at the Beijing Olympics, 11 other Olympic athletes from the Bulgarian weightlifting team were caught with forbidden substances and banned from the Games. Their dismissal set the stage for an overall Olympic disappointment for Bulgaria, which finished with five medals: one gold, one silver in women's wrestling, and three bronze medals in men's wrestling.

(IVA IOVTCHEVA; BORIS YOVCHEV)

BURKINA FASO

Area: 267,950 sq km (103,456 sq mi)
Population (2008 est.): 14,391,000
Capital: Ouagadougou
Chief of state: President Blaise Compaoré
Head of government: Prime Minister Tertius Zongo

In late February 2008 popular discontent over rapidly increasing food prices erupted into serious riots in the Burkina Faso capital and in the cities of Ouagadougou, Bobo-Dioulasso, Banfora, and Ouahigouya. Security forces arrested at least 180 people for organizing the protests. The government called for calm, blaming the situation on the global escalation of oil prices. Import taxes on basic necessities were suspended on February 27, and on March 9 the government announced that food prices were to be cut by 5–15%. Despite these actions, new protests against hyperinflation took place later in March.

Cabinet ministers from Burkina Faso and Benin met on March 7 to discuss a plan to reduce tensions in a 68-sq-km (26-sq-mi) border area claimed by both countries. They agreed to activate a joint border commission to ensure that neither country undertook any overt display of sovereignty in the disputed region, such as building police stations or displaying flags.

In two southwestern provinces in late May and early June, violent clashes occurred when nomads allowed their cattle to graze on the lands of farmers. At least 15 people lost their lives in the confrontations.

Following an outbreak of meningitis in southern Burkina, the government on February 21 reached agreement with Côte d'Ivoire to coordinate a cross-border vaccination campaign. After a polio case was confirmed in Niger, the World Health Organization began a mass vaccination program on June 13 to cover the border areas of Niger, Burkina Faso, and Mali. On July 11, Muslim leaders agreed to participate in a program promoting family planning. On August 10, 31 miners perished in a mud slide at an illegal gold mine in Boussou Koula, 500 km (310 mi) southwest of the capital.

(NANCY ELLEN LAWLER)

BURUNDI

Area: 27,816 sq km (10,740 sq mi)
Population (2008 est.): 8,691,000
Capital: Bujumbura
Head of state and government: President Pierre Nkurunziza

Burundi's ongoing peace process progressed in fits and starts during much of 2008. As the country struggled to restore peace after a 14-year civil war, hostilities between government forces and the last active rebel group, the National Liberation Forces (FNL), were reignited in April. FNL forces launched several attacks in the hills and suburbs surrounding the capital of Bujumbura. The flare-up left more than 100 people dead, displaced close to 40,000 others, and led to the detention of more than 300 rebels. The untenable situation prompted the return in May of FNL leader Agathon Rwasa, who had lived in exile for nearly 20 years; he signed a peace agreement between the FNL and the Burundi government on June 11. The June cease-fire agreement established assembly areas for FNL soldiers to congregate and called for them to be integrated into the national security forces. Another meeting between Pres. Pierre Nkurunziza and Rwasa was held in August in an effort to finalize peace negotiations and to prepare for the 2010 elections. The release from government custody of suspected FNL fighters, a major impediment to the cease-fire accord, was agreed upon at the negotiations. Implementation of the September 2006 cease-fire pact had been stalled since the FNL pulled out of negotiations less than a year later.

The UN High Commissioner for Refugees (UNHCR) repatriated 300,000 Burundians living in camps in Tanzania by early April. Nearly 800,000 Burundians had fled the country between 1972 and 2003, with more than 500,000 refugees flowing into Tanzania during the early 1990s when war broke out. Repatriation efforts had begun in 2002 following the end of hostilities. Nearly 369,000 Burundians, some without UN support, returned home from Tanzania; another 102,000 refugees remained in camps. UNHCR also worked with Tanzania to address the situation of the 218,000 refugees who had fled Burundi during the 1972 genocide. Some returnees from the 1972 exile, however, faced serious resettlement issues, since most no longer had claims to land or property that they owned prior to 1972.

(MARY EBELING)

CAMBODIA

Area: 181,035 sq km (69,898 sq mi)
Population (2008 est.): 14,242,000
Capital: Phnom Penh
Chief of state: King Norodom Sihamoni
Head of government: Prime Minister Hun Sen

The major crisis in Cambodia in 2008 was a standoff between Thai and Cambodian troops over a border dispute in the area in which the ancient temple of Preah Vihear stood. A 1962 World Court decision that had declared the temple site Cambodian territory was never popularly accepted among Thais, and Preah Vihear carried great symbolic weight in both countries. Cambodia's campaign, begun in 2006, to designate the temple a UNESCO World Heritage site became highly politicized within Thailand and was used as a rallying cry by movements opposing the current Thai government. Protests took place near the temple, and in June Cambodia closed the entrance from the Thai side. On July 8 UNESCO declared Preah Vihear a World Heritage site; soon afterward the Thai foreign minister was forced to resign over the issue. Thai troop buildup began after July 15, when Cambodian authorities briefly detained three Thai protesters who had jumped a fence to enter the temple site and at least 40 Thai soldiers entered territory claimed by Cambodia. When the numbers of Thai troops steadily increased, Cambodia sent its own forces, and by July 21, when initial talks between the two countries broke down, there were reportedly thousands of troops from both countries near the temple and along the entire disputed border. After Cambodia withdrew its July 23 appeal to the UN Security Council, sensing that international opinion leaned toward a localized resolution, the two countries returned to bilateral negotiations. August reductions of troop levels provided tempo-

Heng Sinith/AP

Cambodian troops make their way through the ancient temple of Preah Vihear in October following renewed hostilities with Thailand over a long-standing border dispute.

rary respite, but with talks dragging on, tensions flared again in October, when actual fighting broke out. Three Cambodian soldiers were killed and several Thai troops captured.

The July border tension occurred in the two-week run-up to Cambodian elections, and some speculated that it affected the outcome, but the overwhelming victory of the dominant Cambodian People's Party (CPP) was already expected. The CPP consolidated its position significantly, winning 73% of the seats in the National Assembly. The election was marred by irregularities, in particular the disappearance of tens of thousands of names from voter registration lists and the illegal issuance of voting certificates. European Union observers said that the election failed to meet key international standards. The most strident opposition party, the Sam Rainsy Party (SRP), strengthened its position somewhat over previous elections by capturing 21% of the Assembly seats. It was the party most subject to intimidation, and an SRP journalist and his son were assassinated. Gains by the CPP and the SRP came at the expense of the royalist Funcinpec Party. It had split into two parties, and both did poorly.

The Khmer Rouge Tribunal (officially the Extraordinary Chambers in the Courts of Cambodia) gained momentum after four key figures, Nuon Chea, Khieu Samphan, Ieng Sary, and Ieng Thirith—all power brokers in the 1975–79 Pol Pot period—were arrested in late 2007. A formal indictment was issued on August 12 for Kang Kek Ieu (aka Duch), former head of the infamous S-21 detention centre, whose trial was expected to begin in early 2009. The tribunal faced continuing funding problems, however.

(JOHN A. MARSTON)

CAMEROON

Area: 475,650 sq km (183,649 sq mi), excluding the 700-sq-km (270-sq-mi) Bakassi Peninsula
Population (2008 est.): 18,468,000, excluding the Bakassi Peninsula
Capital: Yaoundé
Chief of state: President Paul Biya
Head of government: Prime Minister Ephraim Inoni

Ignoring widespread complaints from opposition parties and nongovernmental organizations, Cameroonian Pres. Paul Biya announced in early January 2008 his intention to eliminate the two-term limit of presidential office defined by the constitution. Throughout February a national transport strike to protest huge increases in food and fuel prices turned into antigovernment demonstrations against the planned constitutional amendment. By February 29 at least 100 people had died in the violence as security forces attempted to restore order in Yaoundé, Douala, and Bamenda. Human rights organizations charged the government with arresting hundreds of youths and conducting a campaign of intimidation and censorship against the press. Three private radio stations were taken off the air in March for their coverage of the demonstrations. On April 21, a few days after the parliament passed the amendment, the opposition Social Democratic Front declared a day of mourning for the constitution.

On August 14 Nigeria officially relinquished the Bakassi Peninsula to Cameroon, six years after the World Court decision to uphold Cameroon's claims to the oil-rich area. In the months before the handover, more than 50 people died in clashes between the mainly Nigerian residents and the Cameroonian army. Despite President Biya's August 22 promise of providing security for all, an estimated 100,000 people fled Bakassi for Akwa Ibom state in Nigeria.

In early February, clashes in the capital of Chad between the military and antigovernment protesters caused some 40,000 people to flee into northeastern Cameroon. The UN established new camps for this latest wave of refugees. On February 21 the UN announced that it had also completed the vaccination of 35,000 children against measles and polio in that same region.

(NANCY ELLEN LAWLER)

CANADA

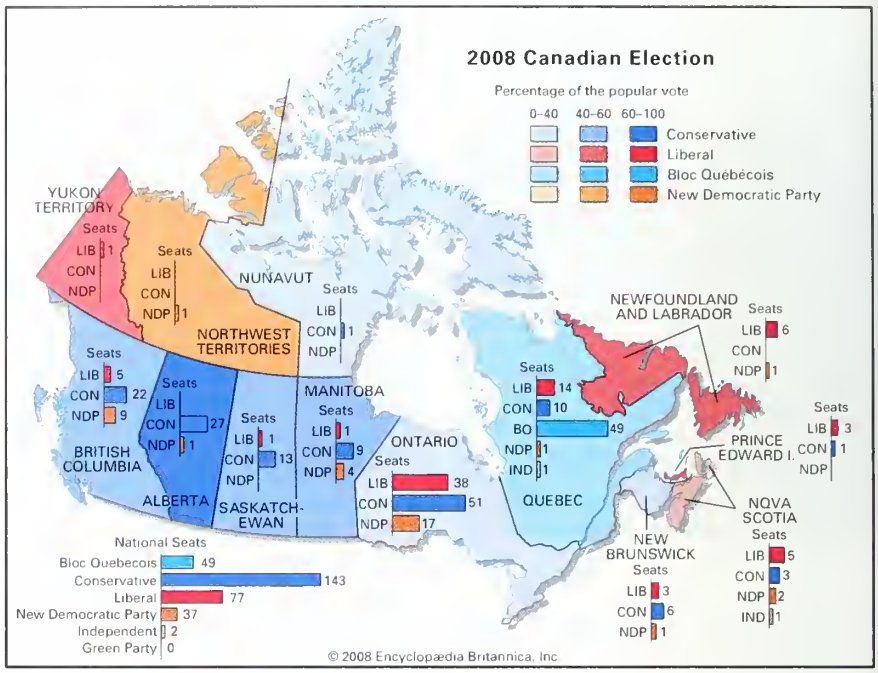
Area: 9,984,670 sq km (3,855,103 sq mi)
Population (2008 est.): 33,213,000
Capital: Ottawa
Chief of state: Queen Elizabeth II, represented by Governor-General Michaëlle Jean
Head of government: Prime Minister Stephen Harper

Domestic Affairs. Prime Minister Stephen Harper's centre-right Conservative Party won reelection on Oct. 14, 2008, in Canada's third general election since 2004. (*See* MAP.) The Conservatives won an increased minority in the House of Commons, taking 143 of 308 seats. The centre-left Liberal Party, under the leadership of Stéphane Dion, took 77 seats to retain its position as the official opposition but garnered its lowest share of the national vote (slightly over 26%) since confederation in 1867. On October 20, after only two years as Liberal leader, Dion announced that he would step down as soon as a new leader could be chosen. The separatist Bloc Québécois, under Gilles Duceppe, took 49 seats in the 75 constituencies that it contested in Quebec. The left-wing New Democratic Party, led by Jack Layton, increased its seat total from 29 to 37, and two independent MPs were reelected. Despite becoming the only major political party to increase the total number of votes that it received, the environmentalist Green Party, under leader Elizabeth May, once again failed to win any new seats and lost its first MP when Liberal-turned-Independent-turned-Green MP Blair Wilson of British Columbia was

defeated. Voter turnout reached a historic low at 59.1%. Harper, who was first elected in January 2006, sought the new election in contravention of a law passed by his own government, which set election dates every four years. He explained that he found the existing minority government to be dysfunctional and wanted a fresh mandate to pursue his party's agenda.

Harper's reelection was a bright spot in an otherwise difficult year for the government as Conservatives faced several embarrassments and scandals. Following a series of missteps, Foreign Affairs Minister Maxime Bernier was forced to resign his cabinet post on May 26. Bernier had previously been criticized for promising to fly aid to hurricane-ravaged Myanmar (Burma) on military planes that were actually unavailable, for not knowing the name of the president of Haiti in spite of a long-term Canadian military mission in that country, and for compromising a quiet campaign by Canadian officials to get the Afghan government to replace a governor who was accused of corruption and of permitting torture in war-torn Kandahar province. The scandal that ultimately forced Bernier out of office, however, revolved around a romantic relationship. Bernier was attacked by opposition parties when news surfaced that a woman with whom he had been involved, Julie Couillard, had had previous relationships with Quebec's biker-gang crime syndicate. Although the government initially defended his right to have a personal relationship with Couillard, Bernier submitted his resignation hours before Couillard went public with news that the minister had left confidential NATO documents at her home and had asked her to dispose of them. Couillard also claimed that she believed someone, probably a government security agency, had bugged her home and that Bernier had offered to help her secure a federal appointment in another ministry.

Harper came under fire in February after the author of a soon-to-be-published book on Independent MP Chuck Cadman released an audiotape interview from 2005 in which the Conservative leader appeared to indicate that his party had offered financial incentives to Cadman in an effort to persuade him to cast a vote of no-confidence in the previous Liberal government in order to trigger a general election. Conservative strategists speculated that Cadman, who was then in the late stages of terminal cancer, wanted to avoid an early election because he would lose his salary and medical benefits. Cadman's wife confirmed that the MP, who died soon after the May 2005 vote, told her that the Conservatives had offered him a million-dollar life insurance policy in exchange for his deciding vote in an otherwise evenly split Parliament. Harper denied the claims, insisted that the audiotape had been altered, and sued the Liberal Party and its leader for libel for repeating the claims outside Parliament, where they did not have privileged legal protection. On October 10 an audio expert hired by the Conservatives testified that key parts of the tape had not been altered.



On November 27 Finance Minister Jim Flaherty tabled a fiscal update in the House of Commons that triggered an unprecented political and constitutional crisis. In spite of comments that Harper made at an international economic conference that suggested that he would strongly favour an economic stimulus package to combat a feared recession, and suggestions that he favoured a more cooperative and conciliatory parliament, the fiscal update promised no immediate major spending initiatives and included several proposals that the opposition parties argued were overtly partisan and unacceptable. The fiscal update would have eliminated public financing to political parties (a move that would have severely compromised the solvency of some opposition parties), placed a temporary ban on federal public sector strikes, and delayed the achievement of pay equity between men and women in the federal public service. Organizers for the Liberals and the New Democratic Party began to work on a formal coalition agreement, signed on December 1, to replace the Conservatives if their minority government lost the confidence of the House of Commons.

The Conservatives attempted to win back the confidence of Parliament first by delaying votes of confidence until December 8 and then by removing from their fiscal update the proposals regarding political financing and the right to strike. The finance minister also promised an early budget in January 2009 that would include a stimulus package if necessary. Nevertheless, the leaders of the coalition, Dion and Layton, refused to back down from their decision to defeat the government at the earliest opportunity. In an effort to delay the confidence votes further, Harper asked the queen's representative, Governor-General Michaëlle Jean, to prorogue Parliament. Requests to prorogue parliament are ordinarily uncontroversial. However, the new session of Parliament had begun only two weeks earlier, and no legislation had yet been passed. Opposition critics called Harper's move undemocratic and a desperate bid to save his own job and hold onto power, and some constitutional experts contended the move could set a dangerous precedent.

On December 4 Jean agreed to the prime minister's request. A new session of Parliament would begin on January

26, 2009, quickly followed by the tabling of a budget and a subsequent vote of confidence in the government. Polls taken during the week of the crisis revealed a deeply divided Canadian public; although the coalition was found to be less popular than a continued Conservative minority government, Harper's personal popularity suffered.

On June 11 the prime minister made a formal apology on behalf of the government and the country to former students of residential schools, which were operated by the government and numerous Christian churches from the 19th century until the last one closed in 1996. The schools were designed to remove aboriginal children from their families and communities as a part of an aggressive assimilation policy that sought to destroy First Nations' culture and change their religious adherence and were often sites of physical, emotional, psychological, and sexual abuse. Although First Nations communities continued to suffer from the effects of generations of attacks on their culture and familial bonds, many aboriginal leaders accepted the apology and urged other Canadians to take notice of a truth and reconciliation commission in which survivors would tell their stories and to enter a new period of Canadian-aboriginal relations. Approximately 86,000 of the 150,000 residential school students were still living in 2008; they would share in a Can$2 billion government compensation package.

The Economy. The federal government, all 10 provinces, and the 3 northern territories presented balanced budgets with modest to large surpluses during the first half of 2008. In the wake of a global credit crisis and fears of a worldwide economic slowdown or recession, however, by October some governments were warning that budgetary deficits could quickly become a reality. Following years in which the federal government had made two consecutive 1% reductions in the national sales tax and numerous other targeted tax cuts and spending increases, Finance Minister Jim Flaherty on February 26 presented Canada's smallest budget in 11 years. Major spending announcements included Can$1 billion over three years and Can$250 million over five years to assist the struggling manufacturing and auto industries, respectively; a Can$2 billion infrastructure investment fund; a tax savings account in which Canadians could deposit or invest up to Can$5,000 tax free each year; Can$500 million for public transit; Can$350 million for a Canada Student Grant program; and Can$330 million to improve access to safe drinking water in First Nations communities. Spending increased by only 3.4% in the 2008–09 budget—a significant reduction from the 14.8% rise from two previous Conservative budgets.

Although Canada had posted consecutive budgetary surpluses since 1998 and both Harper and Dion pledged during the election campaign to continue to present balanced budgets, two days after winning reelection Harper told reporters that the severity of the global economic crisis might force his government to run a deficit at some point during his term. Similarly, despite projecting a budgetary surplus in Ontario's spring budget and balanced budgets until at least 2010–11, the province's finance minister on October 22 announced an updated prediction of a Can$500 million deficit. One day later the Bank of Canada reported that the country was on the edge of a recession in which a recovery might be distant and not complete. The announcement followed a two-month period in which Canada's stock market lost 20% of its value and was off by almost 40% from record highs set the previous year. The Canadian dollar also plunged below U.S.$0.80 in October following a 30-year high in 2007 in which it had closed above parity with the U.S. dollar.

Foreign Affairs. The prime minister's chief of staff, Ian Brodie faced intense criticism for his role in a leak that had ramifications in the U.S. Democratic presidential primaries. On February 27 the Canadian Television Network (CTV) reported that both Hillary Clinton and Barack Obama had made comments that suggested that the North American Free Trade Agreement (NAFTA) might be renegotiated if either candidate were elected president. Clinton denied the reports that day; and Obama denied the story two days later. On March 5 Canadian news reports disclosed that the initial leak had come from Brodie's office during a prebudget media lockup. Brodie remarked to a reporter that, despite recent campaign rhetoric, Clinton's campaign had assured the Canadian government that she did not plan to seriously renegotiate NAFTA if she became president. Brodie resigned for his part in the scandal.

Arctic initiatives, particularly those strengthening Canada's claim of sovereignty over its territorial northern waters for security and resource-extraction purposes, were high priorities. During August the government announced a state-of-the-art mapping program to identify energy and mineral development potential in the area and a series of large-scale rehearsals for emergencies involving cruise ships, commercial vessels, and pleasure crafts.

(WILLIAM STOS)

CAPE VERDE

Area: 4,033 sq km (1,557 sq mi)
Population (2008 est.): 500,000
Capital: Praia
Chief of state: President Pedro Pires
Head of government: Prime Minister José Maria Neves

In 2008 Cape Verde continued to enjoy political stability and annual economic growth of more than 6%, thanks in part to new infrastructural development and increased tourism. In January, Cape Verde was upgraded by the United Nations from a lower-income country to a middle-income country, joining only 13 other African countries with that status.

Cape Verde, which had been involved in accession negotiations with the World Trade Organization (WTO) since 1999 and in December 2007 was invited to join the body, accepted the terms of accession on June 23, 2008; Cape Verde became the WTO's 153rd member on July 23. Some concerns were expressed, however, that businesses would be unable to survive without tariff protection, which would be phased out under WTO rules. The country remained highly dependent on remittances from expatriates to cover a large trade deficit, and the government sought continued international aid to help it reduce its economic vulnerability and to further boost economic growth. After Prime Minister José Maria Neves reshuffled his cabinet in June, he signed a €50 million (€1 = about $1.40) development-fund agreement with Spain; the money would be used in part to pay for a ship to boost interisland trade and passenger links. In August the EU promised Cape Verde €51 million over five years, mainly to fund programs to promote economic growth, poverty reduction, and good governance.

(CHRISTOPHER SAUNDERS)

CENTRAL AFRICAN REPUBLIC

Area: 622,436 sq km (240,324 sq mi)
Population (2008 est.): 4,424,000
Capital: Bangui
Chief of state: President François Bozizé
Head of government: Prime Ministers Élie Doté and, from January 22, Faustin Archange Touadéra

After being named prime minister of the Central African Republic (CAR) on Jan. 22, 2008, Faustin Archange Touadéra, rector of the University of Bangui, declared that peace and security were his government's priorities. Nevertheless, by February 100,000 Central Africans had fled from the north to neighbouring countries, while an additional 200,000 had been driven from their homes by continuing violent confrontations between the army and various rebel groups. In other conflict-related news, an EU force of more than 3,000 was mobilized in March to CAR and Chad to protect displaced people fleeing from the strife in Darfur, a region in The Sudan.

On May 9 the government, having reached agreement with several smaller rebel factions, signed a cease-fire with two major groups, the Popular Army for the Restoration of the Republic and Democracy (APRD) and the Union of Democratic Forces for Unity (UFDR). The APRD, however, later disowned the pact and renewed attacks on government troops; a major confrontation occurred on August 7. In an effort to restart the peace process, the government appointed a special commission to study the feasibility of an unconditional amnesty for the rebels.

Armed banditry was on the increase in the northwest. Five persons were kidnapped in early March, three of whom were later found dead. In another incident two doctors and their staff were taken and held for eight days before a ransom was paid. On March 14 the nongovernmental organization Doctors Without Borders suspended their northern operations after a series of attacks on its ambulances killed an aid worker. In early June bandits reportedly killed at least 37 villagers north of Kamba Kota in Ouham province.

(NANCY ELLEN LAWLER)

CHAD

Area: 1,284,000 sq km (495,755 sq mi)
Population (2008 est.): 10,111,000, excluding more than 200,000 refugees from The Sudan
Capital: N'Djamena
Chief of state: President Lieut. Gen. Idriss Déby
Head of government: Prime Ministers Delwa Kassire Koumakoye and, from April 16, Youssouf Saleh Abbas

The deployment took place in Chad in January 2008 of a portion of the planned EU military force of 3,700 troops (EUFOR). This was to help protect humanitarian personnel providing services mainly to refugees in Chad streaming in from Darfur, a war-torn region in The Sudan, as well as some 180,000 internally displaced people. The deployment of EUFOR had been delayed owing to logistic, financial, and political factors. In February the long-standing armed conflict in eastern Chad between the government and rebels reached the capital, N'Djamena, and heavy fighting occurred there before the rebel troops were expelled. A leading opposition figure fled to France, which claimed that its troops had not been involved in the fighting, but French logistic assistance was likely to have helped to ensure the survival of the government of Pres. Idriss Déby. Accusing The Sudan of aiding the rebels, Déby renewed Chad's state of emergency. By October, EUFOR troops numbered more than 3,300, and UN Secretary-General Ban Ki-moon called on the Security Council to replace EUFOR (its mandate was to expire in March 2009) with a 6,000 UN troop contingent in Chad and the Central African Republic. As long as the Darfur crisis continued, there was little hope of stability in Chad. (See *The Sudan:* Sidebar, below.)

Chad retained its reputation as one of the most corrupt countries in the world, and much of the money that flowed to the government from the new oil revenues seemed to be swallowed up by the armed conflict against the rebels. In September 2008 the World Bank withdrew its loan agreement that backed a vast oil pipeline project with Cameroon, operated by ExxonMobil, on the grounds that Déby's government had not complied with the commitment it had given to set aside oil revenues to benefit local communities, especially in respect to health and education.

(CHRISTOPHER SAUNDERS)

Sunday Alamba/AP

Chadian refugees return to N'Djamena in February after having briefly fled across the Chari River to Cameroon to escape fighting between government troops and rebel forces.

CHILE

Area: 756,096 sq km (291,930 sq mi)
Population (2008 est.): 16,454,000
Capitals: Santiago (national) and Valparaíso (legislative)
Head of state and government: President Michelle Bachelet

In 2008 Chile continued to thrive as an economic success story under democratic rule. Politically, there were harbingers of change after prolonged rule by the centre-left Concertación coalition. Pres. Michelle Bachelet, who took office in 2006, began the second half of her nonrenewable four-year term. Increasingly a lame duck, she continued to deal with domestic issues involving education, health care, transportation, and energy supply, while around her there was increased political maneuvering in anticipation of the December 2009 presidential election. Sebastián Piñera, whom Bachelet had defeated for the presidency, remained the front-runner for the opposing centre-right coalition Alliance for Chile. Within the Concertación there were indications of

interest from several former presidents, notably Socialist Ricardo Lagos and Eduardo Frei of the Christian Democratic Party (PDC). There were conflicts within the PDC—especially in the aftermath of losses in the October 26 municipal elections—which resulted in the resignation of its president, Soledad Alvear, and an end to her presidential quest. The Concertación's political waters were also roiled by competition from Concertación members who had left the coalition, including, for example, independent Sen. Fernando Flores.

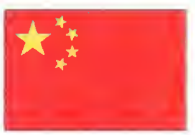
The municipal elections were an indication of problems for the Concertación owing to the growing appeal of the Alliance for Chile. Although the Concertación won a majority of the local council seats, the Alliance took a majority of the mayoralties, including holding on to the mayoral position in the country's capital, Santiago, where a third of Chile's population resided. Although both sides declared a victory, the results were a warning signal to the ruling coalition.

Bachelet devoted considerable time to foreign relations. Fearing the possibility of civil unrest on her country's borders, she took the lead in organizing a regional summit to discuss the increasingly worrisome internal conflict in Bolivia between Pres. Evo Morales, who was supported largely by the poor and the indigenous, and his more upscale political opponents in eastern Bolivia, who were clamouring for greater regional autonomy. There was also continuing friction with her counterpart in Venezuela, Pres. Hugo Chávez. In September the Chávez government expelled the director of Human Rights Watch for the Americas, José Miguel Vivanco, a Chilean. The move elicited a protest by the Chilean government.

Chile's economy continued to thrive, with yearly growth estimated at 4%. Inflation was up, running at 9%. Ironically, the consequences of the U.S. financial crisis for Chile had positive as well as negative aspects. For example, the U.S. dollar, which had dropped markedly in recent years, gained significant ground in the latter months of 2008. This, coupled with the decline in the price of oil, helped boost the Chilean export sector, one of the most vibrant sectors of Chile's economy. The price of copper, still Chile's leading export, declined in the latter part of the year, however, as the global slowdown reduced demand for the metal.

The spread of an infection among Chile's farmed salmon wreaked havoc in the salmon industry. First thought to be an isolated issue, the problem grew as the virus—known as infectious salmon anemia, or ISA—spread to dozens of salmon farms in southern Chile. By late 2008 the government had temporarily closed down nearly 50 sites and quarantined another 80. Despite these difficulties, the volume of Chile's exports of farmed salmon, as well as trout, continued unabated, with most of the exports being sent to the U.S. and Japan, the country's two largest export markets. (LOIS HECHT OPPENHEIM)

CHINA



Area: 9,572,900 sq km (3,696,100 sq mi), including Tibet and excluding Taiwan and the special autonomous regions of Hong Kong and Macau
Population (2008 est., excluding Taiwan, Hong Kong, and Macau): 1,324,681,000
Capital: Beijing
Chief of state: President Hu Jintao
Head of government: Premier Wen Jiabao

Domestic Affairs. For the Chinese government and the vast majority of its citizens, China's remarkably smooth hosting of the 2008 Olympic Games in Beijing symbolized that the country had achieved its modern national goals: wealth and power. (*See* Special Report on page 194.) On the one hand, the Olympics were held as China celebrated the 30th anniversary of the beginning of reform and opening up that had helped to create much of the country's wealth, while on the other, the Games were viewed as marking the end of what official Chinese history referred to as China's "national humiliation" at the hands of Western powers and Japan over the previous 150 years.

Such a momentous year got off to a chaotic start, however, with three weeks of severe snowstorms in January that crippled China's transportation system just as millions of domestic migrant workers were heading home for the Lunar New Year holiday. Hundreds of thousands of troops had to be deployed to maintain order as China's basic infrastructure proved inadequate, despite massive investment in recent years. Faced with mounting criticism of the government's handling of the situation, Premier Wen Jiabao issued a remarkable apology to travelers waiting to return home in southern Hunan province. Although China's government allowed even less political dissent than usual in 2008 as the country prepared for the Olympics, Wen's apology set a precedent for a more responsive, hands-on approach to governance by China's political leadership.

Other examples of the government's new emphasis on accessibility included a Chinese-language Facebook page created for Wen in May and an online chat session that Pres. Hu Jintao joined at People's Daily Online after he listened to a presentation about the site's popular Strong China Forum. In June the number of Internet users in China reached 253 million, which meant that China had overtaken the U.S. as the country with the world's largest population of online users.

China's leadership also enhanced its standing with the Chinese people with a strong response to a wave of unrest in Tibet that drew international attention in early March to China's Tibetan policy and human rights record. The unrest began with protests by Tibetan monks but quickly escalated a week later into a day of rioting during which Tibetans burned and looted businesses owned by ethnic Han Chinese in the Tibetan capital of Lhasa. Chinese troops were sent to restore order but not before violence had spread to other ethnic Tibetan areas of China, including Qinghai, Gansu, and western Sichuan.

While there was widespread sympathy internationally for the Tibetan people, China's ethnic Han majority, which accounted for 92% of the country's population of more than 1.3 billion, was deeply shocked by powerful images of Tibetan resentment of Chinese rule. For many Chinese, the Tibetans appeared as ungrateful recipients of the billions of dollars of development projects that the central government had poured into Tibet, including a $4 billion high-altitude railroad that connected Lhasa to the outside world in 2006. For many Tibetans, though, the railroad and the influx of Han Chinese migrants into Tibet threatened to make Tibetans a minority in their own homeland.

In the weeks following reassertion of Chinese control over Tibet, the world tour of the 2008 Olympic torch drew significant protests in London, Paris, San Francisco, and Seoul in support of the Tibetan uprising. A contingent of Chinese guards dressed in track suits protected the torch as it was attacked

by demonstrators trying to snuff it out. In one such incident in Paris, demonstrators tried to wrest the torch away from a paraplegic Chinese athlete. This reinforced the growing sense in China that China itself was under attack.

On May 12 a magnitude-7.9 earthquake struck Wenchuan township in western Sichuan province, killing nearly 70,000 people and leaving millions homeless. (*See* DISASTERS.) The Chinese army mobilized tens of thousands of soldiers in a disaster effort once again led personally by Wen. Abandoning its policy of secrecy about natural disasters, the Chinese government allowed unprecedented coverage of the aftermath of the earthquake by both Chinese and international media. As the scope of the devastation became clear, China allowed foreign relief organizations to enter the country and briefly tolerated protests by the parents of the many children who died when their school buildings collapsed.

Ng Han Guan/AP

Rescue workers move rubble by hand to search for survivors near the epicentre of the earthquake in Yingxiu, China's Sichuan province, on May 16.

Despite the earthquake, Beijing went ahead with the Summer Games. A major concern for athletes and visitors had been high levels of air pollution in Beijing that had resulted from decades of explosive growth and dramatically increased car ownership. Nonetheless, a policy of shifting heavy industry outside Beijing and last-minute traffic-control measures effectively reduced smog levels. Visitors found a modern capital city studded with ambitious architecture. Major new structures that opened in late 2007 and 2008 included the National Centre for the Performing Arts, known as the Egg, the Beijing National Aquatics Center, known as the Cube, and the Beijing National Stadium, the world's largest steel structure, known as the Bird's Nest.

The Bird's Nest was the location of the Games' opening ceremony, a mass spectacle that involved some 15,000 performers and celebrated 5,000 years of Chinese cultural achievements and the concept of social harmony (*he*), the central tenet of the Communist Party of China's (CPC's) ideology under Hu. To ensure social harmony during the Games, three protest zones were set up in Beijing where residents could protest if they registered and received a permit. No permits were granted, however, and in one case two elderly women who had applied to protest were initially sentenced to reeducation by labour, though this sentence was later canceled. A total of 58 foreigners were deported during the Games for protests that authorities said violated Chinese law. At the close of the Olympics, China had won the most gold medals (51) and the second highest number of medals overall (100), affirming its status as a sports superpower.

In late September China launched a Shenzhou 7 rocket carrying three astronauts, one of whom successfully carried out the country's first space walk. The government's confidence in the mission was strong enough to broadcast the 13-minute space walk live on television. Despite impressive examples of how the central government could mobilize the vast resources at its disposal for national projects or natural disasters, dissent against local governments flickered across China throughout the year. Following protests in 2007 that halted construction of a major chemical plant in the coastal city of Xiamen, residents of Shanghai protested against the proposed Shanghai-Hangzhou Maglev Train during January and February 2008. The protesters opposed the project on grounds that it would lower property values and emit harmful levels of electromagnetic radiation. The project was nonetheless approved in August, with construction slated to begin in 2010. While the Shanghai protests were peaceful, a violent outbreak of rioting occurred in late June in Weng'an, a remote township in Guizhou province. Some 10,000 protesters set fire to government buildings and overturned cars following the death of a 15-year-old girl. The girl's family claimed that she had been raped and murdered, and there were allegations that the crime had been covered up by local authorities.

The two main political events in 2008 were the National People's Congress in March and the CPC's Central Committee meeting in October. The National People's Congress attempted to streamline the Chinese government by creating new superministries under the State Council extracted from clusters of existing specialized ministries. The Congress also elected Li Keqiang one of four vice premiers under Wen on the State Council and Xi Jinping vice president under Hu. This was interpreted as a setback for Hu, who was believed to favour Li Keqiang as his successor. Both Li and Xi were also among the nine current members of the CPC's Political Bureau's Standing Committee that in practice functions as China's highest executive authority.

The Central Committee meeting, which was attended by more than 300 senior party members, committed the state to a policy of loosening the restrictive household-registration system that bifurcated Chinese society in terms of access to resources between those born in the country and those born in the city. In addition, the Central Committee also signaled that Chinese farmers would soon be permitted to buy and sell land-use rights. Both policies were intended as concrete steps in narrowing the vast disparity between the incomes of rural and urban residents by accelerating migration to urban areas. In 2007 the per capita income for rural residents was $608, while urban residents earned $2,027 per capita. The party planned to double the annual income of rural residents by 2020.

The Economy. In 2008, despite record high oil prices and the world credit crisis, China's economy continued its rapid expansion. Though GDP growth slipped to below 10% (from 11.6% in 2007), China's trade surplus continued to increase rapidly, setting a single-month record of $29.3 billion in September as commodity prices decreased from earlier in the year. In turn this pushed China's foreign-exchange reserves—the world's largest—to $1.9 trillion by the end of the third quarter. That figure was almost twice the size of Japan's foreign reserves, the world's second largest. Up to $1 trillion of

China's foreign reserves were held in U.S. treasury bills.

Nonetheless, China Investment Corp., China's $200 billion sovereign wealth fund, did not seek to diversify significantly from U.S. dollar-denominated assets in 2008. One reason for this was widespread domestic criticism of the fund's losses caused by investments in the U.S. financial firms Morgan Stanley and the Blackstone Group in 2007 and $5 billion frozen in a failed money-market fund in September 2008. Chinese finance officials feared that any significant movement away from U.S. dollar assets could trigger a sharp decline in the value of those assets. The Chinese renminbi, meanwhile, accelerated its appreciation against the U.S. dollar, rising some 6.5% over the course of the year.

In addition to China Investment Corp., other Chinese financial companies suffered losses related to the 2008 financial crisis. One prominent example was Ping An Insurance, which was forced to write off $2.5 billion in connection with its investment in the Dutch-Belgian bank Fortis after the bank was taken over by the governments of The Netherlands, Belgium, and Luxembourg. In general, though, China's capital controls and its limited appetite for the types of credit risk that caused the financial crisis staved off serious short-term impact on Chinese financial institutions. The main concern was that a slowdown in China's major export markets would ratchet down economic growth in 2009 and beyond.

Domestically, consumer prices surged in the first half of the year, peaking in May with a consumer price index increase of 7.7%, but by August consumer price inflation had dropped to 4.7% as lower oil and grain prices began to alleviate the pressure. Faced with rapidly changing economic conditions, China's central bank reversed course in September, dropping interest rates for the first time in six years and lowering bank reserve ratios in an effort to anticipate slower economic growth through the end of 2008 and into 2009. A dramatic 70% drop in share prices on the Shanghai Stock Exchange by the third quarter, combined with a sharp decline in real-estate transactions in major cities such as Beijing and Shanghai and slower growth in industrial output, contributed to the prevailing sense that the economy was slowing down. In response, in November the central government announced a major economic-stimulus plan.

Two important laws took effect in 2008 that were expected to have a profound impact on China's economic environment. The first of these was the Labour Contract Law, which went into effect on January 1 and required written contracts to formalize employment relationships between workers and employers. The new law made it more difficult to terminate workers and gave workers the right to file complaints and be compensated for wrongful termination. The second law was the Anti-Monopoly Law, which took effect in August. The Anti-Monopoly Law allowed the Chinese government to block acquisitions of companies if the acquisition harmed competition or threatened national economic development.

In April former Shanghai party chairman Chen Liangyu was convicted of having accepted nearly $340,000 in bribes in connection with a scheme to divert money from pension funds into development projects; he was sentenced to 18 years in prison. In China's southern Guangxi province, Sun Yu, a high-ranking party official, was removed from office and prosecuted for having taken more than $58 million in bribes. Official corruption was estimated to cost China's economy $86 billion annually.

In addition to corruption, China struggled to contain the damaging effects of a series of food- and drug-safety scandals. In March and April the U.S. Food and Drug Administration (FDA) traced tainted batches of Heparin, a commonly used blood thinner, to Chinese suppliers who had sourced the ingredients of the drug from unregulated slaughterhouses. By the end of May, the FDA had identified 149 deaths that it related to tainted Heparin. In all, 10 countries, including China, Japan, and Germany, reported problems with Heparin products.

The scale of the Heparin scandal, however, was dwarfed by a scandal that began to emerge in August involving dairy products that had been laced with melamine—a chemical used in making plastic—in order to increase apparent protein content. In China alone, more than 50,000 babies became ill and four died as a result of having ingested milk formula containing melamine. By the end of October, the scandal had spread far beyond China as melamine-containing products ranging from fertilizer to chocolate candies were found in countries in the region.

Foreign Relations. Direct talks between China and Taiwan resumed in June after having been suspended for nearly a decade. The talks, held in Beijing, came a month after Ma Ying-jeou took office as the new Taiwanese president while vowing to establish better relations with China. The development raised concerns in the U.S. that Taiwan, a traditional U.S. ally, was tilting too much toward China. In that context the administration of U.S. Pres. George W. Bush announced $6.5 billion in weapon sales to Taiwan in October. China reacted angrily to the deal, declaring that it would cause "harm to Chinese interests and Sino-U.S. relations" and canceling several planned military as well as diplomatic exchanges with the U.S. Historic agreements on expansion of direct flights and trade between Taiwan and China were signed at a second round of talks, held in Taipei in November.

Some tensions arose in China's relations with Russia as well. The Chinese foreign-policy establishment was dismayed by the Russian invasion of Georgia in August and Russia's diplomatic recognition of South Ossetia and Abkhazia, since these acts could create precedents for the diplomatic recognition of Tibet or Taiwan as independent countries. Nonetheless, China and Russia resolved a long-running border dispute in October when Russia handed over 340 sq km (131 sq mi) of territory to China on the border of China's Heilongjiang province.

Relations with other countries were generally cordial. In March China opened the last link in a new paved highway connecting Yunnan province to northern Thailand. In May President Hu made a state visit to Japan that contributed to the general thaw in Sino-Japanese relations in the years since anti-Japanese riots occurred in China in 2005. Relations with India became somewhat more difficult when China raised objections to a decision by the Nuclear Suppliers Group in September to lift a nuclear trade embargo on India. The decision was expected to pave the way for the approval of a U.S.-India pact that would allow India access to civilian nuclear technology. This was followed in October by an unsuccessful round of talks on the disputed Sino-Indian border.

Farther afield, Chinese ties with Africa continued to expand, with bilateral trade hitting $100 billion during the year. Relations with France, however, were marred by Chinese boycotts of the French supermarket chain Carrefour following protests against the Olympic torch relay in Paris and

threats by French Pres. Nicolas Sarkozy to boycott the Olympic Games because of Chinese policies in Tibet.

(MICHAEL R. FAHEY)

COLOMBIA

Area: 1,141,748 sq km (440,831 sq mi)
Population (2008 est.): 44,442,000
Capital: Bogotá
Head of state and government: President Álvaro Uribe Vélez

The Revolutionary Armed Forces of Colombia (FARC), a leftist guerrilla group opposing the government, suffered several major setbacks in 2008. In March the Colombian military struck a rebel camp in Ecuadoran territory, killing, among others, senior leader Raúl Reyes and setting off a diplomatic skirmish with Venezuela, Nicaragua, and Ecuador. In May the group revealed that its leader and founding member, Pedro Antonio Marín (also known as "Tirofijo" and Manuel Marulanda Velez [*see* OBITUARIES]), had died of natural causes at what was believed to be the age of 77. In July the Colombian military rescued 15 FARC hostages, including former presidential candidate Ingrid Betancourt (*see* BIOGRAPHIES) and three U.S. Defense Department contractors. Later that month hundreds of thousands of Colombians participated in peaceful marches calling for an end to the kidnappings and violence perpetrated by armed groups—the FARC had more than 700 captives and the National Liberation Army (ELN) more than 200, most of whom were ordinary citizens being held for ransom. A military operation in September resulted in the killing of a particularly violent FARC commander, Aicardo de Jesús Agudelo, known as "El Paisa."

The daring rescue of Betancourt and 14 others was made possible by government infiltration of the upper reaches of the group's leadership. A member of the FARC, cooperating with government forces, convinced the leader of the cell holding the hostages that a humanitarian nongovernmental organization (NGO) was arriving to transfer them to another cell. The helicopters sent to carry out the transfer were carrying government personnel rather than NGO workers. After takeoff, the cell leader and his aide were overpowered, and the hostages were informed that they had been freed.

William Fernando Martinez/AP

Following her dramatic rescue after more than six years in FARC captivity, former Colombian presidential candidate Ingrid Betancourt (right) embraces her mother on July 2 at a military base in Bogotá.

The much-heralded rescue of Betancourt and the others was welcome news for the administration of Pres. Álvaro Uribe. It showed that the falling out with Venezuela's Pres. Hugo Chávez over Chávez's failed mediation efforts between the government and the guerrillas did not mean that the fate of the hundreds of hostages held by the FARC was completely without hope. The rescue also helped divert public attention from a corruption scandal involving the government and its supporters in Congress. In 2004 Congress had approved a constitutional amendment clearing the way for Uribe to run for a second term in 2006. Allegations emerged that congressional support was purchased by the administration through bribes and promises of government favours, particularly in the cases of Yidis Medina and Teodolindo Avendaño.

Previously, members of the government had been charged with having close ties to the right-wing paramilitary group the United Self-Defense Groups of Colombia (AUC) and with accepting AUC campaign contributions. Critics suggested that the extradition of 14 AUC leaders to the U.S. in May was in part motivated by an effort to keep them from identifying their ties to the government.

Despite such criticism, Uribe's continued popularity, which spiked even higher after the rescue of the hostages, fueled speculation that he would find a way to seek a third term. When the Supreme Court concluded that his 2006 reelection was tainted by corruption, Uribe suggested that he would hold a referendum to see whether the presidential vote should be repeated. If the proceedings had gone forward, they might have been used as a means to extend his stay in office, which was currently proscribed by the constitution after 2010. Instead, the new interior minister, Fabio Valencia, was charged with consolidating congressional support behind the process of amending the constitution yet again to allow the president to serve a third term. Uribe suggested that he would consider sitting out a term and seeking reelection in 2014, but this would also require a constitutional amendment. While the administration turned its attention to Congress, the tension between the Supreme Court and the executive branch over the connections between politicians and right-wing paramilitary groups continued unabated.

The "firing" of Chávez as a mediator between the government and guerrillas and the incursion into Ecuador to strike a FARC camp precipitated diplomatic crises. The situations were exacerbated by the ideological distance between the conservative Uribe and the left-of-centre Presidents Chávez and Rafael Correa of Ecuador. Colombia's apparent isolation on the continent seemed to ease in the latter half of the year. Bogotá joined a regional defense alliance spearheaded by Brazil, and an anti-drug-trafficking summit held in Cartagena generated international cooperation, including promises of support from Venezuela.

(BRIAN F. CRISP)

COMOROS

Area: 1,862 sq km (719 sq mi), excluding the 374-sq-km (144-sq-mi) island of Mayotte, a de facto dependency of France since 1976
Population (2008 est.): 645,000 (excluding 192,000 on Mayotte)
Capital: Moroni
Chief of state and head of government: President Ahmed Abdallah Mohamed Sambi

The political crisis that began in Comoros in 2007 after Anjouan Pres. Col.

Mohamed Bacar defied orders to step down from office boiled over into 2008 when African Union (AU) and federal troops invaded the island to wrest control back from the renegade leader. Bacar, who was elected Anjouan president in 2002 after having seized power in a 2001 coup, unilaterally declared himself president in illegal local elections held in June 2007. In the coup-prone Comoros, each of the three autonomous islands of Grande Comore, Anjouan, and Mohéli had its own president; the federal presidency rotated between the island leaders every four years.

In an unprecedented move, on March 25 more than 1,500 Comoran and AU troops landed on Anjouan under a military action dubbed "Operation Democracy," which retook the island and ousted Bacar, who fled to neighbouring French-controlled Mayotte. After the deposed leader unsuccessfully sought haven in France, Bacar was expelled to Benin, which granted him asylum. The coalition troops were able to quickly establish calm on the island following the coup, and on June 29, Anjouan voters elected Moussa Toybou as Anjouan's president. In July, Mohéli Pres. Mohamed Ali Said suspended the island's government; it was the third time he had done so during his term in office.

(MARY EBELING)

Karel Prinsloo/AP

Displaced by a rebel offensive in eastern Democratic Republic of the Congo, civilians laden with whatever possessions they can carry walk alongside a convoy of Congolese army tanks in October.

CONGO, DEMOCRATIC REPUBLIC OF THE

Area: 2,344,858 sq km (905,355 sq mi)
Population (2008 est.): 66,515,000
Capital: Kinshasa
Head of state: President Joseph Kabila
Head of government: Prime Ministers Antoine Gizenga and, from October 10, Adolphe Muzito

Though the apparatus of government was in place in the Democratic Republic of the Congo (DRC) in 2008 and central and provincial assemblies existed, little was achieved. The most important external factor in fostering growth was the implementation of the agreement reached by the government in 2007 with three Chinese state-owned companies; by 2008 work had begun on the restoration of the DRC's infrastructure in return for profits from copper, cobalt, and coltan mining. Under the agreement a number of Congolese staff were to be trained and 10% of the work would be subcontracted to Congolese companies.

In March the U.S. announced that it would dispense $500 million in aid during the year. The following month Pres. Joseph Kabila visited South Africa and, together with Pres. Thabo Mbeki, drafted a number of proposals for cooperation. In June the U.K. provided the initial capital to launch a fund for the protection of the Congo basin, which was threatened by timber companies and mining, and in August the French government increased its offer in support of other European countries that were helping to fund the DRC local elections due in 2009.

In the war-torn eastern border province of Kivu, however, occasional glimmers of hope were usually quickly extinguished. On January 23, representatives of the UN, the EU, the U.S., and the African Union brokered a cease-fire between the government forces and two rebel militias: the Tutsi Gen. Laurent Nkunda's National Congress for the Defense of the Congolese People (CNDP) and the Hutu Democratic Forces for the Liberation of Rwanda (FDLR). The CNDP, however, complained that the government was collaborating with the FDLR and objected to the integration of Rwandan Hutu rebels into the Congo army. The government, on the other hand, believed that Nkunda was effectively operating as a proxy for Rwanda. Adding to the many problems of the region, in early February an earthquake on the eastern border killed 40 people.

On March 13 the UN Security Council unanimously called for the immediate and unconditional disarmament and repatriation of all Rwandan rebels in the DRC and for more purposeful cooperation between the governments of the DRC and Rwanda. At a meeting on March 16, Rwandan Pres. Paul Kagame accused the DRC of arming, supplying, and exchanging intelligence with the FDLR. Although President Kabila had set yet another date (late in May) for the FDLR to disarm, the DRC army proved too weak to enforce the decree. A damaging blow to peace efforts in the region was delivered in October when General Nkunda announced that he intended to transform the CNDP into a national movement aimed at liberating the whole country.

Late in August ethnic clashes occurred in Katanga province between residents of Kolwezi and miners who had arrived from a neighbouring province to work in the copper, cobalt, and tin mines.

An incursion by Ugandan rebels of the Lords Resistance Army made it necessary in August to deploy UN and DRC troops to Orientale province. Friction along the Ugandan border, arising from claims that oil had been discovered in the region, was calmed after a conference in Kampala, Ugan., in September.

In September Prime Minister Antoine Gizenga announced that he was stepping down because of poor health. The following month Budget Minister Adolphe Muzito was appointed in his place.

(KENNETH INGHAM)

CONGO, REPUBLIC OF THE

Area: 342,000 sq km (132,047 sq mi)
Population (2008 est.): 3,847,000
Capital: Brazzaville
Head of state and government: President Denis Sassou-Nguesso, assisted by Prime Minister Isidore Mvouba

New voting cards were issued in the Republic of the Congo to all Congolese electors prior to the June 29 and Aug. 4, 2008, local and senatorial elections. In the balloting the presidential coalition took 600 of the 846 seats in local councils and captured 70 of the 72 Senate seats in the National Assembly. Charges of widespread fraud were made by opposition parties and international observers from the African Union. On August 12, representatives of the Alliance for the New Republic, an organization of three major opposition parties, withdrew from the National Electoral Commission, claiming that the entire process had been a "masquerade." Nevertheless, presidential elections were still scheduled for 2009.

On June 9 the program of demobilization, disarmament, and reintegration of the former rebels known as "Ninjas" was finally launched in Kinkala in the southern Pool region. The Ninja chief, Frédéric Bitsangou (alias Pastor Ntoumi), attended the ceremony. There were an estimated 30,000 combatants from the bloody 1998–2003 rebellion eligible for the program. While security had greatly improved in the region, the presence of thousands of former rebels still bearing arms continued to create a volatile situation.

On March 5 the government lifted its ban on the adoption of children by foreigners. This ban had been imposed in November 2007, following the October arrest of several French aid workers in Chad on child-trafficking charges.

Mobile laboratories to fight Ebola and other tropical viruses were being prepared. In May, Canadian health officials launched a program to train local specialists in the use of the equipment. On June 13 the government announced a new campaign to encourage the use of insecticide-treated mosquito netting for beds to reduce the spread of malaria. The following month the government also agreed to provide free antimalarial drugs to pregnant women and all children under age five. More than 20,000 Congolese children died annually from the disease. (NANCY ELLEN LAWLER)

COSTA RICA

Area: 51,100 sq km (19,730 sq mi)
Population (2008 est.): 4,389,000
Capital: San José
Head of state and government: President Óscar Arias Sánchez

Much of the political energy in Costa Rica during 2008 was focused on passage of legislation to implement the Central America–Dominican Republic Free Trade Agreement (CAFTA-DR). After years of debate, a national referendum on Oct. 7, 2007, had produced a very slim victory (51.6–48.4%) for the pro-ratification side. Formal ratification could not be completed, however, until a package of some dozen bills modifying existing Costa Rican legislation had been approved. The main opposition party, the Citizens' Action Party (PAC), had enough votes in the legislature to seriously delay this package, and by February 2008 some eight bills remained unapproved. Two of the bills were certain to have a major long-term impact. One bill liberalized the state monopoly over telecommunications and thereby opened the door to cell-phone competition; currently only the parastatal Instituto Costarricense de Electricidad could provide such service. A second key bill opened up the insurance industry to competition, previously also dominated by a parastatal monopoly. In November Costa Rican lawmakers voted their approval for CAFTA-DR, and on December 23 Pres. George W. Bush issued a proclamation that would bring the pact into force between the U.S. and Costa Rica on Jan. 1, 2009.

The government faced a crisis in March when Fernando Berrocal, the public security minister, reported finding that a large cache of funds attributed to Colombian guerrillas had been found in the home of two Costa Rican leftists. The trail to the funds had been established from the computer disks captured by a controversial Colombian military cross-border raid into Ecuador. Berrocal stated that he had also uncovered evidence linking the Colombia guerrillas to Costa Rican politicians. Protests against these revelations forced Berrocal to step down at the end of March. He was replaced temporarily by Laura Chinchilla Miranda, who was rumoured to be a strong candidate for the presidency in 2010. In April Janina del Vecchio was named to the security post.

Higher-than-expected levels of inflation continued to cloud the economic news, but the government demonstrated important progress in lowering the poverty rate. Although the high cost of fuel also had a negative effect, the cost was partly mitigated by concessionary prices offered by Venezuela. (MITCHELL A. SELIGSON)

CÔTE D'IVOIRE

Area: 320,803 sq km (123,863 sq mi)
Population (2008 est.): 19,624,000
De facto capital: Abidjan
Chief of state: President Laurent Gbagbo
Head of government: Prime Minister Guillaume Soro

Ten people who were arrested on Dec. 27, 2007, for having plotted to overthrow the government in Côte d'Ivoire were indicted on Jan. 18, 2008. The men allegedly were followers of the former leader of the New Forces, Ibrahim Coulibaly, who was living in exile in Benin.

On January 15 the UN Security Council voted to continue (until new elections were held) its peacekeeping operations in Côte d'Ivoire's "zone of confidence," which since 2002 had separated the rebel-held north and the government-controlled south. In February four UN observation posts in the zone were dismantled as a stage in the establishment of a "green line," which was a much-narrower buffer area. On May 3 more than 1,000 former members of the New Forces participated in a disarmament ceremony in Bouaké.

Public services in the north began reopening as the 2007 peace pact held. In January post office employees started to clear the five-year mail backlog, and customs officials resumed their duties in the north on May 15. Leaders of the fishermen's union and Ministry of Food officials on July 3 called for the lifting

Issouf Sanogo—AFP/Getty Images

An employee of an identification commission in Côte d'Ivoire records a voter's fingerprint during a ceremony to launch a new census in preparation for the country's presidential election, which was rescheduled for 2009.

of a 2004 UN-imposed arms embargo, claiming that they were unable to import parts to repair two naval vessels that were essential to keeping foreign boats from operating in Ivoirian territorial waters.

During the year demonstrations reached violent proportions over such grievances as water shortages, racketeering, and rocketing food prices. On February 20, thousands of women, demanding an end to a monthlong stoppage of drinking water, took to the streets of Abidjan and were teargassed by police. Protests on April 1 and 2 against high food prices turned into riots throughout Abidjan; at least one person was killed and dozens injured as the police attempted to regain control. Pres. Laurent Gbagbo responded by removing all import taxes on foodstuffs. A government announcement on July 6 declaring that it would no longer subsidize fuel prices provoked another series of strikes and protests in Abidjan as prices rose sharply. On July 21 Prime Minister Guillaume Soro stated that the fuel subsidy would be reinstated and that all government ministers would take a 50% pay cut to help pay for it.

Though originally scheduled for June, presidential elections were postponed until November but then further delayed until 2009.

(NANCY ELLEN LAWLER)

CROATIA

Area: 56,594 sq km (21,851 sq mi)
Population (2008 est.): 4,433,000
Capital: Zagreb
Chief of state: President Stipe Mesic
Head of government: Prime Minister Ivo Sanader

In January 2008 the Croatian Democratic Union (HDZ), which had won 66 of the 153 seats in the November 2007 parliamentary elections, joined forces with the Croatian Peasant Party (HSS), the Croatian Social-Liberal Party (HSLS), the Croatian Pensioners' Party (HSU), and ethnic minority representatives to form a government. Prime Minister Ivo Sanader continued as head of government and reiterated his commitment to completing accession negotiations with the EU in 2009 and thereby paving the way for membership in 2010 or 2011. That same month, however, Croatia found itself in a dispute with neighbouring Slovenia and Italy when it unilaterally declared its own "ecological and fisheries protection zone" (ZERP) in the Adriatic Sea, which thus prevented Slovenia and Italy from fishing there. The issue prompted renewed tensions between Ljubljana and Zagreb; a series of other disputes were still unresolved. In March the Croatian parliament adopted amendments to the ZERP that gave EU member states an exemption. EU Enlargement Commissioner Olli Rehn welcomed the resolution of the issue and signaled that accession negotiations would accelerate as a result.

By July 2008 Croatia had opened negotiations on 21 of the 35 chapters of EU law. The European Commission had repeatedly requested that Croatia provide a plan to reform the shipbuilding sector, for which it would be required to cease providing state subsidies upon joining the EU. Shipbuilding accounted for 12–15% of total exports and directly employed more than 11,000 workers. Five of the six state-owned shipyards were operating at a deficit, despite repeated attempts to make them more competitive. In late August the government announced that by early 2009 it would privatize all six state-owned shipyards.

The EU identified anticorruption efforts as a key area in which Croatia needed to demonstrate progress. In 2008 Croatia took several steps toward these goals, including the establishment of a new Police National Office for Quashing Corruption and Organized Crime, the prosecution of a surgeon for having accepted bribes from patients, and the launch of investigations into the conduct of Interior Minister Berislav Roncevic over a scandal involving the procurement of trucks when he was defense minister in 2004. Police also raided universities in a clampdown on professors who had accepted unofficial payments in return for granting good grades and for enrolling unqualified students. Concerns about organized crime reemerged in early October, however, when Ivana Hodak, the daughter of prominent lawyer Zvonimir Hodak, was shot dead. Zvonimir was representing former general Vladimir Zagorec, who was charged with having stolen diamonds valued at €3.5 million (about $4.4 million) to use as collateral in wartime arms deals. In response to the murder, Sanader fired Roncevic, as well as Justice Minister Ana Lovrin and Zagreb Police Chief Marijan Benko.

Croatia's bid for EU membership was strengthened by the fact that it had important allies among the current member states, including Germany and Austria. The EU, however, was not universally popular in Croatia; a Euro-

A Croatian policeman confiscates documents and computer equipment from the University of Zagreb in September as part of a government crackdown on corruption in academic circles.

AFP/Getty Images

barometer poll in June found that only one-third of Croatians approved of EU membership, while one-quarter believed that it was bad for Croatia (39% were undecided).

In April Croatia was invited to join NATO, along with Albania. Current NATO member states signed accession protocols for Croatia in July, and the country was expected to formally join in April 2009 on the organization's 60th anniversary. Croatia was also a nonpermanent member of the UN Security Council for the 2008–09 term.

According to the IMF, GDP growth was forecast at 4.3%, while the budget deficit was projected at only 1.3% of GDP. Croatia's macroeconomic stability was endangered, however, by its high external debt and accelerating inflation; the IMF forecast that by year's end the current account deficit would reach 9% of GDP, and the Croatian National Bank expected that the average inflation rate would climb to 7%. The global economic crisis was likely to increase the cost and difficulty of maintaining this debt, while foreign investment and exports were expected to decline, exacerbating the country's economic vulnerability. (LIZ DAVID-BARRETT)

CUBA

Area: 109,886 sq km (42,427 sq mi)
Population (2008 est.): 11,236,000
Capital: Havana
Head of state and government: President of the Council of State and President of the Council of Ministers Raúl Castro Ruz (acting until February 24 for Fidel Castro Ruz)

Fidel Castro resigned as president of Cuba in February 2008 at the age of 81, thus ending his 49-year tenure as the country's unrivaled leader. His younger brother and longtime minister of defense, 76-year-old Raúl Castro, was elevated to the presidency, which thereby formalized the transfer of power that had initially occurred in July 2006 when a serious stomach illness forced Fidel to relinquish power on a provisional basis. While younger officials, such as economic czar Carlos Lage and Foreign Minister Felipe Pérez Roque, remained in prominent roles, expectations of generational change were dampened when

Cuban shoppers survey computers for sale at a store in Havana following the lifting of a ban on the ability of ordinary Cubans to purchase consumer electronic goods.

Ramon Espinosa/AP

Raúl appointed 77-year-old José Ramón Machado, a top communist apparatchik, as the new first vice president and named 72-year-old Julio Casas the new minister of defense. Though officially retired, Fidel remained active by writing provocative columns about international affairs in the Cuban newspaper *Granma;* although Fidel never appeared in public, he remained in the public eye through the release of a small number of carefully selected photographs and video clips.

During his inauguration speech, Raúl hinted that the government would embrace a limited path of economic reform under the banner of the Communist Party, and in March 2008 the government approved a series of new economic measures. These included lifting a ban on the ability of ordinary Cubans to buy consumer electronic goods, such as DVD players and cell phones, and dropping a stricture that prevented Cubans from staying in the country's top tourist hotels. After introducing a plan in April that allowed thousands of Cubans to receive titles to their homes, the government eliminated salary caps and raised pensions for the country's more than two million retirees. The state also began to allow market forces to take root in the agricultural sector by permitting farmers to select crops and to play a larger role in making decisions about land use. In late August and early September, however, Cuba was struck in rapid succession by major hurricanes Gustav and Ike; more than 100,000 homes were damaged, and 30% of the country's crops were destroyed. The government estimated that storm damages would exceed $5 billion. In November Hurricane Paloma hit the already-devastated island. As a result, Cuba was unlikely to match the 7.5% growth rate achieved in 2007, and the pace of economic reform was crippled.

Cuba reported that its top trading partner in 2007 was Venezuela ($2.7 billion), followed by China ($2.5 billion), Canada ($1.4 billion), and Spain ($1.2 billion). The U.S. (in the fifth spot) ranked among Cuba's largest trading partners, owing to a record $582 million in all-cash sales from American food producers to Cuba; the deal was made possible by a loophole in the U.S. embargo approved by Congress in 2000.

On a political level, U.S.-Cuban relations remained frozen through much of 2008, symbolized by the two countries' inability to agree on the terms of hurricane relief assistance following the onslaught of Gustav and Ike. U.S. authorities offered Cuba $5 million in emergency aid, but the Cuban government rebuffed the offer and instead called for the lifting of the U.S. embargo. U.S. presidential election victor Barack Obama called for increased dialogue between the U.S. and Cuban governments and favoured lifting restrictions on the travel of Cuban Americans to visit family members in Cuba. In November Russian Pres. Dmitry Medvedev paid a visit to Cuba, sightseeing with Raúl Castro and later meeting privately with Fidel. The following month President Castro, making his first official foreign trip since assuming office in 2006, traveled to Venezuela, where he met with Pres. Hugo Chávez.

Popular disaffection with the Castro government came to the fore in January following the release of a videotape that showed computer science student Eliécer Ávila at a town hall forum sharply questioning government policies in an encounter with the National Assembly president, Ricardo Alarcón. Shortly thereafter, Cuban blogger Yoani Sanchez surged to worldwide attention with her ironic and critical musings about the Cuban reality on her popular blog Generation Y. Internet access on the island remained tightly controlled, however. In August, Cuban punk rocker Gorki Aguila was arrested for the crime of "social dangerousness," sparking an

outcry among the country's youth. The number of political prisoners dipped slightly, from 234 to 219, during the year. (DANIEL P. ERIKSON)

CYPRUS

Area: 9,251 sq km (3,572 sq mi) for the entire island; the area of the Turkish Republic of Northern Cyprus (TRNC), proclaimed unilaterally (1983) in the occupied northern third of the island, 3,355 sq km (1,295 sq mi)
Population (2008 est.): island 1,076,000; TRNC only, 271,000 (including Turkish settlers and Turkish military)
Capital: Nicosia (also known as Lefkosia/Lefkosa)
Head(s) of state and government: Presidents Tassos Papadopoulos and, from February 28, Dimitris Christofias; of the TRNC, President Mehmet Ali Talat

The political situation on the divided island of Cyprus showed signs of improvement in 2008. Dimitris Christofias (*see* BIOGRAPHIES) of AKEL, the communist Progressive Party of the Working People, was inaugurated as the Greek Cypriot president on February 28 and called for immediate and meaningful meetings with Mehmet Ali Talat, his Turkish Cypriot counterpart. The two presidents initially agreed to rejuvenate 13 moribund working groups and technical committees. Christofias and Talat later agreed on a single sovereignty and a single citizenship. Major negotiations continued at year's end.

The negotiators faced many problems, particularly the issue of land ownership, but they met in an atmosphere of lessened tension. The border was increasingly porous, with goods and people crossing in both directions. Despite progress, tensions remained. Vandals damaged Turkish-Cypriot property in the bicommunal village of Pyla, and the two regimes differed on foreign policy. For example, while Turkish Cyprus recognized Kosovo's independence, the Greek zone did not share the enthusiasm. Meanwhile, the UN peacekeeping forces celebrated their 60th anniversary, and the UN force in Cyprus continued the 44th year of its mission.

On January 1, Greek Cyprus adopted the euro, and the Cyprus pound ceased to be legal tender a month later. The economy was muted islandwide, with inflation slightly up and tourism down slightly. The lack of natural resources and a rapidly growing population caused serious problems. Cyprus was totally dependent on imported energy, and drought forced both sides to import water and increase desalination.

The island's rich archaeological heritage continued to come to light, often as a by-product of construction. Two ancient shipwrecks, a 3,500-year-old Egyptian ship and a 4th-century BC Greek commercial vessel, were found and investigated.

(GEORGE H. KELLING)

In an undated photo, a diver surveys well-preserved terra-cotta wine vases piled on the hull of an ancient shipwreck lying on the seabed off Cyprus's southern shore.

Department of Antiquities, HO/AP

CZECH REPUBLIC

Area: 78,866 sq km (30,450 sq mi)
Population (2008 est.): 10,408,000
Capital: Prague
Chief of state: President Václav Klaus
Head of government: Prime Minister Mirek Topolanek

In 2008 the Czech Republic experienced rising uncertainty as the government's position weakened and the economy slowed. After six inconclusive rounds of voting, in February the parliament reelected Václav Klaus as president by the narrowest possible margin. Support from the senior ruling Civic Democratic Party (ODS) alone was insufficient, and Klaus scoured the entire political scene for additional backing. The junior ruling Green Party (SZ) and the opposition Czech Social Democratic Party (CSSD) supported Klaus's challenger, U.S.-based economist Jan Svejnar, who was pro-European Union (EU) and favoured more attention to the environment.

While Svejnar's presidential victory would likely have triggered the government's collapse, Klaus's success failed to bring harmony. Indeed, maintaining political stability while pushing forward with further reforms proved difficult for Prime Minister Mirek Topolanek. Following its formation in early 2007, the cabinet lacked a formal parliamentary majority and depended on defectors from the CSSD. Although four deputies had left the CSSD by June 2008, the government remained challenged by disputes within and between the three ruling parties.

While SZ chairman Martin Bursik was accused of having deviated from the party program, rival Dana Kuchtova failed to unseat him at an extraordinary congress in September. That same month controversy heightened within the ODS as party deputy Jan Morava was caught on hidden camera gathering sensitive information about some other politicians. Morava claimed to have been provoked by former finance minister Vlastimil Tlusty (a Topolanek rival), and several Tlusty allies subsequently quit the ODS parliamentary caucus. The third ruling party, the Christian and Democratic Union–Czech People's Party (KDU-

CSL), regained its footing after chairman Jiri Cunek was cleared of corruption charges and thus was allowed to return to the government in April. Some Green representatives remained skeptical of Cunek, however.

Given the country's aging population, pension and health care reforms ranked among the greatest legislative challenges. Although the ruling parties approved an outline in April for health care reforms, internal conflict persisted over several key issues, including health care fees, which were introduced at the start of 2008. In June the parliament backed the first step in pension reform, gradually raising the retirement age to 65 by 2030. The bill was approved despite criticism from the opposition and trade unions, which organized a one-hour general strike before the vote. Topolanek vowed that the government would not set a target date for the adoption of the euro without further pension and health care reforms.

During the second half of October, the Czech Republic held elections to the Senate and regional assemblies, which resulted in a landslide CSSD victory. With 27 of the 81 seats being contested in the Senate elections, the CSSD won 23, compared with just 3 for the ODS, which lost its majority in the Senate. Following a failed attempt to unseat the government in April, the CSSD held another unsuccessful parliamentary no-confidence vote in late October (the fourth since 2006).

Government unity was seen as especially important, since the Czech Republic was scheduled to take over the European Union presidency in the first half of 2009. A potential embarrassment related to the ratification of the EU Reform Treaty also loomed, given the strong contingent of Euroskeptics in the parliament. In late November the Czech Constitutional Court ruled that the treaty was compatible with national law; the parliament was not expected to ratify the document until early 2009, however.

Elsewhere in foreign relations, U.S. Secretary of State Condoleezza Rice visited Prague in July to sign an agreement on the installation of an antimissile shield. In July, Russia cut back on oil supplies to the Czech Republic, ostensibly for technical reasons. Still, many Czechs saw that move as punishment for the government's agreement on the missile deal. Receiving pressure at home, in October Topolanek canceled his trip to Washington, D.C., to discuss the shield.

On the economic front, the country experienced a moderate weakening during 2008 after record-high growth rates in 2005–07. The economy was negatively affected by the global slowdown and strong koruna. Meanwhile, the fiscal reforms that took effect at the start of 2008 drove up inflation, which was boosted further during the first half of the year by high food and fuel costs. On a positive note, the Czech Republic recorded its fourth consecutive foreign-trade surplus.

(SHARON FISHER)

DENMARK

Area: 43,098 sq km (16,640 sq mi)
Population (2008 est.): 5,494,000
Capital: Copenhagen
Chief of state: Queen Margrethe II
Head of government: Prime Minister Anders Fogh Rasmussen

In the spring of 2008, the Danish Folketing (parliament) comfortably ratified the Lisbon Treaty package to reform the EU and thereby avoided a national plebiscite on the issue. The Irish rejection of the deal in June, however, forced Prime Minister Anders Fogh Rasmussen to shelve his centre-right government's plans to hold a vote on Denmark's EU opt-outs on the euro and closer cooperation in defense and law enforcement—exemptions seen by the government as serious impediments to the country's full participation in Europe. Although enjoying solid support at home, Denmark's tight immigration policies were again subjected to international criticism when the EU Commission's General Directorate for Justice (quoting a ruling by the European Court of Justice) warned that the country was in breach of EU rules on family reunification and free movement of labour. Since 2002, strict controls on the inflow of Danes' foreign spouses to Denmark had forced thousands of mixed nationality couples to reside in neighbouring Sweden, and the revelations that such couples could legally attain Danish residence after living in another EU member country for only 2–10 weeks sparked furious outbursts against the Danish immigration authorities. The prospect of EU legal action against Denmark strained the Rasmussen-led Liberal-Conservative coalition's cooperation with the far-right, anti-immigration Danish People's Party, on which the coalition relied for its parliamentary majority. In the end, however, the government toed the line; a new agreement brought Danish immigration practices into accordance with EU law while at the same time imposing tight spot checks to ensure that applicants had actually been working and living in another EU country.

John McConnico/AP

Muslim demonstrators in Copenhagen brandish flags in February to protest the decision by some Danish newspapers to reprint controversial satiric cartoons of the Prophet Muhammad.

The Muhammad cartoon scandal that sparked virulent anti-Denmark protest across the Muslim world in 2006 reemerged in February 2008. After Danish police arrested three young people—two Tunisians and a Dane of Moroccan origin—suspected of plotting to kill one of the cartoonists behind the satiric cartoons, major Danish newspapers, in a show of support for freedom of speech, reprinted the infamous caricatures. This again sparked mass demonstrations by Danish Muslims and scattered protests throughout the Islamic world, culminating in June in a car bomb attack on the Danish embassy in Islamabad, Pak., in which six Pakistanis were killed and 30 injured. In an Internet statement, al-Qaeda took responsibility for the blast, warning that further action would ensue if Denmark failed to apologize for publishing the cartoons.

Early in the year Denmark had the dubious distinction of being the first EU country to fall into recession. On

the brighter side, the country's unemployment rate remained below 2%, and its state budget and current account showed solid surpluses, with public and foreign debt at low levels and self-sufficiency in oil and gas from North Sea offshore fields guaranteed for more than two decades. As the international credit crunch rocked markets in the autumn, the Danish central bank moved to safeguard bank deposits as part of a deal to set up a 30 billion kroner (1 kroner = about $0.18) liquidation fund. In September, after years of negotiation, Denmark reached agreement with Germany on the construction of the Fehmarn Belt Bridge, a 19-km (12-mi) triple-span cable-stayed road-rail bridge linking the two countries. The project was due for completion by 2018 at an estimated cost of 32.8 billion kroner.

(CHRISTOPHER FOLLETT)

DJIBOUTI

Area: 23,200 sq km (8,950 sq mi)
Population (2008 est.): 506,000
Capital: Djibouti
Chief of state and head of government: President Ismail Omar Guelleh, assisted by Prime Minister Dileita Muhammad Dileita

Djibouti faced a tumultuous year in 2008 as it teetered on the brink of a war with Eritrea and endured another food crisis. In April, Eritrea amassed troops along the Ras Doumeira border area of Djibouti; this action resulted in border skirmishes that led to the deaths of about 20 Djibouti soldiers, which prompted Pres. Ismail Omar Guelleh to declare war on Eritrea in June. The African Union, the UN Security Council, and the Arab League roundly condemned the Eritrean incursion.

Parliamentary elections held in February were marked by the highest voter turnout (72%) in 15 years. The ruling coalition, the Union for a Presidential Majority (UMP), swept up all 65 seats as the three-party opposition alliance, Union for a Democratic Alternative (UAD), boycotted the elections.

Amid a confluence of a global rise in food prices, persistent drought, and a virtual total dependency on imports of staple goods, the country faced a food crisis beginning in March, when nearly 55,000 people required emergency food aid. The government implemented measures, including price controls on most basic commodities, in a bid to stem the food crisis. By July more than 150,000 people were facing food shortages.

(MARY EBELING)

DOMINICA

Area: 750 sq km (290 sq mi)
Population (2008 est.): 72,500
Capital: Roseau
Chief of state: President Nicholas Liverpool
Head of government: Prime Minister Roosevelt Skerrit

Dominica surprised its Caricom colleagues in January 2008 when Prime Minister Roosevelt Skerrit declared his desire to join the Bolivarian Alternative for the Americas (ALBA), a group vigorously promoted by Venezuelan Pres. Hugo Chávez. ALBA's underlying philosophy promoted more government control over the economy and integration among Latin American and Caribbean states, to the exclusion of the U.S., which for more than a decade had backed the proposed Free Trade Area of the Americas (FTAA). After Chávez described ALBA as an "anti-imperialist military alliance," Dominica reassured the U.S. in April that it would not be part of any group that had, as its cardinal principle, hostility to the U.S. Besides Venezuela, ALBA's membership included Cuba, Bolivia, and Nicaragua.

In the realm of foreign affairs, Dominica and the nearby French department of Guadeloupe agreed in April to jointly undertake development of thermal resources. In June, Prime Minister Skerrit announced that Dominica would abandon its long-standing practice of automatically supporting Japan in its continuing effort to have the ban on commercial whaling lifted.

(DAVID RENWICK)

DOMINICAN REPUBLIC

Area: 48,671 sq km (18,792 sq mi)
Population (2008 est.): 9,507,000
Capital: Santo Domingo
Head of state and government: President Leonel Fernández

Incumbent Pres. Leonel Fernández of the Dominican Liberation Party defeated his principal opposition opponent by a convincing margin in the May 16, 2008, presidential elections in the Dominican Republic. Fernández, a still relatively youthful 54-year-old, entered his third presidential term with one of the strongest records of economic growth in Latin America.

The global economic downturn, however, had a serious impact on a country that was heavily dependent on tourism, free trade, industrial zones, re-

A condominium contruction site in the Dominican Republic resort city of Punta Cana stands deserted on November 15 after the global economic downturn forced work to be halted on the multimillion-dollar project.

Kena Betancur AP

mittances from the United States, and mining. GDP growth was more than 5%—still high by neighbouring standards—but faltering.

Existing contradictions between fiscal performance and quality of life for a high percentage of Dominicans stood out in sharper contrast in 2008. The neglect of investment in human and physical infrastructure steadily eroded President Fernández's popularity. An international survey highlighting the decline of public education in Latin America placed the Dominican Republic in last place. Public outrage over endemic electrical outages resulted in widespread demonstrations and several deaths. The traditionally high resilience of Dominicans in the face of adversity was also stretched by Fernández's failure to comply with his campaign commitments to take action against the entrenched culture of corruption. Drug trafficking flourished in a climate of corrupt and weak institutions. Complaints about a profligate election system persisted. On a per capita basis, campaign costs were the highest in Latin America. Despite food and fuel subsidies, inflation was running at 13%.

A skilled diplomat, Fernández continued to consolidate Dominican relations within the region and maintain close ties with Haiti, Venezuela, and the United States. A major international accomplishment was the successful mediation of a potentially incendiary crisis between Ecuador, Venezuela, and Colombia. As chair of the regional Rio Group, meeting in Santo Domingo, Fernández defused a dangerous situation precipitated by a Colombian attack in March on a Colombian guerrilla outpost inside the Ecuadoran frontier. In October the Dominican Republic, along with 13 Caribbean Community (Caricom) members, approved a cooperative trade and economic agreement with the European Union. (JOHN W. GRAHAM)

EAST TIMOR (TIMOR-LESTE)

Area: 14,919 sq km (5,760 sq mi)
Population (2008 est.) 1,078,000
Capital: Dili
Chief of state: President José Ramos-Horta
Head of government: Prime Minister Xanana Gusmão

East Timor was plunged into a political crisis in 2008 when Pres. José Ramos-Horta was shot in the back twice outside his home in Dili on February 11. He and Prime Minister Xanana Gusmão were both targeted in assassination attempts on that day, but Gusmão escaped injury. Ramos-Horta was evacuated to Darwin, Australia, for medical treatment. He returned home in April.

Maj. Alfredo Reinado, leader of a band of disaffected soldiers known as "the petitioners," was said to have been responsible for the attack. Reinado, who was living under an agreement to give him freedom from prosecution for earlier offenses, was killed by the president's security guards during the incident; consequently, motives were hard to determine, and uncertainty remained. At Reinado's funeral there were demonstrations of grief from his supporters and family members, who shouted "Viva" at his grave site. The attack led to a security crisis that threatened East Timor's precarious grip on parliamentary democracy. Australian Prime Minister Kevin Rudd responded strongly, saying that decisions would be made in the region by the ballot box and not the gun. Rudd flew to Dili to reassure the East Timorese that Australian troops would remain in that country for as long as they were invited to do so by East Timor's government. (A.R.G. GRIFFITHS)

ECUADOR

Area: 272,045 sq km (105,037 sq mi), including the 8,010-sq-km (3,093-sq-mi) Galapagos Islands
Population (2008 est.): 13,481,000 (Galapagos Islands, about 22,000)
Capital: Quito
Chief of state and head of government: President Rafael Correa Delgado

Riding twin waves of high oil prices and strong personal popularity, Ecuadoran Pres. Rafael Correa (*see* BIOGRAPHIES) secured popular support for sweeping political change in a referendum held in September 2008. More than 60% of those who voted approved a new constitution that entrenched programs, such as social security benefits for mothers and the self-employed, and increased presidential powers over economic and monetary policy. Under the new charter, Correa was bound to hold elections early in 2009; if reelected he could seek another four-year presidential term in 2013. The constitution also broke new ground by conferring legal rights on ecosystems and "natural communities," allowing lawsuits to be filed on their behalf. Many of Correa's political opponents and business executives cautioned that the measures were economically unsound and politically dangerous. Correa, however, said that the vote was part of a "citizens' revolution" that would give him the power to redistribute wealth and clean up a corrupt and unstable political system.

Strong world prices for oil, Ecuador's principal export, enabled Correa to stimulate the economy with social-spending programs that would provide seeds to farmers and building materials to would-be homeowners. Ecuador's government was more disposed to negotiate with foreign oil firms than to nationalize them, as its counterparts in Venezuela and Bolivia had done. Several agreements were renegotiated as service contracts, and talks were held with the Canadian firm Ivanhoe Energy Inc. on development of the Pungarayacu oil field. Minister of Politics Ricardo Patiño said that foreign firms were welcome but added, "Let's make sure their profits are normal, not a stick-up of the Ecuadoran state as in the past."

Correa's personal standing in Ecuador was enhanced by a confrontation in March with Colombian Pres. Álvaro

Supporters of Ecuadoran Pres. Rafael Correa cheer after hearing the early results of a constitutional referendum on September 28 in Quito.

Fernando Vergara/AP

Uribe. Colombian troops battling the rebel Revolutionary Armed Forces of Colombia (FARC) launched a raid in Ecuadoran territory, killing a top FARC commander and 20 others. Correa ordered Ecuadoran troops to the border and cut diplomatic ties with Colombia. Uribe later apologized for the incident, but Ecuador continued to demand concessions as the price of restoring relations. Correa replaced his defense minister and several senior military commanders after press reports suggested that intelligence supplied by the Ecuadoran military to the United States may have helped the Colombian forces locate the FARC unit. Meanwhile, Correa said that the lease (scheduled to expire in 2009) allowing the U.S. to conduct anti-drug-trafficking surveillance flights from the Manta air base on the Pacific coast would not be renewed. (PAUL KNOX)

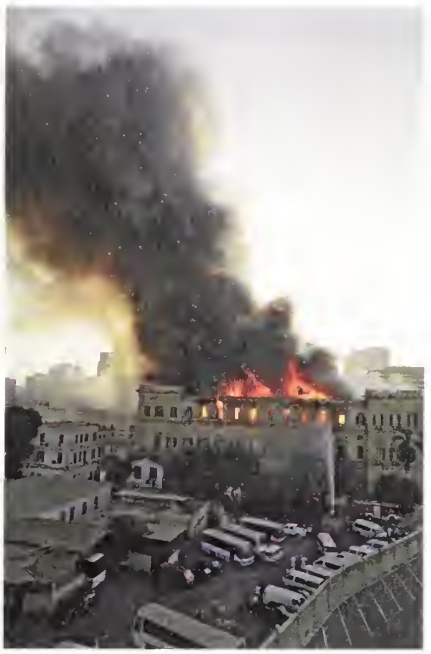
EGYPT

Area: 997,739 sq km (385,229 sq mi)
Population (2008 est.): 74,805,000
Capital: Cairo
Chief of state: President Hosni Mubarak
Head of government: Prime Minister Ahmad Nazif

Egypt experienced an unprecedented surge in 2008 in the political involvement of its citizens, whose activities flouted limitations imposed since 1981 by the state of emergency. This was manifested in widespread protests, ranging from food riots to confrontations about environmentally hazardous projects, and support for the breakout of the besieged population of Gaza into Egypt.

In response to public outcry, the government delayed until 2009 the submission for parliamentary approval of a draft antiterrorism law to replace the 27-year-old state of emergency. Leaked parts of the draft raised public concern and brought condemnation by human rights activists. The government-appointed National Council for Human Rights criticized police torture practices, demanded full disclosure by the Ministry of the Interior, and denounced the trial of civilians before military tribunals as unconstitutional. The report also rejected the proposed restrictions

Nasser Nasser/AP



Flames and smoke rise from the People's Assembly (parliament) building in Cairo on August 19.

on television satellite channels by license regulation. The independent Egyptian Organization for Human Rights accused the government of having manipulated incidents of violence to legalize the perpetuation of the state of emergency and documented in its annual report 226 cases of torture and 93 deaths in police custody in the previous seven years.

Sparring continued between the government and the banned Muslim Brotherhood, the best-organized opposition group in the country. A military tribunal handed down various prison sentences to 25 leading members of the Brotherhood on charges of having funded the group's activities. The sentencing ignited student demonstrations in five universities, as the condemned included some university professors. An administrative court, however, ruled that military tribunals did not have the jurisdiction to try civilians. In the meantime, the Interior Ministry began the release in March of some 500 pro-Islamic detainees; compensation also started to be paid to another 800 of an estimated 15,000 detainees who had won monetary awards after having endured years in detention.

A strike on April 6 by textile workers in the Nile delta city of Al-Mahallah al-Kubra marked a watershed in civil political action. An estimated 25,000 workers and thousands of irate supporters staged a preannounced strike to protest the government's failure to honour a promise it had made in September 2007 for an improved compensation package. Antiriot squads in full gear supported by thousands of security forces clashed with demonstrators as they went on a rampage, burning tires and pelting shops, vehicles, public transport, security forces' trucks, and a police station. Teargas bombs, rubber bullets, and batons were used to break up the demonstrations, which had been organized through Internet announcements. An estimated 111 persons were injured, including 41 security personnel, and a 15-year-old schoolboy was killed by stray bullets. In December an emergency State Security court sentenced 22 persons to prison terms of three to five years and acquitted 27 others. Poverty, rising food prices, scarcity of subsidized bread, unemployment, the poor quality of health services and education, and charges of nepotism and rampant corruption were among the many grievances in a country in which inflation reached 25.6% (food price inflation 35%) in August, unmitigated by a 30% increase in the salaries of public workers and 7% GDP growth. In October inflation was revised downward to 21%.

Nationwide elections were organized on April 8 to fill 52,000 local council seats. The ruling National Democratic Party (NDP) won 44,000 seats uncontested. The Muslim Brotherhood boycotted the elections, and a minority of party-affiliated or independent candidates filled other seats.

In August the historic Shura (Consultative) Council building (constructed in the mid-19th century in downtown Cairo) was gutted by fire, which was attributed to an electrical short circuit. Some documents were destroyed by the blaze, which also partially damaged the neighbouring People's Assembly (parliament) building. Another fire, also reportedly ignited by a short circuit, destroyed the National Theatre, built in 1921. In September a 1,000-ton loose boulder from the Muqattam plateau, east of Cairo, fell and crushed part of the shantytown below, killing 107 persons and setting off clashes between angry crowds and government security forces.

In a surprise development, 11 European tourists and 8 Egyptian guides were kidnapped on September 19 while on a little-trodden desert trek at Jebel Oweinat in southwestern Egypt. Unidentified kidnappers asked for a ransom of €6 million ($9 million). Ten days later all hostages were safely released by their kidnappers. (AYMAN M. EL-AMIR)

EL SALVADOR

Area: 21,041 sq km (8,124 sq mi)
Population (2008 est.): 5,794,000
Capital: San Salvador
Head of state and government: President Elías Antonio Saca González

At the start of 2008, the final full year of Pres. Elías Antonio (Tony) Saca González's term in office, El Salvador enjoyed a modest rate of economic growth. Rising foreign trade and remittances from Salvadorans in the United States accounted for much of this success, however. Although the Central America–Dominican Republic Free Trade Agreement (CAFTA-DR) had not provided all the benefits that the government promised, it had increased trade with the U.S. and the Dominican Republic. Separate trade agreements with Chile, Mexico, Panama, and Taiwan had further expanded Salvadoran trade, and negotiations with the Caribbean Community (Caricom), Canada, Israel, and the European Union promised additional growth. The U.S. economic downturn, however, slowed the growth in imports and exports as well as remittances, which had reached record levels in 2007.

President Saca received the Path to Peace Award from an international Roman Catholic foundation that cited his leadership in consolidating peace, strengthening democracy, and reducing delinquency and poverty. Statistically, poverty levels had fallen, but there remained a vast gulf between the rich and the poor in El Salvador. Thus, some Salvadoran Roman Catholic organizations, notably the Christian Base Communities, criticized the granting of the award to Saca and complained that his draconian measures in fighting crime and violence had led to frequent civil rights violations.

El Salvador continued to be plagued by violence, much of which emanated from the Mara 18 and Mara Salvatrucha gangs—which numbered their membership in the thousands—but was also related to drug trafficking and organized crime. In 2007 the murder rate reached 64 deaths per 100,000 population, one of the highest in the world. Violence and poverty also fed the continuing exodus of the population, but the rising number of illegal immigrants deported from the U.S. contributed to the growth of the gangs. In March the Los Angeles Police Department signed an agreement with the El Salvadoran police to exchange officers in an effort to study and observe methods of dealing with these gangs.

For the El Salvadoran presidential election scheduled for March 2009, the popular TV newscaster and political moderate Mauricio Funes gave his opposition Farabundo Martí National Liberation Front (FMLN) a more centrist image. He held a substantial lead in the polls over the Nationalist Republican Alliance (ARENA) candidate Rodrigo Ávila. The U.S. accused Venezuelan Pres. Hugo Chávez of trying to influence the outcome of the Salvadoran election by supporting the FMLN candidate. Although Chávez supplied cheap oil to Salvadoran towns dominated by the FMLN, he denied intervening directly in the electoral campaign.

(RALPH LEE WOODWARD, JR.)

EQUATORIAL GUINEA

Area: 28,051 sq km (10,831 sq mi)
Population (2008 est.): 616,000
Capital: Malabo
Chief of state and head of government: President Brig. Gen. Teodoro Obiang Nguema Mbasogo, assisted by Prime Ministers Ricardo Mangue Obama Nfubea and, from July 8, Ignacio Milam Tang

Though Equatorial Guinea Pres. Teodoro Obiang Nguema Mbasogo ruled Africa's third largest oil producer (after Nigeria and Angola) dictatorially, in May 2008 parliamentary and local elections were held; the governing Democratic Party and its allies won an overwhelming victory, taking all but one of the 100 parliamentary seats. New attention was focused on Equatorial Guinea when British mercenary Simon Mann—who was accused of having led a coup in 2004 to topple Obiang Nguema and replace him with exiled opposition leader Severo Moto—was extradited secretly from Zimbabwe, where he had served four years in prison. Mann, a former officer in the British Special Air Service, was put on trial in Malabo, and the proceedings were broadcast internationally. He expressed remorse and revealed new details about the failed coup attempt, implicating the son of former U.K. prime minister Margaret Thatcher and claiming that Spain, South Africa, and the United States knew of the plot and approved it. Mann was sentenced on July 7 to 34 years in prison. In addition to his prison sentence, Mann was fined some $24 million.

In July 2008 Nguema replaced Prime Minister Ricardo Mangue Obama Nfubea, whom he accused of graft and security failings relating to the 2004 coup attempt, and installed Ignacio Milam Tang. A pressing issue for the new government was the maritime border dispute with Gabon over the island of Mbanie in the Gulf of Guinea, where oil had been discovered. The UN appointed a Swiss legal expert to try to resolve the dispute.

(CHRISTOPHER SAUNDERS)

British mercenary Simon Mann, on trial for a coup attempt against Equatorial Guinea Pres. Teodoro Obiang Nguema Mbasogo in 2004, listens to evidence in a court in Malabo on June 20.

Daniel Flynn—Reuters/Landov

ERITREA

Area: 121,144 sq km (46,774 sq mi)
Population (2008 est.): 5,028,000
Capital: Asmara
Head of state and government: President Isaias Afwerki

Eritrea entered into another frontier dispute in 2008, this time with its neighbour Djibouti. In June regular soldiers of the two countries clashed at a small area along their undemarcated border, leading to more than 20 deaths and the wounding of dozens.

The fighting came as the UN prepared to disband a mission aimed at preserving a fragile cease-fire between Eritrea and Ethiopia. The UN, which had earlier complained that Eritrea had cut off fuel supplies to the mission (which had arrived in December 2000 to keep the peace after a deal was reached to end a two-year war in which 70,000 lives were lost), completed the pullout of its peacekeeping troops from the tense border in July. The border between the two countries remained volatile throughout the year, however, as both countries massed soldiers on their respective sides.

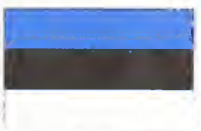
While the new tensions simmered at the Djibouti border, Eritrean Pres. Isaias Afwerki's government quarreled with the international community. The regime refused to cooperate with a UN Security Council panel investigating the problem, which had roots in frontier ambiguities first created during the 19th-century partition of Africa by European powers.

Hunger and hardship continued to afflict many Eritreans. In September an international humanitarian organization warned that 17 million people in the Horn of Africa, a region that included Eritrea, urgently needed food and other types of humanitarian aid because of a long-running drought, human conflict, and global escalation of food prices.

On the economic front, Eritrea made little improvement on a large scale, but, in an effort to attract investors, the country announced the creation of a new export zone at its port of Massawa. The World Bank in June approved $29.5 million in new financing for Eritrea to help it pay for a power-distribution and rural-electrification project and fund early-childhood-development programs. In August a Canadian mining company, Nevsun Resources Ltd., disclosed that it had abandoned its mining operations in Mali to spearhead development of a $250 million gold-mining project in Bisha, Eritrea. The company would operate the mine in partnership with an Eritrean government-controlled corporation.

(PATRICK L. THIMANGU)

ESTONIA



Area: 45,227 sq km (17,462 sq mi)
Population (2008 est.): 1,340,000
Capital: Tallinn
Chief of state: President Toomas Hendrik Ilves
Head of government: Prime Minister Andrus Ansip

On Feb. 24, 2008, Estonia marked the 90th anniversary of its declaration of independence, and the celebration continued in various forms throughout the year, including plans for a contested Freedom Monument in central Tallinn. Prime Minister Andrus Ansip's three-party coalition managed to retain power, but internal divisions among its partners grew as the country faced increasing economic hardship. While Ansip's Reform Party played the leading role in the national government, Tallinn Mayor Edgar Savisaar and his Centre Party, the main opposition in the parliament, held majority control in the city council of the capital.

Dismal economic news dominated domestic life. After nearly a decade of rapid growth, Estonia suffered a sharp economic downturn and the onset of a recession, further magnified by the global financial crisis late in the year. The overheated economy stopped growing as the real-estate bubble burst, and domestic demand and exports fell. Because of a shortfall in revenue, the government was forced to make midyear budget cuts, increase the value-added tax on certain items, and postpone a projected income-tax reduction. At the same time, the inflation rate reached double digits, which made adoption of the euro—a key government goal—unlikely before 2011.

Relations with Russia continued to be chilly following the 2007 imbroglio over the relocation of the Bronze Soldier monument. In June 2008, at the fifth World Congress of Finno-Ugric Peoples in Khanty-Mansiysk, Russia, Estonian Pres. Toomas Hendrik Ilves walked out to protest an attack made by a Russian State Duma official on the Estonian government's policies. In August Estonia condemned Russian actions in Georgia, and President Ilves quickly joined other Baltic and Eastern European leaders in Tbilisi in a show of solidarity with Georgia. At the end of 2007, Estonia joined the Schengen Convention, which eliminated border controls with most other European countries, and in November 2008 visa-free travel to the United States became a reality.

(TOIVO U. RAUN)

ETHIOPIA

Area: 1,127,127 sq km (435,186 sq mi)
Population (2008 est.): 78,254,000
Capital: Addis Ababa
Chief of state: President Girma Wolde-Giyorgis
Head of government: Prime Minister Meles Zenawi

After several years of political turmoil following the 2005 national and regional elections in Ethiopia, domestic politics returned somewhat to normal in 2008. Most of the political detainees (mainly members of opposition political parties and several journalists), who in June 2007 had been tried and found guilty of various crimes, had since been pardoned and released. Civil society activists Netsanet Demissie and Daniel Bekele submitted a pardon request and were freed in March 2008.

The Ethiopian economy was projected to grow at the vibrant rate of 8.4% in 2008, though this was down from 11.4% in 2007. Most exports came from the agricultural sector, particularly coffee (exports grew by 40% in 2008), tea, spices, cereals, pulses, oilseeds, flowers, fruits, and vegetables. Whereas tourism and other aspects of the economy continued to grow in 2008, inflation and rising prices on consumer goods strained the government's ability to meet local demand. Urban citizens continued to particularly experience the impact of rising prices on sta-

Anita Powell/AP

A three-year-old Ethiopian child, weighing less than 4 kg (9 lb), awaits care at an emergency feeding centre in southern Ethiopia in May.

ples such as grains, cereals, and cooking oil, which led the government to introduce some price controls.

The World Bank and many bilateral donors resumed assistance to Ethiopia, though donors remained concerned about human rights and regional conflicts. It was a difficult year for Ethiopia's poor, at least 5 million of whom were considered chronically food insecure and expected to need food assistance; an additional 10 million people were suffering temporary food insecurity owing to droughts and floods. Violence at the local level and serious incidents of human rights abuses were noted throughout 2008, especially, as in previous years, in the Oromiya and Somali regions.

Long-delayed local elections were held in April. The ruling Ethiopian People's Revolutionary Democratic Front (EPRDF) won the vast majority of the seats. By-elections were also held for seats that had been won in 2005 by the opposition but never filled (members had refused to take them). Most of these seats were also won by the EPRDF. Credible reports of harassment and intimidation of candidates and voters in key constituencies and the absence of impartial monitors led most to consider the elections lacking in legitimacy. In addition, after the release from prison in 2007 of most of the political leadership, the various political opposition parties fragmented substantially. Caretaker governments in the two largest cities, Addis Ababa and Dire Dawa, were replaced by permanent elected administrations. A restrictive press law was passed by the parliament over objections by members of the opposition, and a highly controversial law regulating civil society organizations was tabled as well.

The border dispute with Eritrea continued throughout 2008 with little change. The UN Security Council ended its peacekeeping mission (UNMEE) in July, but some feared the possibility of a return to war. In December 2006 Ethiopia had launched a coordinated air and ground war inside Somalia, and thousands of Ethiopian troops were estimated to still be inside Somalia supporting the Transitional Federal Government against insurgents. Eritrean and Ethiopian support to opposing sides in Somalia continued unchecked. (LAHRA SMITH)

FIJI

Area: 18,272 sq km (7,055 sq mi)
Population (2008 est.): 839,000
Capital: Suva
Chief of state: President Ratu Josefa Iloilovatu Uluivuda
Head of government: Prime Minister Voreque Bainimarama (interim)

A standoff between Fiji's interim government and its Pacific neighbours continued throughout 2008. At the heart of the tension was the timing of an election originally scheduled for early 2009. Interim prime minister Voreque Bainimarama continued to insist that the objectives of the 2006 coup—the elimination of corruption in public and private institutions and the adoption of a People's Charter for a new Fiji—should precede general elections and the return of an elected government. To that end, the National Council for Building a Better Fiji continued to work on the People's Charter for Change, Peace and Progress and by August was circulating a draft charter for public comment.

The Pacific Islands Forum (PIF) appointed a working group to assist the interim government in its preparations for elections. Technical difficulties arose from the interim government's determination to replace existing communal rolls with a single consolidated electoral roll, which proved more complicated than anticipated. The electoral process was further delayed when the recent appointment of a new supervisor of elections was overturned. Fiji withdrew from the PIF's working group in July and in August chose not to attend the PIF's annual meeting. Bainimarama further indicated that criticism by the PIF might lead Fiji to withdraw from that body, but Fiji did not act on that threat.

(CLUNY MACPHERSON)

FINLAND

Area: 338,417 sq km (130,664 sq mi)
Population (2008 est.): 5,310,000
Capital: Helsinki
Chief of state: President Tarja Halonen
Head of government: Prime Minister Matti Vanhanen

Eero Heinäluoma, the head of Finland's Social Democratic Party (SDP), announced in February 2008 that he would not run for the position again in the June convention owing to the party's unfavourable election results in the 2007 general election. As his replacement, SDP members elected Jutta Urpilainen, a primary-school teacher who was elected to Parliament in 2003 and became vice-chair of the SDP floor group in 2007. She beat her main con-

tender, Erkki Tuomioja, a former foreign minister and 1960s student radical, by a margin of 218–132 in the second round of voting.

Minister for Foreign Affairs Ilkka Kanerva lost his office after the stripper to whom he had sent some 200 text messages went public early in 2008. The National Coalition (Conservative) Party chairman, Jyrki Katainen, decided to dismiss Kanerva, as the veteran politician had been warned before for similar indiscretions. The move inspired some debate, as Kanerva's "affair" had never been sexual, and some saw in the case a worrying sign of "American-style puritanism" gaining ground in Finnish politics. Kanerva was replaced in April by Alexander Stubb, a member of the European Parliament from the Conservative Party.

Party Secretary Jarmo Korhonen of the Centre Party was implicated in a scandal over unannounced campaign contributions. Five prominent businessmen had invested €406,000 (about $556,000) in an association, founded the year before, financing mostly Centre Party politicians but also Conservative and SDP candidates. It appeared that the businessmen had received preferential treatment for their projects in municipalities of politicians whom they had supported. Unannounced campaign contributions, though illegal, carried no penalty, however, and Korhonen was reelected in June after apologizing to party supporters.

In the municipal elections on October 26, two clear winners emerged. The Conservatives became the largest party for the first time, with 23.5% of the vote, and the tiny True Finns jumped to 5.4% from 0.9% in 2004. The latter's success was explained by the mainstream media's reluctance to discuss the adverse effects of immigration, an issue often raised by the True Finns. The biggest losers were the Social Democrats (21.2%) and the Centre Party (20.1%), which dropped to third place. The Greens increased their popularity 1.6 points to 8.9% and bumped the Social Democrats from second to third place in Helsinki, where the Conservatives remained the leading party. Voter turnout was 61.3%, up 2.7 points from 2004. The number of women councilors grew slightly to 36.7% from 36.4%.

Former president (1994–2000) and career diplomat Martti Ahtisaari in October was awarded the 2008 Nobel Prize for Peace. (*See* NOBEL PRIZES.) Ahtisaari received the prize in honour of his life's work of successful mediation for peace, notably in Namibia, the Aceh province of Indonesia, Kosovo, Northern Ireland, the Horn of Africa, and, most recently, Iraq. (SUSANNA BELL)

FRANCE

Area: 543,965 sq km (210,026 sq mi)
Population (2008 est.): 62,028,000
Capital: Paris
Chief of state: President Nicolas Sarkozy
Head of government: Prime Minister François Fillon

The year 2008 was one in which French Pres. Nicolas Sarkozy showed his capacity to act—on the domestic front and as president of the European Union for the second half of the year—and to surprise his fellow citizens as he presented them with extensive political and economic reforms as well as more exposure to a French president's private life than they were used to, or perhaps wanted. Sarkozy bounced back from low opinion poll ratings and election setbacks at the start of the year to push through a strengthening of France's weak Parliament, to steer France more toward NATO, and to get the EU to agree on a response to the international economic crisis as well as a more ambitious climate-change program aimed at negotiating a global accord in 2009 with incoming U.S. Pres. Barack Obama's administration.

Domestic Affairs. Elected in May 2007 on a reform platform, Sarkozy made little progress in his first few months, and the things that he did accomplish came at some cost; for example, he brought about an end to special pension privileges for railway workers, but it was achieved at the price of an autumn rail strike and a hike in basic rail pay. As 2007 passed, his popularity rating sank rapidly in the opinion polls. By February 2008 one survey had rated his popularity 11 points below that of Prime Minister François Fillon, who held an office that seemed almost designed to take the flak for problems that the president would be expected to float above.

Two reasons were offered for this reversal. Sarkozy evidently displeased many French with the extended publicity that surrounded his private life: the quick divorce from his second wife, Cécilia, in late 2007 and his whirlwind romance with Italian-born model-turned-singer Carla Bruni, whom he married on Feb. 2, 2008. Many French felt that Sarkozy's apparent encouragement of the boundless media coverage of his personal life verged on the vulgar and that the president was paying too much attention to Bruni and not enough to

French Pres. Nicolas Sarkozy, accompanied by his wife, Carla Bruni-Sarkozy, waves from the Élysée Palace during Bastille Day ceremonies in Paris on July 14; Sarkozy married the model-turned-singer in February.

Thibault Camus/AP

Michel Euler/AP

As part of a protest against declining farm incomes in France amid the global economic crisis, a shepherd leads his herd of sheep past the Eiffel Tower in Paris on November 13.

his job. The second reason was Sarkozy's unusual involvement in the details of government, effectively supplanting Fillon and sometimes even individual ministers, as when he superseded his education minister in negotiations with university unions or when he insisted on going to an EU finance ministers meeting.

This style of governing created some unease about Sarkozy's otherwise sound constitutional reforms in July. By only one vote, the Senate and the National Assembly together gave the necessary 60% majority approval to reforms that would give the Assembly more power, including the right to be informed within three days of any foreign military operation and the right of veto over any such operation lasting more than four months. The reforms also limited the president's tenure to two five-year terms. Although the main Socialist opposition lacked the votes to prevail, they particularly objected to the president's new right to address the National Assembly directly, on the grounds that this violated the separation of powers and undermined the office of prime minister. Notwithstanding, Fillon loyally welcomed this change.

Sarkozy's centre-right Union for a Popular Movement (UMP) lost ground in the March local council elections, though the overall vote tally in the second round on March 16 was close. The UMP and its allies won 48% of the vote, versus 49% for the Socialists, with their Green and left-wing allies. The UMP kept control of Marseille, the country's second biggest city, but could not win the largest, Paris, and the third largest, Lyons, from the Socialists, who gained Toulouse and Strasbourg.

Nevertheless, Sarkozy pushed on with his economic reforms, even as France began to feel the international credit crunch's effect. Legislation was passed to encourage people to work more (by allowing more overtime beyond the standard 35-hour workweek) and longer (by offering incentives for older people to stay in the workforce). The government later recapitalized French banks with some €10.5 billion, though it had to satisfy EU rules to ensure that Paris was not being overly generous to basically sound banks. It also loaned €22 billion to small businesses to help them weather economic recession.

Foreign Affairs. French foreign and defense policies during the year were marked by some passing difficulties with EU partners and a further shift toward the U.S. and NATO. German Chancellor Angela Merkel took exception to the way that Sarkozy initially couched one of his flagship projects, the Union for the Mediterranean, to exclude the EU's non-Mediterranean members while using their money. Sarkozy eventually made the Union more inclusive, and he launched it with fanfare at a Bastille Day summit in Paris in mid-July. Predictably, Germany was also irked by Sarkozy's criticism of the European Central Bank for having too restrictive a monetary policy.

The improvement in relations with Washington, begun during Sarkozy's successful 2007 trip to the U.S., continued as the French president kept to his tough line toward Iran and friendly tone to Israel and as a result of his decisions on NATO and Afghanistan. Sarkozy broadly endorsed a high-level military commission's recommendations in June for big troop and base cuts (with financial savings going into better equipment), more stress on intelligence, and the reintegration of French forces into NATO's military command. There was political resistance, however, to the proposals to cut troop numbers by 54,000 and to close or relocate 116 bases and units, and Sarkozy made France's reintegration into NATO conditional on parallel improvement in EU military cooperation. France was the only European member of NATO to send reinforcements (800 troops) to Afghanistan in 2008, but in mid-August, 10 French soldiers were killed in one ambush, the worst French combat casualty toll in 25 years. Sarkozy flew immediately to Afghanistan to express France's continued commitment there.

Sarkozy seemed to relish every challenge thrown at him during France's EU presidency. After the Irish voted down the Lisbon Treaty, he negotiated a deal in December that provided enough changes and reassurances to persuade Ireland to schedule a vote again in 2009 but without invalidating treaty ratification elsewhere. In August Sarkozy took on a brokering role in the conflict between Russia and Georgia. He was criticized by some, including the U.S., for failing to end Russia's presence in Georgia's Abkhazia and South Ossetia enclaves, but by using the leverage of EU partnership negotiations with Moscow, he persuaded Russia to pull back its forces from almost all of the rest of Georgia. Faced with ever-worsening credit and economic conditions, Sarkozy found it easier to get support for European policy proposals at the international financial conference held in Washington, D.C., in November than for any coordinated EU stimulus to the European economy. The EU summit on December 11–12 left it largely to member countries to do

as much or as little as they wanted. At the same meeting, however, Sarkozy pulled off the remarkable feat of getting the 27 EU member countries to agree (albeit with considerable concessions to recession-hit industries) on reforms that would take their climate-change policies beyond Kyoto, up to 2020.

(DAVID BUCHAN)

GABON

Area: 267,667 sq km (103,347 sq mi)
Population (2008 est.): 1,486,000
Capital: Libreville
Chief of state: President Omar Bongo Ondimba
Head of government: Prime Minister Jean Eyeghe Ndong

On Jan. 9, 2008, Interior Minister André Mba Obame suspended the four groups of nongovernment organizations (NGOs), which were accused of having interfered in Gabon's national politics after criticizing the government's use of public funds. Two days later the government announced that in an effort to reduce expenses cabinet ministers would no longer be provided with official cars. The NGO suspension was lifted on January 15 on the condition that the organizations respect the laws governing their activities.

Against a fragmented opposition, Pres. Omar Bongo's Gabonese Democratic Party (PDG) retained control of more than half of the seats in the district and municipal councils in the April 27 elections. The Gabonese Union for Democracy and Development (UGDD), led by Zacharie Myboto, came in second and secured 160 municipal seats.

On February 19 the African Development Bank agreed to loan €10 million (about $14.7 million) to help finance the expansion of Gabon's rubber and palm oil plantations. The government announced on May 19 that it would donate $500,000 to aid Beijing in its massive earthquake-relief effort in Sichuan province. Just a week later the Gabon government and Comibel, a Chinese mining corporation, signed an agreement for the development of rich iron deposits in Gabon's northeastern region.

Under the auspices of UN Secretary-General Ban Ki-moon, diplomats from Gabon and Equatorial Guinea met in New York City on June 11 to negotiate a long-standing dispute over ownership of oil-rich Mbanie Island. The UN reported on July 23 that progress had been made in preparing the case for adjudication by the International Court of Justice.

(NANCY ELLEN LAWLER)

GAMBIA, THE

Area: 11,300 sq km (4,363 sq mi)
Population (2008 est.): 1,754,000
Capital: Banjul
Head of state and government: President Col. Yahya Jammeh

In early 2008 the economy of The Gambia grew by more than 6%, and the IMF and the World Bank in March said that the country had met the requirements for full debt relief. When rising world food and oil prices began to have a serious impact on the economy, however, Pres. Yahya Jammeh called on Gambians to work for food self-sufficiency. This declaration was well received, unlike his statement in May, when Jammeh said that homosexuals should leave the country within 24 hours. He reportedly threatened to have them beheaded if they did not depart, though he later denied this.

Human rights monitors also continued to express concern about numerous infringements of press freedom. A number of journalists were detained, and one was severely beaten. In June the Court of Justice of the Economic Community of West African States declared illegal the arrest and detention of a journalist and ordered Gambian authorities to release him. In September, Abdul Hamid Adiamoh (the publisher and editor of *Today*, a privately owned Banjul-based newspaper) was arrested for the fourth time, put on trial for publishing "with seditious intent," and charged with tax evasion. The Gambia had also come into the news in August when the head of the navy of Guinea-Bissau, who was alleged to have been involved in a failed coup attempt there, was arrested as he arrived by sea.

(CHRISTOPHER SAUNDERS)

GEORGIA

Area: 57,612 sq km (22,244 sq mi), excluding the disputed areas (from the early 1990s) of 8,640 sq km (5,336 sq mi) in Abkhazia and 3,900 sq km (1,506 sq mi) in South Ossetia
Population (2008 est.): 4,360,000, excluding the roughly approximated populations of Abkhazia, 200,000, and South Ossetia, 270,000 (as estimated prior to the August 2008 war)
Capital: Tbilisi
Head of state and government: Presidents Nino Burjanadze (acting) and, from January 20, Mikheil Saakashvili, assisted by Prime Ministers Lado Gurgenidze and, from November 1, Grigol Mgaloblishvili

In a preterm presidential ballot held in Georgia on Jan. 5, 2008, Mikheil Saakashvili of the United National Movement (UNM) defeated six rival candidates to win reelection, garnering 53.47% of the vote. Second-place finisher Levan Gachechiladze of the nine-party opposition National Council claimed that the official results were rigged.

On March 21, Saakashvili scheduled a preterm parliamentary election for May 21. The outgoing parliament enacted amendments to the election law that the opposition protested were intended to preserve the UNM's majority. Parliament Speaker Nino Burjanadze withdrew her candidacy on April 21, citing disagreements with official policy. In the balloting the UNM won 119 of the 150 mandates, followed by the United Opposition–National Council–New Rightists bloc, which took 17 seats; the Christian Democrats and the Labour Party, with 6 seats each; and the Republican party, with 2 seats. The National Council and most Labour deputies rejected the results as rigged and announced a boycott of the new Parliament, of which Foreign Minister David Bakradze was elected speaker. On September 26 human rights ombudsman Sozar Subari criticized Georgia's leaders as authoritarian, and on September 30 he formed a new opposition party—Public Forum for Liberty and Justice—with which Gachechiladze and other prominent opposition leaders aligned themselves. President Saakashvili announced on October 28 that he was replacing Prime Minister Lado

Shakh Aivazov/AP

A woman holds a portrait of her missing son at a funeral ceremony in Tbilisi for unknown Georgian soldiers killed during fighting with Russian and Ossetian rebel forces that erupted in August.

Gurgenidze with Grigol Mgaloblishvili, a little-known diplomat.

Earlier in the year, tensions between the Georgian government and the breakaway republics of Abkhazia and South Ossetia increased following an April 16 edict by Russian Pres. Vladimir Putin on intensifying cooperation with them. Abkhazia rejected new peace proposals unveiled by Saakashvili on March 28 and those put forward on July 17 by German Foreign Minister Frank-Walter Steinmeier. (*See* BIOGRAPHIES.)

Following several weeks of sporadic exchanges of gunfire between Georgian troops and rebel forces in South Ossetia, Saakashvili ordered Georgian troops into the republic on August 7, just hours after having announced a cease-fire. In response, Russian tanks and troops advanced into South Ossetia on August 8; bombed Gori, the port of Poti, and several military bases on August 9; and occupied Gori on August 11. In western Georgia, Russian and rebel forces expelled Georgian troops from the Kodori gorge. Several hundred servicemen and civilians died during the fighting, and tens of thousands were forced to flee their homes. Talks on August 12 between Russian Pres. Dmitry Medvedev (*see* BIOGRAPHIES) and French Pres. Nicolas Sarkozy yielded a cease-fire agreement that was augmented on September 8. Following the deployment of some 200 EU observers, Russian troops withdrew from the conflict zones by the October 10 deadline.

President Saakashvili announced on August 12 that Georgia would quit the Commonwealth of Independent States to protest the Russian incursion. Three days after Russia formally recognized Abkhazia and South Ossetia as independent states on August 26, Tbilisi severed diplomatic ties with Moscow. Georgia was not offered a membership action plan either at the NATO summit in April in Bucharest, Rom., or at the NATO foreign ministers' meeting in December. (ELIZABETH FULLER)

GERMANY

Area: 357,093 sq km (137,874 sq mi)
Population (2008 est.): 82,143,000
Capital: Berlin; some ministries remain in Bonn
Chief of state: President Horst Köhler
Head of government: Chancellor Angela Merkel

Chancellor Angela Merkel's 2008 New Year's speech was an optimistic reminder that Germany in 2007 had seen economic improvement and that 2008 was promising a continuation of this trend. Internal political strife, increased violence among teenagers, and the international credit crunch were counterbalanced by further decreases in unemployment, an expansion of early-education programs, and a serious step forward in alleviating cross-border tax evasion.

Domestic Affairs. Domestic events in early 2008 shocked many Germans as the year began with reports of a retiree admitted to the hospital because of an unprovoked attack by a group of teenagers. This alleged incident was a continuation of events that occurred in late 2007; in general, the past two years had seen six instances across Germany in which groups of teenagers committed random violent acts on people walking on the street or in parks at unusual hours. This left many people reconsidering for the first time their understanding of physical safety in modern Germany.

In the political arena these occurrences fed into the identity crisis of the Christian Democratic Union (CDU), which had already faced problems in 2007 related to redefining the party's conservative agenda and uniting voters and party members under the same umbrella in respect to terrorism and domestic security. The apparent willingness of groups of teenagers to commit acts of violence as a recreational activity induced Minister for the Interior Wolfgang Schäuble of the CDU to call for tougher jail sentences. The debate reached monumental dimensions in those states with elections in 2008: Hessen, Bavaria, and Lower Saxony. Even within the CDU there was dissent, as many members agreed with the opposition Social Democratic Party (SPD) that instead of harsher prison sentences, there was a need for intervention before a teenager became violent. The debate was not helped by police and social service workers who opposed any attempts to increase prison sentences for teenagers. Statistically, they argued, the number of violent acts committed by teenagers was on the decrease, though the individual acts had become more violent. The fact that violence committed by nonnational teenagers had increased was particularly worrying.

Germans had grappled with integration issues for years, and there was little agreement among the parties in 2008 as a new law that required immigrants to demonstrate that they could speak rudimentary German came into force. Both the new law and the recent increase in violence opened the doors for serious discussions of what integration should mean—a debate that as yet remained without a solution.

This debate caused even more problems for the SPD, which was struggling to redefine its identity within the political spectrum. As the new centre-left party the Left argued that immigrants needed more help and the Christian Democrats demanded more social integration, the Social Democrats seemed to have a hard time defining where their position lay between these two disparate stances. In 2007 the Social Democrats had agreed to a new party program, but they were unable to win any of the state elections in Hessen, Bavaria, and Lower Saxony, while the Left increased its vote totals and won seats in two of the three state parliaments. Embattled SPD leader Kurt Beck suddenly resigned in September and was replaced in October by his predecessor, former vice-chancellor Franz Müntefering. At the same time, it was announced that Foreign Minister Frank-Walter Steinmeier (*see* BIOGRAPHIES) would stand against the CDU's Merkel as the SPD's official candidate for the chancellorship in the 2009 elections to the Bundestag (the lower house of parliament). Although it was believed that the SPD and the Left would work together in coalition should they achieve enough seats in 2009, the two parties were likely to field their own candidates in the presidential campaign to challenge Pres. Horst Köhler of the CDU.

The CDU's push for an increase in free child-care facilities and the attendant encouragement of fathers to take on more child-care responsibilities (and thus allow mothers to return to work sooner) was going well. An increase in births in 2007 and 2008, the first rise in 10 years, was considered an indication that the policy was working. Other CDU initiatives were less successful. The laws allowing the state to gather data by using private e-mail and phone conversations without actual proof of wrongdoing failed in the Constitutional Court, as did a widespread smoking ban. The use of biometric data on passports and increased rights for police to fight terrorism were expected to be debated in the court over the course of the next year.

The Constitutional Court itself saw a new development in 2008 when, for the first time, a judge appointed to the Constitutional Court, University of Würzburg law professor Horst Dreier of the SPD, publicly failed to garner approval from the other parties. Twice before in German history had a judge failed to achieve acceptance by the opposition, but this was the first time that the debate had been carried out publicly rather then internally between the two main parties in government.

Foreign Affairs. Internationally 2008 saw Germany take a stand on several contentious issues, especially when Chancellor Merkel, as a protest against human rights infringements in China, announced in March that she would not attend the opening ceremony of the Olympic Games in Beijing in August. The announcement that U.S. presidential candidate Barack Obama (*see* BIOGRAPHIES) planned to present a major speech in front of the Brandenburg Gate during his July visit to Berlin met with widespread puzzlement in Germany, where many people were still unfamiliar with his name. When he gave the speech, however, it met with approval from the huge crowd that turned out to hear him. In the weeks following Obama's visit, Germany's relationship with the U.S. was in the forefront of political debate.

During the year Germany followed the lead set by the U.K., France, and the U.S. in recognizing Kosovo as an independent state, providing Myanmar (Burma) with emergency aid, and playing a role in the EU's dealings with Iran. In the conflict between Georgia and Russia, however, Germany was slightly more proactive and visible as it led the EU investigation groups being sent to Georgia. These situations brought to the surface one of the greatest issues relating to Germany's role in the world as other Western countries, such as the U.K. and the U.S., demanded that Berlin take on more military responsibility in international conflicts. After World War II it was clear in the collective German mind that there would never again be a German military presence, and by 2008 younger Germans found it difficult to even contemplate that military force might be a solution in any conflict. Moreover, the suggestion that Germany should provide troops, as opposed to giving financial aid or noncombatant support within the remit of a peacekeeping force, triggered immediate public disapproval. Political leaders not only shared that view but also recognized that any German politician who agreed to provide combat soldiers would automatically lose public support. In October, after months of pressure from NATO, the Bundestag agreed to send 1,000 additional troops to Afghanistan and to extend the mission there by 14 months, but Berlin still resisted transferring German forces from the relative peace in northern Afghanistan to the war-torn south.

Members of a German engineering and metal workers' union stage a demonstration in Cologne in November to demand a wage increase of 8%.

Wolfgang Rattay—Reuters/Landov

The Economy. From an economic point of view, 2008 started positively, with a budget surplus of some €7.3 billion (about $10.8 billion) in the first half of the year. A budget that would leave Germany debt free by 2011 was approved, and unemployment was on a steady decrease throughout the year, from almost 4 million to 3.2 million out of work. The international credit crunch that followed the U.S. banking crisis, however, pushed Germany into recession in November, and the government abandoned the balanced budget in favour of a €50 billion (about $70 billion) stimulus package.

In the spring a financial scandal involving Liechtenstein took on aspects of an espionage novel when German tax officials acquired a CD-ROM through secret service contacts. This CD con-

Herbert Knosowski/AP

In October German Foreign Minister Frank-Walter Steinmeier (left) and former vice-chancellor Franz Müntefering (right) celebrate Müntefering's election as leader of the Social Democratic Party and Steinmeier's nomination as the party's candidate for chancellor in the 2009 general elections.

tained information on German tax evaders who had used Liechtenstein as a tax haven. (See *Liechtenstein*, below.) German officials hoped to use the data to convict some 600 tax evaders, including the Deutsche Post minister, who resigned after his name was found on the CD. Other persons whose names were found on the CD sued the state for compensation on the basis that the information had not been come by legitimately. The court case, as well as the whole affair, was likely to keep German officials occupied for years and could cast a long shadow over relations with Liechtenstein.

Spring 2008 also saw the threat of strikes in the rail industry. The increased price of oil and a rising environmental consciousness had led to a greater use of commuter trains by German workers. The threat of a strike was averted, but high oil prices remained a problem through much of the year. Nevertheless, the euro remained steady in the face of decreasing value of the U.S. dollar and the British pound.

German automobile manufacturers had not moved with the times, counting on a perennial desire among consumers for ever-faster cars, and had sacrificed fuel economy and environmental friendliness for speed. The industry was therefore hit hard by the EU Commission's plans for stricter rules governing automotive CO_2 emissions. The banking failures affecting the U.S. economy added another component to the economic problems in Germany, which had to provide state loans to some of its own banks that had been undermined by the repercussions of the subprime mortgage crisis in the U.S. In September a German mortgage provider, Hypo Real Estate, showed weakness for the first time. A rescue packet was designed and prepared by other financial institutes initially, but national measures throughout Europe soon followed.

(NICOLA CORKIN)

GHANA

Area: 238,533 sq km (92,098 sq mi)
Population (2008 est.): 23,383,000
Capital: Accra
Head of state and government: President John Agyekum Kufuor

The general election on Dec. 7, 2008, dominated politics in Ghana as citizens looked forward to a peaceful turnover of power. The ruling New Patriotic Party (NPP) had effectively kicked off the campaign on Dec. 23, 2007, by nominating Nana Akufo-Addo, a former foreign minister, as its presidential candidate. The NPP faced tough competition from the former ruling party, the National Democratic Congress (NDC), and seven other parties. A presidential runoff was forced after no candidate received more than 50% of the vote in the initial round of voting. Opposition leader John Atta Mills of the NDC narrowly won the run-off on December 28, taking 50.23% of the vote to Akufo-Addo's 49.77%. This was Mills' third bid for the presidency. Despite sporadic outbursts of ethnic tensions and fierce campaigning, the polling proceeded mostly peacefully and was heralded as a model for African democracy.

Although Ghana enjoyed unhampered prosperity owing to an economic boom, reigned as the world's second largest cocoa producer and Africa's second largest gold producer, and was looking forward to the start of offshore oil production in 2010, there was rising public anger over the inflation in the price (about 17%) of food and fuel imports. Additional concerns involved disputes over land rights and sporadic ethnic clashes, especially in the northern region.

On February 20, U.S. Pres. George W. Bush visited Ghana as part of his six-day tour of Africa. Journalists voiced open skepticism about the president's AIDS initiative as well as suspicion about U.S. plans to establish its African military command (AFRICOM) headquarters on the continent.

Ghana hosted (January 20–February 10) the 2008 Africa Cup of Nations, in which 16 countries participated at four venues. Ghana placed third in the event.

(LARAY DENZER)

Ghanaian opposition leader John Atta Mills is pictured in his office in Accra on December 9, two days after the first round of voting took place in Ghana's presidential election; Mills went on to win the presidency with a narrow victory over Nana Akufo-Addo in the second round.

Rebecca Blackwell/AP

GREECE

Area: 131,957 sq km (50,949 sq mi)
Population (2008 est.): 11,239,000
Capital: Athens
Chief of state: President Karolos Papoulias
Head of government: Prime Minister Konstantinos Karamanlis

Throughout 2008 the government of Greek Prime Minister Konstantinos (Kostas) Karamanlis was shaken by a series of scandals that undermined the ruling New Democracy (ND) party's public standing and led to dissatisfaction within the ND, including among prominent politicians. The suicide attempt in late December 2007 of former Culture Ministry secretary-general Christos Zachopoulos stayed in the news in the early months of 2008. Zachopoulos had tried to commit suicide after allegedly being blackmailed by his former assistant Evi Tsekou over their extramarital affair. The prime minister's office and a newspaper had received copies of incriminating video footage. There were also accusations by prosecutors that Zachopoulos had let a number of illegal deals go through that allowed protected archaeological sites to be developed. Tsekou and several others were arrested but were later released on bail.

In the context of the bribery scandal surrounding German electronics giant Siemens, evidence suggested that over a 17-year period the German company paid more than €100 million (€1 = about $1.40) in bribes to secure Greek state contracts. During a trial in Munich, a former Siemens executive testified that Greek politicians and senior executives received an 8% commission on such deals. In addition, documents suggested that Siemens had paid the two main parties some €17 million between 1998 and 2005.

On September 12, Merchant Marine Minister Georgios Voulgarakis resigned and was succeeded by Anastasios Papaligouras. Voulgarakis had come under pressure for co-owning with his wife—and during his tenure as a government minister—at least two real-estate companies that were transferred offshore and for having appointed the manager of one of them head of the Seamen's Pension Fund. His wife was also the notary in a controversial land exchange between the state and the Vatopedi monastery. In this and other land deals between the two sides, the monastery's land was apparently overvalued while the state land was undervalued. In September the monastery's assets were frozen, and one of the deals was revoked. Two deputy prosecutors investigating the land deal resigned on October 14, claiming that their work was hampered by superiors, but their resignations were not accepted. On October 22 the parliament unanimously voted to set up an inquiry commission to investigate the deal. Theodoros Roussopoulos, a minister of state and the government spokesman, resigned the following day, saying that he wanted to be free to fight allegations of corruption. On December 15 the parliamentary parties presented separate reports on the inquiry.

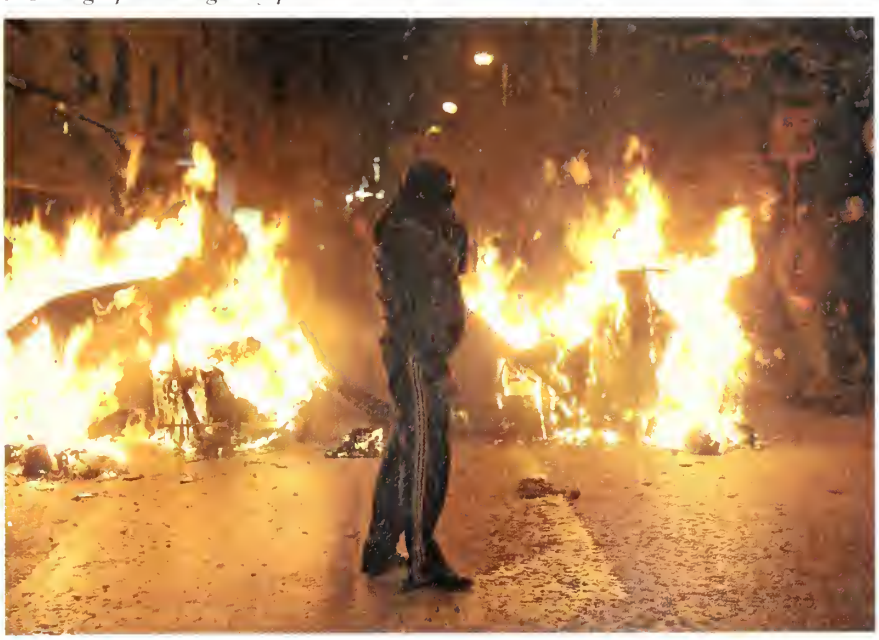
The killing of a 15-year-old boy, Alexandros Grigoropoulos, by a police officer in central Athens on the evening of December 6 triggered the worst riots in decades in Athens and other cities, which lasted for several weeks and caused considerable damage to property. The police officer who fired the shots was charged with murder, and a fellow officer was charged as an accomplice.

In March the Panhellenic Socialist Movement (PASOK) held its eighth party congress. Following the congress, many leading politicians were dropped from PASOK's Political Council, including Evangelos Venizelos and Kostas Skandalidis, who had challenged the party chairman, Georgios Papandreou, in the 2007 leadership vote. Ioannis Ragoussis was elected the new party secretary. At the party congress of the Coalition of the Radical Left, 33-year-old Alexis Tsipras was elected its new chairman on February 10; he succeeded Alekos Alavanos, who did not seek reelection.

In January, Karamanlis became the first Greek prime minister since 1959 to pay an official visit to Turkey, where both sides pledged to "open a new page" in their relations. Foreign policy was dominated, however, by the ongoing dispute with Macedonia over that country's name. Before the NATO summit in Bucharest, Rom., in April, intense negotiations failed to produce results, and Greece was prompted to veto Macedonia's accession to NATO. Talks later in the year were characterized by both sides' immobility, with Macedonia also trying to raise issues of language, ethnicity, and the restitution of property of Greek Civil War refugees.

The Greek economy continued to improve, although at a slower pace than in previous years. GDP growth was expected to drop below 3%, with inflation climbing toward 5%. The budget deficit was expected to remain just below 3%. In March the government pushed through Parliament a pension-reform package that was strongly opposed by the opposition and by trade unions, which staged large-scale strikes. A no-confidence vote tabled in

Young people riot in the centre of Athens in December following the fatal shooting of a teenager by police.



Petros Giannakouris/AP

connection with the reforms was rejected. In August the government approved new measures aimed at curbing tax evasion. Under this legislation self-employed people would pay a 10% tax on the first €10,500 of their income, which was previously exempt from taxation.

Archbishop of Athens and All Greece Christodoulos died on January 28 at the age of 69. (*See* OBITUARIES.) On February 7 the Holy Synod elected Metropolitan Ieronymos of Thebes as his successor. Ieronymos pledged to avoid interfering in politics and to improve relations with the Ecumenical Patriarchate. (STEFAN KRAUSE)

GRENADA

Area: 344 sq km (133 sq mi)
Population (2008 est.): 108,000
Capital: Saint George's
Chief of state: Queen Elizabeth II, represented by Governors-General Sir Daniel Williams and, from November 27, Carlyle Glean
Head of government: Prime Ministers Keith Mitchell and, from July 9, Tillman Thomas

In February 2008 the government of Grenada appointed a receiver to take over the operations of Capital Bank International. The government explained that this step was necessary because of the bank's "failure" to accede to withdrawal requests by customers, raising questions about its solvency. In March the World Bank approved a no-interest $1.9 million loan to Grenada to support efforts to improve the local business environment through private sector-led growth. Key government responsibilities such as customs, tax administration, and investment and export promotion were to be modernized.

A commission of inquiry concluded in May that it could find no evidence that Prime Minister Keith Mitchell had accepted bribes from Grenada's Ambassador-at-Large Eric Resteiner, as a condition for appointing him to the post and providing him with a diplomatic passport. Mitchell insisted that the $15,000 under investigation was for expenses incurred by him as prime minister for official travel abroad, which Resteiner had agreed to fund. The opposition National Democratic Congress (NDC) rejected the commission's findings.

In the general election held in July, the NDC ousted Mitchell's New National Party administration, with an 11–4-seat majority in the House of Representatives. NDC leader Tillman Thomas was sworn in as prime minister.

Thomas announced in September that a commission had been established to delimit the maritime boundary between Grenada and Trinidad and Tobago. The commission was part of the NDC's policy of increased cooperation between Grenada and its Caribbean neighbours. (DAVID RENWICK)

GUATEMALA

Area: 109,117 sq km (42,130 sq mi)
Population (2008 est.): 13,002,000
Capital: Guatemala City
Head of state and government: Presidents Óscar Berger Perdomo and, from January 14, Álvaro Colom Caballeros

Following his inauguration on Jan.14, 2008, Guatemalan Pres. Álvaro Colom launched an ambitious program of social reform. A Council of Social Cohesion, headed by his wife, Sandra Torres de Colom, coordinated educational and economic benefits for the rural poor. By July, Colom had improved access to drinking water, health care, and education, and he had initiated renewable sources of energy with hydroelectric and thermal projects. In March, however, Guatemala rejected daylight saving time in a move to prevent workers and children from having to walk in the early-morning darkness, when crime was highest.

Inflation in food and energy prices increased living costs. Guatemala reduced its dependence on the U.S. economy by opening trade with India and China and negotiated new trade agreements with the EU, Brazil, and other Latin American countries. Remittances from Guatemalans abroad (mostly in the United States) remained very important; in 2007 they reached a record $4.13 billion. President Colom paid a state visit in April to Brazilian Pres. Luiz Inácio Lula da Silva.

Government efforts to reduce the high rates of violent crime were hampered by the degree to which organized crime and drug traffickers had infiltrated law enforcement. In September, Colom fired his security chief after discovering seven unauthorized listening devices and cameras in the presidential office and residence; the surveillance presumably had been engineered by organized crime. Guatemala was also a transit point for Colombian cocaine destined for the United States. Aid provided by the U.S. to suppress the drug traffic had failed to stem the tide of violence, exacerbated by gangs, police corruption, and overcrowded prisons. U.S. Deputy Secretary of State John Negroponte visited Guatemala in June to promote the Mérida Initiative, designed to "help Mexico and Central America combat narcotrafficking, transnational youth crime, and terrorism." A UN commission cooperated with the Guatemalan government to investigate judicial corruption and to reform its court system. Former Guatemalan president Alfonso Portillo, who had fled to Mexico in 2004 with some $15.7 million in embezzled public funds, was extradited in October.

Guatemala's new National Adoption Council was brought into compliance with the Hague Convention on Protection of Children and Co-operation in Respect of Intercountry Adoption. The council tightened regulations involving foreign adoptions and revealed that babies had been stolen amid wide-

Rodrigo Abd/AP
A narcotics agent in Guatemala City stands guard over packages of cocaine that are to be incinerated.

spread corruption in the former system, which was run by private lawyers. In February, following a six-year moratorium, the death penalty was reinstated in Guatemala; President Colom vetoed the legislation the following month, however.

(RALPH LEE WOODWARD, JR.)

GUINEA

Area: 245,836 sq km (94,918 sq mi)
Population (2008 est.): 9,572,000
Capital: Conakry
Head of state and government: Presidents Gen. Lansana Conté until December 22 and, from December 24, Moussa Dadis Camara, assisted by Prime Ministers Lansana Kouyaté and, from May 20, Ahmed Tidiane Souare

The powerful National Confederation of Guinean Workers called for a general strike on Jan. 10, 2008, to protest the firing of Communications Minister Justin Morel Junior (a key aide to Prime Minister Lansana Kouyaté), who was removed from office by Pres. Lansana Conté. The move followed months of conjecture that Conté was acting to reassert control over the government. The indefinite postponement of the 2007 parliamentary elections, coupled with rising food prices, added to popular discontent. On May 20 Conté sacked Kouyaté, reneging on a deal that was struck in 2007 with the opposition. Riots erupted in the capital, with at least one death reported.

Supporters of Pres. Lansana Conté of Guinea rally in the Kaloum neighborhood of Conakry on May 30 to call an end to an army mutiny.

Alexandre Foulon/AP

After a weeklong army mutiny, in which protesting troops held Gen. Mamadou Sampil prisoner, the government announced on May 27 that it would pay salary arrears dating back to 1996. That same day newly appointed Prime Minister Ahmed Tidiane Souare promised that no punitive actions would be taken by the government against the mutineers and that all remaining soldiers imprisoned for participating in the 2007 mutiny would be freed. A presidential decree announced the firing of Defense Minister Gen. Mamadou Bailo Diallo. In mid-June soldiers of low rank were given mass promotions and about $1,000 in back pay. Later that day police demanding higher salaries, promotions, and a rice subsidy went on strike, seizing the police chief and other high officials. On June 17 the army clashed with the striking policemen; casualties were reported on both sides. Soldiers looted the police camp in Conakry, and all shops in the capital were closed.

After what was described as a long illness, Conté died on December 22. (*See* OBITUARIES.) A military coup, led by Moussa Dadis Camara, quickly followed, prompting international condemnation. In a state radio broadcast, coup leaders vowed to hold presidential elections in 2010.

(NANCY ELLEN LAWLER)

GUINEA-BISSAU

Area: 36,125 sq km (13,948 sq mi)
Population (2008 est.): 1,503,000
Capital: Bissau
Chief of state: President João Bernardo Vieira
Head of government: Prime Ministers Martinho Ndafa Kabi and, from August 6, Carlos Correia

Guinea-Bissau experienced a measure of political stability (March 2007–July 2008), with the three leading political parties working together in a coalition government. The IMF, which had withdrawn from the country in 2001, resumed investment activities in January 2008, and in July it released almost $3 million in emergency assistance. The legislative election due to be held in March was postponed until November. The African Party for the Independence of Guinea and Cape Verde (PAIGC) captured 67 of the 100 seats in the National Assembly. Voter turnout was strong at 82%, and international observers described the election as largely peaceful and orderly.

In late July, the country was plunged into political instability when the PAIGC withdrew from the government after Prime Minister Martinho Ndafa Kabi sacked four high-ranking officials. Pres. João Bernardo Vieira dissolved the parliament and replaced Kabi with veteran politician Carlos Correia, who had served as prime minister in the 1990s. A failed coup followed, and its alleged leader, the head of the country's navy, escaped by sea but was soon arrested in The Gambia. Another apparent coup attempt followed the November legislative election, with Vieira surviving an attack at his home by mutinous soldiers.

Guinea-Bissau was again in the grip of a cholera epidemic. It had also become a major hub for the transshipment of cocaine from South America to Europe. (CHRISTOPHER SAUNDERS)

GUYANA

Area: 214,999 sq km (83,012 sq mi)
Population (2008 est.): 736,000
Capital: Georgetown
Chief of state: President Bharrat Jagdeo
Head of government: Prime Minister Sam Hinds

Following the settlement of Guyana's maritime boundary dispute with Suriname in 2007, the Guyana Geology and Mines Commission announced in May 2008 that the world's largest oil company, ExxonMobil, had begun exploration work in its offshore Stabroek block. Guyana did not produce any oil of its own.

In June, Guyana's Customs Anti-Narcotics Unit (CANU) lost its leader when, according to the government, he failed a lie detector test. Other CANU officials suffered a similar fate. The U.S. government had previously claimed that CANU—the country's leading drug-enforcement agency—was "corrupt and inefficient."

Prime Minister Sam Hinds announced in June that the proposed 100-MW Amaila Falls hydroelectric power project would go ahead in Guyana. Construction would begin by year's end 2008 and the plant was expected to be ready to produce its first power in 2012. Florida-based Synergy Holdings was the developer of the project.

The security forces in August finally caught up with the notorious Rondell Rawlins gang, which had unleashed a reign of terror in rural Guyana for more than a year, murdering at least 23 people and coming close at one stage to destabilizing society. Rawlins and one of his accomplices were killed in a shoot-out with a team of police and army personnel.

(DAVID RENWICK)

HAITI

Area: 27,700 sq km (10,695 sq mi)
Population (2008 est.): 9,751,000
Capital: Port-au-Prince
Chief of state and government: President René Préval, assisted by Prime Ministers Jacques-Édouard Alexis and, from September 5, Michèle Pierre-Louis

Optimism that Haiti was rebounding from decades of conflict, instability, and economic decline gave way in 2008 to eroding confidence in the country's future. Global trends of skyrocketing food and fuel prices hit Haiti hard, owing to dependence on costly imports in a country where 78% of the population lived on less than $2 a day. National demonstrations against the high cost of living in early April deteriorated into vandalism and violence. Subsequently, the Haitian Senate dismissed Prime Minister Jacques-Édouard Alexis, causing the postponement of a donor's conference expected to support the government's poverty-reduction strategy and renewing festering political schisms.

Parliamentary rejection of Pres. René Préval's first two prime ministerial replacement nominations left the country with a caretaker government unable to initiate new programs. Resilient crime, especially urban kidnapping, and the government's inability to improve material conditions of the population, including those under 25 years of age (who constituted 60% of all Haitians), dampened hopes of a brighter future.

The new coalition government led by Michèle Pierre-Louis, a respected educator and social activist, confronted a country ravaged by two tropical storms and two hurricanes within a 23-day period (August 16–September 7). Rainfall rushing down hillsides with less than 3% forest cover destroyed settlements in river deltas and floodplains, displacing hundreds of thousands of people and leaving 800 dead. Préval, citing the hurricane that devastated New Orleans in 2005, characterized the storms as "our Katrina."

Flooding also wiped away public investments made earlier to improve crop production, leaving massive food deficits and setting back national efforts to address dependence on costly imported rice. International relief efforts (complemented by resource mobilization among Haitians living overseas and within Haiti) helped the survivors and demonstrated hopeful signs, especially in Haiti, of solidarity. The renewal in mid-October of the one-year mandate of the UN Stabilization Mission in Haiti (MINUSTAH) offered additional relief, particularly in view of its capabilities in disaster response and in reinforcing public safety.

Still, as 2008 ended, Haiti faced continuing food shortages and rising prices and the daunting prospect of rehabilitating its natural environment and rebuilding physical infrastructure. Making matters worse were anticipated reversals, because of food and fuel price increases and the destruction brought about by storms, in modest GDP growth trends and the inflation decline experienced since 2005. Remittances, reaching $1.83 billion, or 30% of GDP, in 2007, were expected to stagnate or decline owing to the impact of global economic problems on Haitians living overseas.

(ROBERT MAGUIRE)

A Haitian man walks past a burning barricade during an antigovernment protest in Port-au-Prince on April 7. Demonstrators were angered by the high cost of food.

Ariana Cubillos/AP

HONDURAS

Area: 112,492 sq km (43,433 sq mi)
Population (2008 est.): 7,639,000
Capital: Tegucigalpa
Head of state and government: Manuel Zelaya

Hondurans in 2008 experienced regular increases in prices, particularly for food and gasoline. To counter rising oil prices, Honduras joined Petro-Caribe, which enabled it to receive petroleum from Venezuela for two years at a reduced price; the cost savings

Esteban Felix/AP

A supporter of Honduran Pres. Manuel Zelaya waves a Venezuelan flag at a signing ceremony in Tegucigalpa on August 25 at which Honduras officially joined the Bolivarian Alternative for the Americas, an organization promoted by Venezuelan Pres. Hugo Chávez.

would be put into a trust for national development. To promote economic development, Honduras signed an agreement with Brazil's Petrobras to construct a plant to produce lubricants and oils; Tegucigalpa also entered into agreements that would allow Hondurans to apply to work in Canada and Spain legally. Honduras launched a new campaign to increase tourism, "Honduras, everything is here." The Toncontín Airport in the capital was closed to international flights for five weeks, however, after a TACA Airlines plane with 136 people aboard crash landed in May; 5 people were killed.

The main focus of politics was the selection of candidates for the upcoming 2009 general elections. On November 30 the Supreme Elections Tribunal oversaw primaries for all parties with internal factions. The primaries were significant because they represented only the second time that parties had held primaries for all offices (prior to 2005, primaries were held only to select presidential candidates). The most important presidential precandidates in both major parties, and in two of three small parties, selected female vice presidential candidates. Another political landmark was the implementation of the Transparency Law, which was passed at the end of 2006 and required government offices to share information when requested by a citizen. Pres. Manuel Zelaya brought Honduras into the Bolivarian Alternative for the Americas, an organization promoted by Venezuelan Pres. Hugo Chávez to counter the influence of the U.S. and of international financial institutions. This move was highly controversial, with opposition from the Congress, the business community, and Honduran immigrants in the U.S. Another issue that made continuous headlines and shaped presidential precandidates' campaigns was the country's ongoing crime wave, including an increase in female homicides. (MICHELLE M. TAYLOR-ROBINSON)

HUNGARY

Area: 93,030 sq km (35,919 sq mi)
Population (2008 est.): 10,032,000
Capital: Budapest
Chief of state: President Laszlo Solyom
Head of government: Prime Minister Ferenc Gyurcsany

International stock market speculation against Hungary's currency, the forint, and the drying up of credit markets led in the autumn of 2008 to a crisis of investor confidence and a weakening of the forint, which triggered the most serious budget crisis the country had seen since the fall of communism in 1989. In October 2008 the government received an international rescue package of €20 billion ($26 billion) from the IMF, the European Union, and the World Bank. The financial crisis hit Hungary at a time when the economy was already shrinking and public discontent with Socialist Prime Minister Ferenc Gyurcsany's economic-stabilization program was on the rise. In addition, tension was high between coalition partners the Hungarian Socialist Party (MSzP) and the SzDSz–Hungarian Liberal Party, who squabbled over strategies to reduce the country's budget deficit (9.2% of GDP in 2006 and 3.4% in 2008)—a key criterion for qualifying the country for membership in the euro zone.

Tax and price hikes, coupled with spending cuts and a radical health care package, prompted widespread social discontent and calls by the opposition for early elections. Following the 2007 passage of a bill promoted by the Liberals to overhaul the health sector—which was to restructure hospitals and allow for private investment in a new system of multiple health insurance funds—the opposition Fidesz–Hungarian Civic Alliance (widely known as Fidesz) called for a referendum to mobilize the electorate against the reforms.

In the March referendum, voters were asked whether newly introduced fees for doctor and hospital visits and those for university tuition should be abolished. An overwhelming 82% of the electorate voted for the abolishment of the fees; voter turnout (50%) exceeded the percentage (46%) for the 2003 vote on Hungary's bid for EU membership. In the wake of the referendum, the popularity of both governing parties fell to a record low; the Socialists scored 15–20%, while the Liberals (at about 2%) were significantly below the 5% that was needed to qualify for representation in the National Assembly. Meanwhile, the centre-right Fidesz repeatedly attained at least 40% in polls measuring voter support.

The loss in the referendum threw the coalition into disarray. A few weeks later the Socialists backtracked on the health reform program, and Gyurcsany fired the health minister nominated by the Liberals, who withdrew two other ministers and moved into opposition. They nevertheless pledged to support the Socialists' minority government in sponsoring reforms that were necessary for Hungary to join the euro zone within four years. Fidesz called on Gyurcsany to resign or make way for new elections, and the Liberals joined the call for his dismissal.

Prior to the new National Assembly session in September, Gyurcsany sought to relaunch his austerity program by publishing an essay calling for tax cuts financed largely from a clampdown on the gray economy. The plan—a sketch of a political program as opposed to a comprehensive reform plan—failed to find supporters outside the MSzP and was seen by the opposi-

tion as a last-ditch effort by a lame-duck prime minister. On the proposal of another opposition party, the Hungarian Democratic Forum (MDF), the National Assembly began its first session with a vote on self-dissolution. The Socialists and the Liberals voted to keep the parliament in session, and Gyurcsany pledged to step down if his tax proposals and eventual budget failed to win parliamentary backing.

The combined effect of the Hungarian austerity program and the global financial meltdown kept GDP growth at 1.9%, only slightly higher than that of the previous year (1.3%). Soaring fuel and food prices pushed inflation up to 6.6%, inducing a fight between the Hungarian central bank and the government on how to manage interest-rate policy. The investment climate was also weakened by a series of violent street demonstrations against the government by some right-wing and antiestablishment groups. (ZSOFIA SZILAGYI)

ICELAND

Area: 103,000 sq km (39,769 sq mi)
Population (2008 est.): 315,000
Capital: Reykjavík
Chief of state: President Ólafur Ragnar Grimsson
Head of government: Prime Minister Geir H. Haarde

Iceland's economy experienced an unsettling period of extreme turbulence in 2008. The country's currency slipped sharply, with the exchange rate plunging by year's end to more than 119 krónur to the dollar, compared with 62 krónur at the beginning of the year. The main cause was the persistent deficit on the current account of the balance of payments, which stood at 15–16% of GDP in both 2007 and 2008. High domestic interest rates attracted speculative international issues of krónur bonds that overappreciated the exchange rate, causing a commensurate currency depreciation when many such bond issues matured during the year. Following several years of rapid expansion, the economy slowed to basically zero growth in 2008. At the same time, the depreciation of the currency accelerated inflation to 15%, the highest annual rate in more than a decade.

The rapid growth in the Icelandic banking system had brought its total balance sheet to about nine times Iceland's GDP. This called into question the ability of the central bank to act as a lender of last resort to the banking system. In May the central banks of Norway, Sweden, and Denmark formed a currency-swap agreement with the central bank for €500 million (about $778 million) each. These difficulties were exacerbated by the turmoil in international financial markets that culminated in October. As Iceland was running out of foreign currency, the British government seized the assets of Icelandic banks in the U.K. The Icelandic government took over the country's three largest banks; foreign-currency trading was halted; and the stock market was suspended. In early November the IMF loaned $2 billion to Iceland, followed by assistance from several other European countries.

Despite these problems, longer-term prospects remained good. Iceland possessed abundant hydropower and geothermal resources, and international demand for clean energy was attracting many foreign investors to the country to make use of these resources. Two major aluminum smelters were on the drawing board, and other energy-intensive industries were looking for development opportunities. The Icelandic government was in the process of opening for bids for oil exploration licenses in the Dreki, or Dragon, area northeast of Iceland. (BJÖRN MATTHÍASSON)

Icelanders concerned over the government's handling of the country's financial crisis attend a rally in Reykjavík in October.

Arni Torfason/AP

INDIA

Area: 3,166,414 sq km (1,222,559 sq mi)
Population (2008 est.): 1,147,996,000
Capital: New Delhi
Chief of state: President Pratibha Patil
Head of government: Prime Minister Manmohan Singh

Domestic Politics. Terrorism, internal security threats, and concerns about the civil nuclear cooperation agreement between India and the United States dominated attention in India in 2008. In late November the country was rocked by multiple terrorist attacks in Mumbai (Bombay). (*See* Special Report on page 192.) In political developments, India's ruling coalition, the United Progressive Alliance (UPA), found itself in a minority with its main ally (the Left Front) withdrawing support and the main opposition, Bharatiya Janata Party (BJP), and a clutch of other regional parties taking a critical view of the civil nuclear cooperation agreement. While the Left Front allies opposed what they alleged was a "strategic alliance" with the United States, the BJP opposed the nuclear agreement on the grounds that it would restrict India's ability to conduct nuclear tests in the future and limit India's nuclear options in a future race with China. The UPA government was confronted with a potential defeat in the parliament when the Samajwadi Party (SP), an ally of the Left Front, broke ranks with the Left and affiliated itself with the UPA. Emboldened by SP's changed tack, Prime Minister Manmohan Singh sought and won a vote of confidence in the lower house of parliament, the Lok Sabha, and stabilized his coalition. Another important development was the emergence of Mayawati Kumari, chief minister of Uttar Pradesh and leader of the Bahujan Samaj Party (BSP), as a key political figure

likely to play a decisive role in future coalition building.

Winning the vote of confidence in the parliament boosted the sagging morale of the ruling UPA coalition, which had faced a series of defeats in elections to provincial legislatures. The Congress Party, which was defeated in India's largest state of Uttar Pradesh, encountered another loss in elections in May in the state of Karnataka, where the BJP scored a historic win and formed its first majority government in a southern state. The Congress also lost to the Left Front in the small northeastern state of Tripura but did narrowly manage to form governments in two other small northeastern states—Meghalaya and Nagaland.

The Economy. The global economic slowdown, accompanied by a spurt in energy and food prices, took a toll on the Indian economy. India's rate of growth in 2008 was expected to drop to about 7.5%, compared with an average annual rate of growth of 8.8% in 2003–07. Nonetheless, India remained the world's second fastest growing economy. Because the country's tolerance to increased levels of domestic inflation was historically low, a sudden increase in the headline inflation rate from an average of 3–4% in the previous five years to more than 7% in early 2008 (with a steeper rise in consumer prices, especially energy prices) brought inflation management to the top of the government's policy priorities. The central bank hiked interest rates, maintained a tight monetary policy, and squeezed growth to bring prices down. A normal monsoon season and improved food production softened food-price inflation. India, which did not experience the food riots that were prevalent in many other less-developed economies, used food imports to keep domestic prices in check. The headline inflation rate remained in the double-digits, however, well into the third quarter of 2008.

India's deliberate gradual liberalization in the financial sector helped the country escape the full impact of the financial meltdown that took place in the U.S. and Europe. The global economic slowdown, however, was expected to hurt export growth and, combined with the impact of high oil prices, contribute to a higher current account deficit. The National Manufacturing Competitiveness Council formulated a National Strategy for Manufacturing, which sought to restore momentum to India's laggard manufacturing sector. The strategy was devised to push manufacturing-sector output growth, whose share in national income had remained stuck at about 17% for more than a decade. In addition, India successfully negotiated a free-trade agreement with the Association of Southeast Asian Nations (ASEAN) and was engaged in discussions for a free-trade agreement with the European Union.

AFP/Getty Images

An Indian policeman escorts a survivor of the terrorist attacks in Mumbai away from the Chhatrapati Shivaji railway terminus, one of the sites where attacks took place in late November.

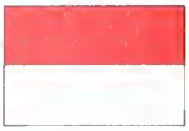
Foreign Policy. Securing an unconditional waiver for the resumption of commerce in civil nuclear energy from the Nuclear Suppliers' Group (NSG) became the single-most-important foreign-policy objective for India in 2008. Indian diplomats toured the world to secure the support of the 45-nation member NSG. The final vote in favour of the measure came on September 6, shortly before Prime Minister Singh's visit to the U.S., where he met with U.S. Pres. George W. Bush, French Pres. Nicolas Sarkozy, and other leaders. A bilateral agreement with the U.S. was signed in October, opening the doors for increased trade in nuclear and high-technology areas. India and France signed a bilateral agreement in Paris on September 30. India signed a civil nuclear cooperation agreement with Russia in early December. In October India also elevated its status as a space power by launching an unmanned spacecraft, Chandrayaan-1, that would orbit the Moon.

Another foreign-policy preoccupation was with developments in the immediate neighbourhood, where democratic governments came to power in Bhutan (for the first time), Nepal (after the end of the monarchy), and Pakistan (after the stepping down of Gen. Pervez Musharraf). A terrorist attack on the Indian embassy in Kabul drew India more actively into the war on terrorism in Afghanistan. Despite growing concern in India about Pakistan's inability to control cross-border terrorism, the democratic transition in Pakistan helped to improve the climate for more bilateral cooperation. India and Pakistan agreed to increase trade across the international border between the two countries and to begin trading across the Line of Control in Jammu and Kashmir. The latter occurred on October 21.

Two other priority areas for India in foreign policy were relations with East Asian economies and with Africa. The India-ASEAN free-trade agreement paved the way for closer interaction between India and the East Asian Community. Prime Minister Singh visited Beijing in January and participated in the Group of Eight summit in Japan in August. India hosted the India-Africa Summit in March, marking a major step forward in the country's regional economic diplomacy with African countries. New Delhi offered duty-free access and tariff preferences to a range of African exports and extended credit and investment facilities.

(SANJAYA BARU)

INDONESIA



Area: 1,860,360 sq km (718,289 sq mi)
Population (2008 est.): 234,342,000
Capital: Jakarta
Head of state and government: President Susilo Bambang Yudhoyono

Achmad Ibrahim/AP

Demonstrators in Jakarta march and shout slogans during a public protest against fuel price hikes in Indonesia.

Maneuvering for the 2009 legislative and presidential elections shaped much of what occurred in Indonesian politics in 2008. Elections for national and regional parliaments were scheduled to take place simultaneously in April 2009, and the first round of the presidential elections was to occur in July.

Pres. Susilo Bambang Yudhoyono (commonly known as SBY) declared in September 2008 that he would seek reelection. Since his election in 2004, he had mostly enjoyed high public approval. In early 2008, however, a number of respected surveys showed a sharp slide in his standing; several opinion polls indicated that SBY was running second to former Indonesian president Megawati Sukarnoputri.

SBY's falling popularity was attributed to the government's decision to reduce fuel subsidies by an average of almost 30%. The rising cost of these subsidies—some $19 billion annually, or about one-fifth of total budget outlays—had become unsustainable, especially as the cost of crude oil imports spiraled upward. Though welcomed by most economists, the fuel price rises sparked public protests, some of them violent, as well as condemnation from many political parties and nongovernmental organizations (NGOs), which claimed that the policy would worsen inflation and poverty. The government sought to offset the impact of price rises on the poor by introducing a direct payment of 100,000 rupiah (about $10) per month to low-income households. Initially criticized as financially inadequate and prone to corruption, the direct payments appeared to be winning cautious approval from both grassroots communities and welfare groups.

Despite the backlash on fuel prices, SBY's economic record remained good. The overall economy continued to grow more strongly than most others in the region, recording an annual increase of 6.4%, though inflation was relatively high, at 12.2%. Unemployment levels fell slightly, from 9.75% in early 2007 to 8.46% in early 2008 (about 10 million people). Poverty also fell modestly.

Megawati's improving political stocks owed much to her status as a leading opponent of SBY. She had sharpened her criticism of his government over the past year and had been more active in campaigning at the community level. Her party, the Indonesian Democratic Party of Struggle (PDI-P), was the only major party without representatives in the cabinet, and it served as the unofficial opposition in the parliament. As the popularity of SBY and his coalition government dropped, Megawati's and the PDI-P's climbed.

Other prominent candidates for the presidency included former generals Wiranto and Prabowo Subianto, both of whom established their own parties (Hanura and Gerindra, respectively) and were funding expensive advertising and community-mobilization campaigns. Unlike many of the other new parties formed since 2004, Hanura and Gerindra appeared to be well organized and well staffed, with retired military officers holding many key positions. The popularity of both men rose sharply, owing largely to their heavy promotional campaigns, but they both needed to overcome lingering public suspicion of generals with "tough" images.

Another candidate who had captured considerable public attention was Hamengkubuwono X, the sultan of Yogyakarta. He enjoyed strong support among his fellow Javanese, Indonesia's single-largest and most politically influential ethnic group, and he also had the backing of powerful sections of Golkar, currently the largest party in the parliament. Although untested at national-level politics, Hamengkubuwono was thought to be a possible compromise candidate capable of attracting broader political support.

The presidential race was likely to remain very fluid until the results of the April legislative election were known. In what appeared to be an increasingly volatile electoral environment, most parties were reluctant to commit themselves to particular candidates until the makeup of the new parliament became clear. Thirty-four parties (10 more than in 2004) were expected to take part in the elections in 2009. Most of the smaller, newer parties had poor prospects, and a number of major parties might also struggle, having been dogged by internal disputes and leadership problems. These included three of the larger Islamic parties: the United Development Party (PPP), the National Mandate Party (PAN), and the National Awakening Party (PKB). Indeed, the only Islamic party in Indonesia with good prospects was the Justice and Prosperity Party (PKS).

The year 2008 was also notable for the extensive and successful anticorruption campaign led by the Corruption Eradication Commission (KPK), which resulted in the investigation of a

string of high-profile figures. Two cabinet members—the ministers for forestry and national planning—were under investigation for taking bribes, though SBY refused to stand them down until they had been proved guilty. One parliamentarian was jailed for graft, and a number of others faced similar charges. Revelations about MPs' having received regular payments from government departments to pass legislation also filled the newspapers for much of the year. The former governor of Bank Indonesia, the central bank, was sentenced to imprisonment for five years for corruption; four of his senior officials were awaiting trial; and dozens of regional heads and legislators were jailed for a variety of corruption offenses. According to opinion polling, these cases helped to make the KPK the most-trusted institution in the country. It was unclear whether the wave of antigraft investigations would have a lasting impact on Indonesia's entrenched culture of corruption, but a 2008 Transparency International survey lifted the country's corruption ranking to 126 out of 180 (from 143 of 179 countries in 2007). (GREG FEALY)

IRAN

Area: 1,648,200 sq km (636,374 sq mi)
Population (2008 est.): 72,269,000
Capital: Tehran
Supreme political and religious authority: *Rahbar* (Spiritual Leader) Ayatollah Sayyed Ali Khamenei
Head of state and government: President Mahmoud Ahmadinejad

Elections to the eighth Majlis (parliament) took place in Iran on March 14, 2008, with a second round occurring in April for the seats for which candidates did not secure at least 25% of the vote in the first round. Although the voter turnout was 65% overall, it was only 40% in Tehran; in the second round, turnout was estimated at a mere 25%. In the balloting the conservative Islamic groups (led by the ruling United Fundamentalist Front) won the majority of the seats. The Inclusive Fundamentalist Coalition, loosely aligned with conservative Ali Larijani (who in May became speaker of the Majlis), was also well supported. Reformists took some 17% of the poll, and independents garnered 14%.

The election results were a setback for Pres. Mahmoud Ahmadinejad. Opposition to his policies gathered strength, and senior members of the regime, including former president (1989–97) Hashemi Rafsanjani, concentrated their criticism on the government's poor economic performance. There was constant upheaval in the appointment and dismissal of cabinet ministers in a bitter struggle between the Majlis and Ahmadinejad. The influential Council of Guardians, which barred most reformists from the election, and the Expediency Council remained dominated by former president Rafsanjani.

President Ahmadinejad's alleged continuing preoccupation with obtaining nuclear weaponry was opposed by the U.S. and the European countries, which continued to deny Iran the capability for the manufacture of nuclear warheads. On March 3 the UN Security Council passed Resolution 1803, the third in a series of minor sanctions against Iran. In the noncontinuous dialogue with UN Security Council members and Germany, Iran was given more incentives to dissuade it from enriching uranium; the talks, however, only delayed events and enabled Iran to press ahead.

After Iran tested long-range missiles in July, the Security Council warned Tehran on July 31 to comply with its resolution or face further sanctions. On September 8 the Revolutionary Guard and the army undertook war games. There was no compliance by Iran in curbing its nuclear activities, and at the end of September the UN Security Council imposed conditional sanctions on the import-export of sensitive nuclear materials, including a ban on trade in missile weapon carriers, and a freeze on Iran's financial assets. Meanwhile, the International Atomic Energy Agency reported on September 15 that Iran had increased the number of uranium-enrichment centrifuges (from 3,300 to 3,820) and was poised to install an additional 2,000 at the Natanz enrichment plant. In late November Iran claimed that it had "more than 5,000 centrifuges" at Natanz and reiterated that it had no plans to suspend uranium enrichment.

Iranian intervention in Iraqi affairs, which apparently began in 2007 with the supply of weapons and logistic support to Shi'ite groups in Basra, Iraq, particularly the Mahdi army of Muqtada al-Sadr, was vehemently denied by President Ahmadinejad. In March he made a historic trip to Baghdad (the first such visit by an Iranian president) and established a "new page" in Iran-Iraq relations during talks with Iraqi Prime Minister Nuri al-Maliki. Trade and travel opened up significantly between the two countries. Relations with other Arab states were maintained, though difficulties remained. Iran threatened to close the Persian Gulf waterways in the event of a U.S. attack and continued to pursue its territorial claims to the Abu Musa and Tumb islands. The Iranian axis with Syria was sustained, and Syrian Pres. Bashar al-Assad visited Tehran in August. Meanwhile, Ahmadinejad continued his fiery rhetoric against the U.S. and Israel. On September 23, during his speech to the UN General Assembly in New York City, Ahmadinejad predicted that Israel was on the verge of collapse and that Zionists were dominating the U.S. in a "deceitful, complex, and furtive manner."

The political atmosphere hinged increasingly on economic performance. Under Ahmadinejad's management, corruption flourished, and the random adoption of projects was based on demands by regional committees. Little effort was made to privatize state businesses, and large-scale industrialization was eschewed. A debate on consumer subsidies, particularly for foodstuffs and petroleum, continued; the Majlis opposed any sharp reduction in the $100 million annual cost. A gasoline-rationing system prevailed to contain imports of refined products. Shortages of electric power also led to rationing in the form of blackouts in Tehran.

In the 2007–08 Iranian fiscal year, imports were estimated at $53,728,000 and exports at $82,900,000. Despite high oil revenues and a current-account balance of payments that stood at $23,855,000 at year's end 2007, foreign reserves were down. An IMF report concluded that the economy was heavily distorted by both high oil income and short-term expansionary policies, which were responsible for an estimated 30% boost in inflation. In addition, unemployment rose to more than 11.2%, and GDP growth trailed at 4.6%. Productivity in agriculture continued to falter, while the government had great difficulties in disposing of large industries through privatization. The proposed March 2008–09 budget caused considerable discontent owing to its reliance on the drawing down of foreign exchange holdings.

(KEITH S. MCLACHLAN)

IRAQ

Area: 434,128 sq km (167,618 sq mi)
Population (2008 est.): 29,492,000 (including nearly 2,300,000 Iraqi refugees, of which about 1,400,000 are in Syria and about 500,000 are in Jordan)
Capital: Baghdad
Head of state: President Jalal Talabani
Head of government: Prime Minister Nuri al-Maliki

Hadi Mizban/AP

Shi'ites in Baghdad protest the Iraqi government offensive in March against the Mahdi Army of Shi'ite cleric Muqtada al-Sadr and other militias in Basra.

Despite acts of violence, including kidnappings and suicide bombings, the security situation improved noticeably in Baghdad and elsewhere in Iraq in 2008. The decline in violence was due in large part to the "surge" of U.S. forces and the commitment of U.S.-backed Sunni militias—the Awakening Councils—who in 2006 had turned against al-Qaeda. These militias, known as "Sons of Iraq," numbered about 100,000. On October 1 the Shi'ite-dominated Iraqi government, eager to assert its control, took command of the Sunni Awakening Councils from the U.S., pledging to pay their salaries and to integrate them into the armed forces or the civil service.

The overall performance of the Iraqi government in providing services, such as electricity, clean water, and fuel, and fostering a reduction in unemployment, remained well below government promises. Inflation remained high—at 16% in May, though it eased to 12.9% in September.

In March, Prime Minister Nuri al-Maliki personally directed military operations in Basra to bring to heel the militias that had controlled the city, terrorized the population, and prevented the normal flow of oil from terminals in Basra to the rest of the country. The Mahdi Army of Muqtada al-Sadr was the main target. After a long week of fighting, the city came under the control of government forces when Sadr ordered his militia off the streets of Basra. Despite Sadr's call for a renewal of the six-month cease-fire in February, fighting by some Mahdi militia elements spread in March and April to other Shi'ite cities, such as Amarah and Kut, and Sadr City district within Baghdad. It was not until the end of May that Iraqi government forces, with help from the U.S., were able to pacify Sadr City.

These actions gave a boost to the Maliki government. Another shift toward national reconciliation occurred when Iraq's largest Sunni bloc, the Iraqi National Accord (INA), ended a nearly yearlong boycott and, on July 19, rejoined the cabinet, retaking six cabinet ministries. The INA had left Maliki's cabinet in 2007 at the height of violence between Sunni and Shi'ite Arabs.

After months of debate and delay, the Iraqi parliament on September 24 passed a crucial election law that was signed by the Presidency Council in October. The law aimed at organizing the important provincial elections to be held on Jan. 31, 2009, except for the three provinces in the Kurdish region (which were to schedule elections later) and Kirkuk. Passage of the law fulfilled a major benchmark requested by the U.S. and marked an important advance in the political sphere. Much of the delay had been caused by the controversial Kirkuk issue and the debate over who should control the oil-rich province. Kirkuk was excepted from the election, and the issue was given to a committee for further study. Although Kurds claimed the province as part of their autonomous region (and wanted an election to cement their control), resistance to this claim came from Arab and Turkmen inhabitants of the province and a large part of the Arab Iraqi population, Shi'ite or Sunni.

The Chaldean archbishop of Mosul, Faraj Rahho, was kidnapped February 29 and found murdered on March 13. By October, Iraqi Christians had become a clear target of harassment. Hundreds living in Mosul were threatened and forced to leave their homes and flee the city. The threats came from as-yet-unidentified groups. During the year Mosul was the focus of intensive joint U.S.-Iraqi operations against al-Qaeda in Iraq.

Arab Sunnis in Iraq and many of Iraq's Sunni-led Arab neighbours continued to show concern over growing Iranian influence in Iraq; this concern was shared by U.S. officials, who claimed that Iran was involved in training and funding a "shadow" army of Shi'ite militias aimed at removing U.S. forces from Iraq. The Iraqi government publicly said that it had no evidence of Iran's having trained Iraqi militias.

Though Iraq's long-awaited oil law was stalled in the parliament at year's end, this did not prevent Royal Dutch Shell from concluding a natural gas agreement with the state-run Southern Oil Co. on September 22 and setting up an office in Baghdad. It was the first major international oil and gas firm to return to Iraq since the nationalization of the Iraqi oil industry in 1972.

On August 11 King Abdullah II of Jordan paid a historic visit to Iraq. He was the first Arab head of state to visit Iraq since the 2003 U.S.-led invasion. With the encouragement of the U.S., Abdullah's visit was followed by those of other high-level Arab officials. Several Arab countries (including Syria) sent ambassadors to Iraq, signaling an

Arab thaw toward the Shi'ite-led government in Baghdad. Although Kuwait sent an ambassador to Baghdad in October, a planned visit by Kuwaiti Prime Minister Sheikh Nassar Muhammad al-Ahmad al-Sabah did not occur.

During the year Iraq engaged in crucial negotiations and hard bargaining with the U.S. over a security agreement that would decide the future of U.S. forces in Iraq. The final accord, known as the States of Forces Agreement, called for U.S. forces to leave Iraqi towns and villages by June 2009 and for a total withdrawal of U.S. forces from Iraq by the end of 2011. Iraqi authorities were granted extensive power over the operations of U.S. forces, and Iraq was given the right to prosecute U.S. soldiers and defense contractors in cases of serious crimes committed off duty and off bases. The agreement was approved by the cabinet on November 16 and went to the parliament, where a vigorous debate took place. Parliamentary approval came on November 27, with a vote of 149 out of 198 deputies present, despite criticism from some Shi'ite hard-liners, especially Sadrists, who demanded unconditional U.S. withdrawal from Iraq. The deal was passed only after the Shi'ite-led government agreed to a mainly Sunni demand for a popular referendum on the agreement to be held no later than July 30, 2009. A second Strategic Framework Agreement covered future bilateral relations between the U.S. and Iraq. (LOUAY BAHRY)

IRELAND

Area: 70,273 sq km (27,133 sq mi)
Population (2008 est.): 4,467,000
Capital: Dublin
Chief of state: President Mary McAleese
Head of government: Prime Ministers Bertie Ahern and, from May 7, Brian Cowen

In 2008 the sudden resignation in April of Prime Minister Bertie Ahern and the selection of Finance Minister Brian Cowen (*see* BIOGRAPHIES) as his replacement, the problems of the construction sector, the unexpected rejection of the EU's Lisbon Treaty, and the effects of the international credit crunch dominated a year of surprises in Ireland. The end of a decade of growth in housing construction had been flagged in 2007, but there were hopes of a "soft landing." When it came, however, the landing provided quite a shock. In the first 11 months of 2008, average house prices fell by 8.3%, with a year-on-year drop of 9.6%. (The figures reflected only completed deals, taking no account of an excess of unsold stock.) Builders offered price cuts of up to 25%, particularly on apartments, but first-time buyers were the only beneficiaries as unemployment, which had fallen steadily during the boom years, began to climb again. The seasonally adjusted "live register" measure of unemployment increased from 260,300 in October to 277,000 in November, taking the annual rate to 7.8%. The rise in unemployment owed much to the drop in construction output, down by 12.2% in the second quarter of 2008 compared with the same period in 2007.

A €7 billion (€1 = about $1.40) shortfall in annual tax revenues, due to the construction slump and slowing consumer spending, appeared likely in September, up from €3 billion in June. The annual budget was brought forward to October 14 from the first week in December. It envisaged a current account deficit of €4.7 billion and included spending cuts, tax increases, and voluntary pay cuts for government ministers. Reductions in health and education spending triggered strong resistance, and two deputies withdrew support from the government. By November unemployment had risen to 7.8% from 4.9% in January. One positive was the halving of the inflation rate to 2.5% by the end of November. By year's end the government reported an €8 billion shortfall in tax receipts for 2008.

On June 12 the Irish electorate rejected the Lisbon Treaty, voting 862,415 against and 752,451 in favour, on a relatively high referendum turnout of 53%. This caused serious embarrassment to Prime Minister Cowen and all of the major political parties, which had backed the measure to update European Union institutions and procedures following the EU's expansion to 27 members. Opposition from Sinn Fein and a hitherto-unknown extraparliamentary group called Libertas (funded by businessman Declan Ganley) upset the pro-European consensus, and it appeared that the EU-wide adoption of the treaty had been halted by the only country to hold a referendum on it. The results of a government-commissioned opinion poll showed that about a third of voters believed (wrongly) that the treaty included a policy for conscription into a European army and the elimination of Ireland's ban on abortion, while

Members of the European Parliament show their support for Ireland's rejection of the EU's Lisbon Treaty during a debate in France on June 18.

Christian Lutz/AP

more than 40% thought that it meant an end to Ireland's low corporate tax regime, despite assurances to the contrary. Some 42% who voted "no" cited a lack of information, knowledge, or understanding of the treaty as the main reason.

The year's greatest shock was the international banking crisis in the autumn. In September concerns spread to Irish-based financial institutions. Finance Minister Brian Lenihan first raised the state guarantee protecting savers' deposits with Ireland-based banks from a limit of €20,000 to €100,000, but this measure was not enough. The failure of at least one Irish bank appeared imminent, and Lenihan introduced emergency legislation to make the guarantee unlimited for a period of two years. In December he introduced plans to inject €5.5 billion into the country's three largest domestic banks.

There was a changing of the guard among those with responsibility for the Anglo-Irish peace process that had delivered power sharing in Northern Ireland. After Ahern announced his resignation on April 2, Cowen took office on May 7. British Prime Minister Tony Blair had already stepped down in June 2007, and Northern Ireland First Minister Ian Paisley retired in May 2008. This meant that three of the four principals who set up the power-sharing executive in 2007 had left the political stage, with only Sinn Fein leader Gerry Adams still on the scene.

Peter Robinson (*see* BIOGRAPHIES), Paisley's long-serving Democratic Unionist Party (DUP) deputy, succeeded Paisley as first minister. Difficulties between the DUP and Sinn Fein over devolution of policing responsibilities from London to Belfast emerged over the summer. This led to the cancellation of executive meetings and to a degree of political stasis as important decisions were deferred. This was not resolved until mid-November. In the interim community tensions had been inflamed.

The Progressive Democrats, the smallest party in Ireland's government, with only two deputies in the Dail (lower house of parliament), decided to wind itself up on November 8, though some members resisted the closure after 23 years of existence. The party was formed in 1985 and enjoyed initial success, seeing many of its liberal economic and socially progressive policies adopted by rivals, but it was almost wiped out at the 2007 general election.

(KIERAN FAGAN)

ISRAEL

Area: 21,643 sq km (8,357 sq mi), including the Golan Heights and disputed East Jerusalem, excluding the Emerging Palestinian Autonomous Areas
Population (2008 est.): 7,018,000, excluding 290,000 Jews in the West Bank
Capital: Jerusalem is the proclaimed capital of Israel (since Jan. 23, 1950) and the actual seat of government, but recognition has generally been withheld by the international community
Chief of state: President Shimon Peres
Head of government: Prime Minister Ehud Olmert

The Emerging Palestinian Autonomous Areas (the West Bank and the Gaza Strip)
Total area under disputed administration: West Bank 5,900 sq km (2,278 sq mi); Gaza Strip 363 sq km (140 sq mi)
Population (2008 est.): West Bank 2,656,000, including 2,366,000 Arabs and 290,000 Jews; Gaza Strip 1,444,000
Principal administrative centres: Ramallah and Gaza
Head of government: President Mahmoud Abbas, assisted by Prime Minister Salam Fayad

On Sept. 21, 2008, Israeli Prime Minister Ehud Olmert resigned, and Foreign Minister Tzipi Livni (*see* BIOGRAPHIES), who became leader of the ruling Kadima party in a mid-September leadership primary that Olmert did not contest, spent much of the following month trying unsuccessfully to form a new coalition government. Livni then asked Pres. Shimon Peres to call early elections, which were set for Feb. 10, 2009.

Olmert's resignation occurred after more than two years of intensive police investigations. His position became untenable in late May when Morris Talansky, a New York-based fund-raiser, in a pretrial deposition, accused Olmert of having accepted about $150,000 in cash payments over a 13-year period. With Olmert under suspicion of bribery, breach of trust, and violation of election-campaigning laws, Defense Minister Ehud Barak threatened to pull the Labour Party out of the coalition unless Kadima chose a new leader. This announcement triggered the process that led to Olmert's ouster.

Six days before his resignation, Olmert leaked details of a far-reaching peace offer made to the Palestinians. In return for peace, Israel would hand over the equivalent of 100% of the West Bank, set up a temporary joint regime for Jerusalem's holy basin, and agree to the return to Israel proper of 2,000 Palestinian refugees annually over a 10-year period.

After a Mideast summit that was hosted by the U.S. in Annapolis, Md., in November 2007, Israel and the Palestinians launched intensive peace talks on two tracks. The aim was to conclude by the end of 2008 a final Israeli-Palestinian peace deal, a "shelf" agreement that would be implemented as soon as conditions permitted.

The U.S. and the international community invested a great deal of energy in the process. U.S. Secretary of State Condoleezza Rice made several trips to the region to facilitate negotiations; former British prime minister Tony Blair, special envoy of the international "Quartet" (the U.S., the EU, the UN, and Russia), raised more than $7 billion to boost the Palestinian economy; and U.S. Gen. Keith Dayton trained Palestinian forces to take over security in West Bank cities, starting with Nablus, Jenin, and Hebron.

Hamas categorically rejected any peacemaking with Israel and in the first half of the year fired thousands of rockets and mortar shells at Israeli civilians in towns and villages bordering the Gaza Strip. In an attempt to pressure Hamas, Israel maintained a land and sea blockade, causing a degree of humanitarian suffering for which it was widely criticized.

In late January Hamas militiamen blew up the border fence at the Rafah crossing point, and hundreds of thousands of Palestinians poured into Egypt in symbolic defiance of Israel's blockade. The Egyptians, however, quickly resealed the border, and over the next few months, fighting between Israel and the militants escalated. In early March, after Hamas fired long-range Grad rockets at the city of Ashkelon, Israel conducted a five-day land incursion into Gaza, in which more than 100 Palestinians were killed. Partly out of concern that the Gaza violence might overflow into Egypt, Cairo mediated a truce that went into effect on June 19. On December 19, Hamas refused to renew the truce as long as border crossing points remained closed and five days later fired more than 70 rockets and mortar shells

Israeli soldiers and tanks prepare for a land operation against Hamas militants in the Gaza Strip on December 30, three days after Israel began air strikes to put an end to rocket fire from Gaza into Israel.
Ariel Schalit/AP

at civilian targets in Israel. Israel's response was harsh. On December 27, in an initial strike that lasted just 3 minutes and 40 seconds, more than 60 warplanes and helicopters destroyed dozens of Hamas government buildings and installations, killing about 150 people, most of them militiamen. By year's end, despite international calls for a cease-fire, the confrontation showed every sign of escalating, with Israeli air raids and Hamas rocketing continuing unabated, and Israeli ground troops poised to move into Gaza.

After a breakdown of Israeli-Syrian peace talks in 2000, both sides put out feelers in 2007 to resume the process; an announcement on May 21, 2008, led to the renewal of indirect peace talks, which would be mediated by Turkey. Following four sessions of fruitful talks, the Israelis and the Syrians were on the brink of launching direct peace talks but decided to wait until the formation of new administrations in Israel and the U.S. There were two key questions: would Syria be prepared to detach itself from the Iranian axis, and would a new U.S. administration be ready to offer Syria sufficient economic and political inducement to do so?

Israel's main strategic concern was Iran's suspected plan to manufacture a nuclear bomb. Throughout the year Israel made strong diplomatic representations in an effort to block an Iranian nuclear weapons program. During visits to Israel in January and May, U.S. Pres. George W. Bush was shown the latest Israeli intelligence data. In a festive address to the Knesset (parliament) marking Israel's 60th anniversary, Bush reaffirmed U.S. determination to prevent "the world's leading sponsor of terror" from possessing "the world's deadliest weapon." In June the Israeli air force reportedly carried out large-scale maneuvers that simulated an aerial attack on Iranian nuclear installations, and Transport Minister Shaul Mofaz warned that if Iran continued its alleged weapons program, Israel would be left with no option but to attack. In late September Israel's military intelligence told the government that Iran already had one-third of the fissionable material needed to produce a bomb.

On July 16, two years after the outbreak of the war in Lebanon between Israel and the Iranian-backed Hezbollah, the latter group returned the bodies of two Israeli soldiers who were kidnapped in the incident that had led to war. As part of the prisoner exchange mediated by Germany, Israel returned a Lebanese held since 1979 after particularly brutal terrorist murders, four Hezbollah fighters captured in the war, and the bodies of 199 Lebanese and Palestinian militants.

The final report of the Winograd Commission's investigation of the war was published in late January, further undermining Olmert's position as prime minister. Although the report was scathingly critical of his performance, it did not recommend that he resign, nor did it find, as his detractors claimed, that he had launched the inconclusive land operation in the final 60 hours of the war to improve his sagging political fortunes. On the contrary, it stated that the decision was "almost inevitable," and Olmert claimed that the report had lifted a "moral stigma."

The international credit crisis found the Israeli economy faltering, but not as badly as the economies in the U.S. or the EU. Though first-quarter growth registered at 5.6%, as the international crisis deepened, the growth rate was ratcheted down to about 3% for the year, and the Bank of Israel forecast the 2009 rate at 2.7%. Israeli banks were not heavily involved in subprime lending, and there was no need for a government rescue plan. Nevertheless, the Tel Aviv stock exchange tumbled and by mid-October had lost about one-third of its value from the beginning of the year. (LESLIE D. SUSSER)

ITALY

Area: 301,336 sq km (116,346 sq mi)
Population (2008 est.): 59,760,000
Capital: Rome
Chief of state: President Giorgio Napolitano
Head of government: Prime Ministers Romano Prodi and, from May 8, Silvio Berlusconi

Politics, a garbage pileup in the city of Naples, and an ongoing debate over immigration laws all competed for attention in Italy during 2008. After a two-year hiatus, billionaire Silvio Berlusconi returned to power in May at the head of a new centre-right party called the People of Freedom. His success in the April parliamentary elections followed the disintegration of the precarious centre-left alliance that Prime Minister Romano Prodi had presided over since 2006. As the national election campaign took shape early in the year, Italy's attention turned to Naples, where the closure in late 2007 of waste-disposal incinerators and local mismanagement attributed to organized crime gradually led to the accumulation of tens of thousands of tons of garbage in city streets, provoking local outcries and censure from the European Union. In January government officials estimated that some 50,000 tons of uncollected waste had accumulated in the Campania region, including both Naples and the Amalfi Coast, a popular tourist destination. Later the city's association of physicians openly expressed fears that the increase in rats and insects might lead to the spread of infectious diseases. An agreement to

pay Germany to help with the garbage disposal led to the transport of some 160,000 tons of trash to Hamburg and other German cities for incineration, but this was recognized as a temporary solution.

Berlusconi used the Naples crisis as a campaign watchword. He also pledged to make cuts in property taxes. Prodi's Union alliance, which held a narrow majority in the parliament throughout its existence, unraveled definitively in February when former justice minister Clemente Mastella, the head of a small Roman Catholic party, rancorously pulled out of the Prodi coalition as a way of protesting his innocence against corruption charges. Prodi's efforts to woo back Mastella failed, and the embattled prime minister soon lost a confidence vote. He had lost a similar vote in 2007 and managed to form a second government, but this time divisions within the left made regrouping impossible.

Instead, Italy faced a runoff between two new political entities, Berlusconi's People of Freedom and the Democratic Party (PD) headed by Rome Mayor Walter Veltroni, Prodi's political heir. Veltroni's call for the creation of an interim nonpartisan government to oversee electoral reform ahead of voting was successfully resisted by Berlusconi and his ally Umberto Bossi, the head of the xenophobic Northern League. Those two leaders sought to capitalize immediately on a tide of public disenchantment with the left. The presence of the new parties reflected efforts on both political sides to assemble ideologically similar forces under the same roof to avoid the parliamentary splintering caused by Italy's system of proportional voting.

The People of Freedom and the Northern League together amassed nearly 47% of the national vote versus 37.5% for the PD, a dizzying defeat for the centre-left and Veltroni, a self-styled political modernist and an outspoken supporter of U.S. Democratic presidential contender Barack Obama. (*See* BIOGRAPHIES.) Significantly, the election results all but erased dozens of splinter parties. For the first time since World War II, political heirs to the former Italian Communist Party failed to win a parliamentary seat. Meanwhile, the Northern League, known for its anti-immigration stance, made significant inroads, doubling its most recent vote totals in what was widely considered a bare-knuckled protest against the growing presence of illegal immigrants in the Italian blue-collar workforce. Overall, Berlusconi's forces won 344 seats in the 630-seat lower house, the Chamber of Deputies, and 174 seats in the 315-strong Senate, a commanding majority that assured the centre-right of broad legislative power. The 71-year-old Berlusconi was sworn in as prime minister on May 8.

Salvatore Laporta/AP

A woman and child walking in Naples in January pass some of the tens of thousands of tons of garbage piling up in the streets since the closing in late 2007 of local trash incinerators.

Berlusconi repeatedly traveled to Naples, but the long-standing garbage crisis remained largely unresolved. Efforts to reopen a suburban incinerator that had been promised to urban renewal provoked repeated clashes with police. Berlusconi insisted that he would reopen the facility by January 2009 and pledged to build two new sites. Government officials ruefully admitted that the crisis was nourished in part by the Camorra, an organized crime syndicate (similar to the Mafia) that earned billions by illicitly controlling the waste-disposal industry. The release in May of the film *Gomorra*, from a book by journalist Roberto Saviano, galvanized public opinion against organized crime. Saviano's ongoing exposés of Camorra influence in Naples had already earned him 24-hour police protection.

The Northern League's impressive electoral showing led Berlusconi to name one of its key officials, Roberto Maroni, as interior minister. Maroni swiftly produced aggressive and controversial legislation intended to rein in clandestine immigration, widely seen as a source of blue-collar crime. In July, Italy declared a state of emergency to limit the country's rising Roma (Gypsy) population. A plan to fingerprint all Roma in nomad camps as part of a census effort was decried by UNICEF as a violation of the UN convention on the Rights of Children, but the EU did not object. New immigration and crime legislation also called for stricter accounting of foreign residents in Italy, including proof of income and residence for stays of more than 90 days. Maroni made further headlines when he announced that a limited number of Italian troops would be deployed in Italian cities as a part of an experimental law-and-order measure. More than 500 such personnel were earmarked for Naples, again identified as a hot spot for drug violence and racially motivated crimes. At the same time, Berlusconi recommended the implementation of a satellite tracking system to help deter potential immigrants at their point of origin, most often from Balkan and North African seaports.

The focus on immigration was in part a response to Italy's weak economy, which teetered on the brink of recession. According to official data, Italy's second-quarter GDP fell 0.3% from the previous quarter and was 0.1% down on the year. The European Commission said that it expected the economy to stagnate through the end of 2008. A World Bank's rating of national competitiveness rated Italy 65th in the world. In October the IMF predicted that Italy would undergo two years of

recession, and prognosticators believed that the economy was likely to shrink.

The fate of debt-ridden Italian national airline Alitalia paralleled both the rising costs of aviation fuel and the residual intransigence of the labour unions. Two rescue packages intended to save the beleaguered airline, one foreign and one domestic, collapsed when union leaders vetoed extensive job cuts, and in August Alitalia filed for bankruptcy protection. A compromise deal, finalized in December following internal feuding, kept the airline afloat and in Italian hands. Berlusconi, who opposed the airline's sale to foreign interests, immediately claimed this as a personal victory.

As always, Italians looked to sports for solace. At the Olympic Games in Beijing, Italian competitors captured 28 medals (8 gold), notably victories by fencers Matteo Tagliariol and Valentina Vezzali and swimmer Federica Pellegrini. The country's strong showing at the Olympics partially offset a forgettable performance by the national team at the European association football (soccer) championships held in Austria and Switzerland. Italy was eliminated by Spain in the quarterfinals, which led to the dismissal of coach Roberto Donadoni and his replacement by former trainer Marcello Lippi. Inter Milan won its third consecutive Serie A title in Italy's top soccer league, and fan violence that had marred the sport in 2007 appeared to abate domestically. In October, however, Italian fans rioted during a World Cup qualifying match in Sofia, Bulg., shouting insults and injuring local police. Italian political authorities vowed to intensify the vetting of fans bound for away matches.

(CHRISTOPHER P. WINNER)

JAMAICA

Area: 10,991 sq km (4,244 sq mi)
Population (2008 est.): 2,688,000
Capital: Kingston
Chief of state: Queen Elizabeth II, represented by Governor-General Kenneth Hall
Head of government: Prime Minister Bruce Golding

The new Jamaica Labour Party (JLP) government announced in January 2008 that it would proceed with the decision of its predecessor, the People's National Party (PNP), to adopt liquefied natural gas (LNG) as the preferred fuel diversification option for the country. Prime Minister Bruce Golding said that discussions on LNG supplies were "under way" with unnamed countries; these talks occurred following the inability of either Trinidad and Tobago or Venezuela to provide promised LNG within an acceptable time frame.

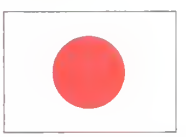
The Office of Utilities Regulation in April began soliciting proposals for the provision of 73 MW of renewable energy such as wind, biomass, solar, and hydrogen. The takeover by Brazil's Infinity Bio-Energy of Jamaica's five sugar factories was confirmed in July, with the company stressing its intention to use sugar as the basis of a significant ethanol industry in the country.

Prime Minister Golding in May called on the U.S. to lift its decades-old economic embargo on Cuba and for both countries to undertake "constructive engagement" to resolve differences. He suggested making efforts similar to those that the U.S. had adopted in reestablishing ties with China, Vietnam, and North Korea.

Former prime minister Portia Simpson Miller defeated rival Peter Phillips for the leadership of the PNP in party elections held in September. After her reelection Miller insisted that she would work harder to restore the PNP to power in Jamaica.

(DAVID RENWICK)

JAPAN



Area: 377,915 sq km (145,914 sq mi)
Population (2008 est.): 127,674,000
Capital: Tokyo
Symbol of state: Emperor Akihito
Head of government: Prime Ministers Yasuo Fukuda and, from September 24, Taro Aso

Domestic Affairs. In 2008, just one year after having assumed the post of prime minister and well before the end of his term as party leader or the end of the legislative term of the Diet (parliament), Yasuo Fukuda surprised Japan's political establishment and others around the world by announcing that he was stepping down. He made the announcement on September 1, almost exactly a year after his predecessor, Shinzo Abe, had made a similarly unexpected announcement. Though Abe had explained his decision as resulting from his gastrointestinal problems, Fukuda was not able to point to any health problems as a reason for stepping down. He simply chose to move aside, he explained, in order to help accelerate a policy-making process that had been moving at a snail's pace for the entire period of his prime ministership. Fukuda was succeeded on September 24 by Taro Aso (*see* BIOGRAPHIES), a fellow member of the long-ruling Liberal Democratic Party (LDP). Aso assumed the post of prime minister after having been selected by the LDP as party leader in a special LDP election scheduled to choose Fukuda's successor.

Fukuda's frustration was driven by the difficulties he had working with a "twisted Diet," the Japanese term for divided control of the legislature. The opposition Democratic Party of Japan (DPJ) held a majority of the seats in the upper house, while the LDP, together with its coalition partner, the New Komeito party, held a two-thirds majority in the more powerful lower house of the Diet. The DPJ had won control of the upper house in July 2007—the first time that a party other than the LDP had won majority control of either house of the Diet in the post-World War II period. Abe's resignation, his reports of stomach problems notwithstanding, was largely a result of that election loss.

It thus fell to Fukuda to deal with an awkward legislative situation that was new to Japan. Under the leadership of DPJ head Ichiro Ozawa, the party's upper-house delegation remained united in refusing to compromise with the prime minister. In his first four months in office, Fukuda was able to usher through the Diet only a single significant piece of legislation: the renewal in January of antiterrorism legislation authorizing the Japanese navy to resume its mission in the Indian Ocean that involved refueling U.S. ships engaged in the war in Afghanistan.

In the spring term of the Diet, Fukuda was able to pass the budget on schedule by using the ruling coalition's control of the lower house. In March, however, the opposition took advantage of the fact that the appointment of governors and deputy governors of the Bank of Japan (BOJ) required the approval of both chambers of the Diet. The DPJ

Issei Kato—Reuters/Landov

A customer at a currency exchange bureau in Tokyo in late October watches in concern as the Japanese yen soars in value against other currencies.

blocked Fukuda's efforts to appoint Toshiro Muto the new central bank governor, delaying the selection of a new chief until after the term of the outgoing governor, Toshihiko Fukui, had expired on March 19. The post thus stood vacant for several weeks—with Masaaki Shirakawa (*see* BIOGRAPHIES) serving as acting chief—as an important meeting of the Group of Seven economic officials approached. Only the potential embarrassment of having Shirakawa attend this meeting as a mere "acting" governor compelled the DPJ to stand aside and allow him to assume the post of governor with Diet approval. Nevertheless, the drama continued when the DPJ announced that it would oppose Fukuda's nominee for the open deputy governor's slot. Over the remaining months of his tenure as prime minister, Fukuda was forced to abandon a series of proposed candidates. The standoff over this issue appeared to have been one of the headaches that pushed Fukuda to step down. A new deputy was approved on October 24.

Fukuda was involved in one final legislative showdown with the DPJ over the renewal of the "temporary" gasoline-tax surcharge. The surcharge, which had been in place since the oil-crisis years of the mid-1970s, had been repeatedly renewed because it produced an annual stream of tax revenue totaling an estimated ¥2.6 trillion (about $27.2 billion) that was used to fund road projects. The DPJ, citing the public's concern over rising gas prices, refused to approve renewal ahead of the March 31 expiration date. Fukuda countered by proposing to redirect the gas-tax revenue from road projects to a fund used for general purposes. This plan was eventually approved on April 30, though Fukuda's proposal was modified to reflect the demands of rank-and-file LDP members that the gas tax support road projects for one more year, after which such revenue would be directed to general-purpose use starting in 2009. This represented a major change in policy that former prime minister Junichiro Koizumi had failed to achieve earlier in the decade.

The DPJ orchestrated one final effort to embarrass the prime minister. In June, just prior to a meeting of the Group of Eight (G-8) hosted by Japan, the upper house passed a motion of censure against the prime minister. While ostensibly designed to press Fukuda to call early elections for the lower house, the motion was (as expected) overridden by a vote of the LDP-dominated lower house, which under Japan's constitution had the power to select the prime minister. Nevertheless, the vote was yet another reminder that Fukuda had only partial control of the legislature.

More worrisome for the LDP, however, was the prospect that the party would have to face the voters in lower-house elections by September 2009. Given the standing of the party and the prime minister in public-opinion polls, the LDP and its New Komeito allies looked certain to lose their two-thirds majority in that chamber in the next elections. Anything short of the two-thirds control that the party had wielded since the 2005 elections threatened to make the job of managing the Diet even more complicated, since that supermajority had been critical to Fukuda's ability to push through legislation on several occasions during his tenure in office. A bare majority would leave the LDP completely dependent on opposition cooperation until at least the 2010 upper-house elections—and probably beyond that to 2013.

Having found the existing situation difficult enough, Fukuda decided to leave the task of leading the LDP into a general election to a successor. The party promptly focused on Aso as the man best situated to take on this challenge. After he assumed the party presidency on September 22, Aso was quickly approved by the lower house as the new prime minister. His approval rating immediately after taking office stood at 49% in most polls—higher than Fukuda's at the end of his tenure but below where Fukuda's had stood when he assumed office a year earlier. By November, Aso's support had fallen to just 40% as it became clear that the economy was slowing sharply and that the financial crisis was driving the stock market to record lows. Asked which party they preferred, respondents in the November poll taken by the national newspaper *Yomiuri* preferred the LDP to the DPJ by just a single percentage point, 32% to 31%. Elections were likely to be held in the spring of 2009 if political conditions improved for the ruling coalition but possibly as late as the summer if Aso decided to wait until close to the September 2009 deadline.

The Economy. In late July the International Monetary Fund (IMF) reported that the Japanese economy was showing "resilience to recent external shocks" and that "activity remained robust through the first quarter of 2008." By October, though, it was apparent that the worldwide economic slowdown that began in the U.S. after the collapse of the housing bubble was hitting Japan hard. During the second quarter, Japan's economy contracted by 0.7%, or at an annual rate of 3%. Further contraction in the third quarter pushed the Japanese economy into recession in the fall.

Growth was affected by the rise in Japan's import bill as the country paid

record-high prices for imported oil, combined with a slump in exports, which were hit by declining growth in the U.S. and Europe. The slowdown was also a product of developments at home, where both private residential investment and public investment declined sharply. As a result of the recession, projections for Japan's growth during 2008 and 2009 were downgraded. Whereas the IMF's midyear projections suggested that Japan would grow at a rate of about 1.5% during 2008–09, the projections it issued in September called for growth to slow to 1% in 2008 and 1.1% in 2009. Just two months later, after taking into account the effects of the spreading global financial crisis, the IMF lowered its projections for Japanese growth again.

The contraction of credit and the associated unwinding of the yen-carry trade, which led the yen to strengthen to 94 yen to the U.S. dollar on October 27 and to strengthen even more sharply against the euro and many other currencies, dealt a severe blow to Japanese automakers and other exporters. Automakers slashed projected sales in the U.S. and other markets and predicted much lower levels of profits. These developments fed a sharp decline in the Japanese stock markets; the Nikkei 225 Stock Average fell to a 26-year low in late October before recovering slightly at year's end. The unemployment rate moved up to 4.2% in August after starting the year at 3.8% but fell back to the 3.7–3.9% range in the autumn.

In response to the slowdown, the government passed a fiscal stimulus package valued at ¥1.8 trillion (about $18.8 billion) in October and immediately began working on a second package. The latter became the top priority of the new cabinet inaugurated under Prime Minister Aso, who announced on October 30 that the package would be valued at ¥5 trillion (about $52.3 billion). The next day, the BOJ announced that it was lowering interest rates from 0.5% to 0.3%, the first time the central bank had cut rates in seven years. Additional measures designed to inject public funds into banks, along with a major economic stimulus package, worked their way through the Diet in late 2008.

The fiscal and monetary policies adopted late in the year caused the Japanese government to backtrack from efforts to "normalize" interest rates, which had been at 0.5% or lower for the entire decade, and from efforts to reduce the country's fiscal deficit to a level where it achieved a "primary balance" by fiscal year 2011. Private-sector forecasters predicted that Japan could reach this goal only if it raised the consumption tax, but such a tax hike was not even on the agenda as Japan faced both a recession and elections in 2009.

Foreign Affairs. The foreign policy issue that preoccupied senior Japanese officials in 2008 was the effort to persuade North Korea to give up its nuclear weapons program and take responsibility for past violations of international law—especially the kidnapping of Japanese citizens in the 1970s and '80s. The good news was that the U.S. and North Korea agreed during the year on several steps that were aimed at resolving these issues. North Korea disabled its nuclear reactors in June after it reached a tentative agreement with the U.S. on a verification regime. This step was to be followed by the U.S. removal of North Korea from the list of countries that it considered state sponsors of terrorism and by the provision of one million tons of fuel to North Korea by South Korea, China, Russia, the U.S., and Japan—all participants in six-party talks on North Korean denuclearization. Because the tentative agreement on verification did not resolve all of the concerns on the U.S. side or address Japan's kidnapping concerns, these moves were delayed into the fall, which thus caused North Korea to resort once again to brinkmanship by barring inspectors from its nuclear facilities at Yongbyon, threatening to resume production of plutonium, and moving toward another nuclear test. Hoping to avoid this, the U.S. announced on October 11 that it was indeed removing North Korea from its list of state sponsors of terrorism in exchange for verbal compromises by Pyongyang on the terms of the verification regime.

The bad news was that these compromises were not enough to reassure Japan, which announced that it was not willing to approve the deal. Japan insisted that it would agree to provide fuel oil only when details of the verification regime were put into writing and accepted by all participants in the six-party talks. Japan further demanded that the North Koreans carry out another investigation into the fate of the kidnap victims. Japanese officials blamed the U.S. for failing to adequately consider their concerns, and Aso went so far as to question the U.S. decision to make a deal with ailing North Korean leader Kim Jong Il, who, Aso claimed, was "incapable of making important judgments."

This deterioration in relations with the U.S. amid continuing concerns about North Korea came during a time when Japan was able to improve its relations with China and Europe. Chinese Pres. Hu Jintao traveled to Japan in May—the first visit by a Chinese head of state since 1998. His trip—which came after several years in which visits by Japanese heads of state to the Yasukuni Shrine (where both Japanese war dead and 14 Class A war criminals were enshrined) and anti-Japanese demonstrations in China had aggravated relations between the two neighbours—marked a milestone in improving ties. Nevertheless, the two countries continued to face difficulties dealing with issues such as the Chinese tainted-food scandal, which caused problems throughout Asia and elsewhere during the year.

In July, Japan hosted the G-8 summit, which was held in Toyako on the island of Hokkaido. Much effort was devoted prior to the summit in working with the Europeans to nudge the U.S. toward taking a more productive role on climate-change negotiations. The summit's crowning achievement was a commitment by the group—including the U.S.—to halve greenhouse gas emissions by 2050. The group also pledged to work to bring China and India and other large emitters of greenhouse gases into a new post-Kyoto Protocol climate-change-mitigation regime.

(LEONARD SCHOPPA)

JORDAN

Area: 88,778 sq km (34,277 sq mi)
Population (2008 est.): 5,844,000 (including about 1,900,000 Palestinian refugees, most of whom hold Jordanian citizenship; excluding roughly 600,000 Iraqi refugees)
Capital: Amman
Head of state and government: King Abdullah II, assisted by Prime Minister Nader Dahabi

Confronted in 2008 by the rising cost of living spurred by unbridled increases in world oil and cereal prices, Jordan

embarked on a plan to cushion the impact of inflation. Though subsidies were eliminated, the salaries of public- and private-sector employees were raised. Despite mounting inflation, which was a risk factor for social upheaval, the government seemed firmly in control of the domestic security situation as it also tried to cope with its 750,000 Iraqi refugee population.

The consumer price index rose over 15% in the first nine months of the year (compared with 5.4% in 2007) as a result of the increase in oil prices, elimination of fuel and some food subsidies, and the escalation in prices of imported cereals (31%), fuel and electricity (55%), dairy products (36%), transport (24%), and meat and chicken (10%). The government's 2008 budget of $7.3 billion marked an increase of $1.2 billion over 2007, with an expected deficit of $1 billion (5.6% of GDP), compared with the previous year's deficit of $535.2 million. The government's economic liberalization program troubled opposition parties and the population at large. Public opinion surveys indicated that 55% of Jordanians considered themselves poor on the basis of the fact that their living conditions had worsened in the past three years. Only 13% of the population believed that their situation had improved. The Jordanian economy was growing at an estimated annual rate of 6%, compared with 4% in 2006, but government officials considered rates of unemployment and poverty high.

Two attacks against foreign tourists occurred in Amman during the year. In March a Jordanian stabbed a German tourist, and in July a shooting incident near the Roman amphitheatre resulted in some injuries. The political situation remained fairly stable, despite the Iraqi refugee problem, the lack of progress in the Palestinian-Israeli negotiations, and the country's restive mood following the removal of subsidies.

In July, Jordanian, Palestinian, and Israeli officials concluded negotiations in Amman with World Bank representatives for a feasibility study of a $3 billion project to build a canal that would connect the Red Sea to the Mediterranean via the Dead Sea, where the water level had reached a critical low. Described as a scheme to foster increased cooperation between Israel and its Arab neighbours, the project was criticized by experts as a revival of the 1993 plan offered by Israeli Foreign Minister Shimon Peres at the 1993 Arab summit in Casablanca, Mor.; at that time the project was considered an attempt to effectively separate the Palestinian West Bank from the Gaza Strip and was viewed as a threat to the Egyptian Suez Canal and marine life in the Gulf of Aqaba. The plan was again rejected at the 2002 World Summit on Sustainable Development in Johannesburg.

(AYMAN M. EL-AMIR)

Demonstrators in Amman on December 27 vigorously protest Israeli air strikes against Hamas militants in the Gaza Strip.

Nader Daoud/AP

KAZAKHSTAN

Area: 2,724,900 sq km (1,052,090 sq mi)
Population (2008 est.): 15,655,000
Capital: Astana
Head of state and government: President Nursultan Nazarbayev, assisted by Prime Minister Karim Masimov

The political leadership in Kazakhstan spent 2008 seeking to prove its worthiness to head the Organization for Security and Co-operation in Europe (OSCE); at its annual meeting in 2007, the foreign ministers of the OSCE participating countries had agreed that Kazakhstan should chair the organization in 2010, on condition that the country met certain requirements in the areas of political reform and human rights guarantees. In return, Kazakhstan promised to bring its national legislation into line with international standards during 2008. The decision gave a boost to Kazakh Pres. Nursultan Nazarbayev's "Road to Europe" program, which was hailed in February 2008 by visiting U.S. Assistant Secretary of State Richard Boucher as helping Kazakhstan to become a "really modern country." The same month, however, Nazarbayev notably passed over the issue of political reform in his annual state of the nation address.

The president defended his own party's dominance of Parliament as necessary to facilitate "crucial reforms," comparing the situation in Kazakhstan to such one-party-dominated countries as Japan, Sweden, and Singapore. In February, Prime Minister Karim Masimov imposed a moratorium on state inspections of small businesses in order to give a boost to the free-market economy. In September, President Nazarbayev told the new EU representative in Astana that Kazakhstan wanted to expand cooperation with the EU, already a major trading partner, in an effort "to attract European technologies, investments, experience and to develop the cooperation within the framework of Kazakhstan's chairmanship of the OSCE in 2010."

Kazakhstan's relations during the year with major foreign investors were more troubled. In January the Agip KCÖ consortium, after serious disputes with Kazakh government agencies, handed a

majority share in the huge Kashagan oil field to state-owned KazMunaiGaz. After a blast killed 30 miners in January in a mine owned by ArcelorMittal, the Kazakh government accused the company of having neglected to improve safety and meet environmental requirements, which were somewhat nebulous. In April, Standard & Poor's dealt a blow to the government's development program, reducing Kazakhstan's credit rating from stable to negative, owing to the country's foreign-currency obligations.

Kazakhstan showed less willingness in 2008 to meet international standards in the sphere of human rights protection. The government was sharply criticized by the international human rights community for handing Uzbek asylum seekers over to Uzbek security services on what were widely believed to be trumped-up charges. Despite President Nazarbayev's well-publicized commitment to promoting religious tolerance, members of minority religious communities, such as unregistered Baptists and Hare Krishna adherents, continued to experience harassment from local officials.

(BESS BROWN)

Khalil Senosi/AP

People residing in an internal displacement camp in Nakuru in the Rift Valley province in May are among some 300,000–600,000 who were forced from their homes by violence that exploded after the disputed Kenyan presidential election at the end of 2007.

KENYA

Area: 582,646 sq km (224,961 sq mi)
Population (2008 est.): 37,954,000
Capital: Nairobi
Head of state and government: President Mwai Kibaki, from April 17, assisted by Prime Minister Raila Odinga

The sporadic fighting that had occurred in 2007 in the Mt. Elgon region of the western Rift Valley province between Kalenjin ethnic groups and Kikuyu tenant farmers became politicized and much more violent in 2008 after the disputed presidential election in December 2007. The clashes occurred between Kalenjin ethnic groups who claimed traditional ownership of the land and the mainly Kikuyu tenant farmers who had settled in the area that was occupied by white farmers prior to independence. Although the Orange Democratic Movement (ODM), which had its stronghold in the west, gained the largest number of seats in the National Assembly, its leader, Raila Odinga (*see* BIOGRAPHIES), accused the government of having rigged the presidential election when incumbent Mwai Kibaki of the Party of National Unity (PNU) was hurriedly sworn in as president before an official result was announced. Odinga's call for a mass protest demonstration in Nairobi fueled the discontent still further, and violence by his supporters in the west and on the coast was countered by Kikuyu attacks on western ethnic-group settlers in more-central regions. More than 1,000 people were killed, and estimates of the number of displaced persons varied from 300,000 to 600,000. The transportation of goods from Mombasa to Nairobi and onward to Uganda and Rwanda was brought to a halt.

Laborious negotiations between the contending parties—mediated by Kofi Annan, former UN secretary-general; Jakaya Kikwete, president of Tanzania and chairman of the African Union; and other African dignitaries—eventually resulted on February 28 in an outline agreement to form a power-sharing government and to create the new post of prime minister. Kibaki remained president, and Odinga became prime minister.

Bargaining continued over the distribution of offices, and the composition of the cabinet was not announced by Kibaki until April 13. In an effort to accommodate all the aspirations of the different groups, 42 cabinet ministers and 52 assistant ministers were named. Worries over footing the bill for the salaries of these new appointees led to an immediate outcry and a demonstration in Nairobi. Nevertheless, the cabinet was sworn in on April 17.

Another feature of the agreement was the appointment of a commission, under the chairmanship of South African Judge Johann Kriegler, to inquire into the conduct of the presidential elections. The commission reported in September that the elections had been so badly affected by corruption on all sides that it was impossible to discover the victor and recommended that the Electoral Commission be fundamentally reformed or, preferably, replaced by a better-qualified body. An additional inquiry was launched in May to investigate how the postelectoral chaos came about.

Economic recovery followed an uneven course. In August the giant mobile telephone company Zain established its headquarters in Nairobi. In September, however, the government was urgently requested to take action to reduce the cost of fuel to avoid large-scale unemployment. There were also lingering concerns over corruption. In July, Finance Minister Amos Kimunya resigned in the wake of an investigation into the sale of the state-owned Grand Regency Hotel in Nairobi, which was sold below market value. At the same time, an investigative journalist claimed that two cabinet ministers and a number of senior politicians and officials were among the beneficiaries of land set aside for the resettlement of displaced persons.

(KENNETH INGHAM)

KIRIBATI

Area: 811 sq km (313 sq mi)
Population (2008 est.): 97,200
Capital: Government offices on three islets of South Tarawa
Head of state and government: President Anote Tong

In 2008 Kiribati confronted serious challenges to its long-term future from accelerating climate change, a prolonged drought, and rising sea levels, which some analysts predicted could leave the low-lying island country uninhabitable by the end of the century. Pres. Anote Tong, in New Zealand in June for World Environment Day, used the opportunity to express his fears that the drought—exacerbated by widespread erosion and the infiltration of salt water into freshwater sources—could force the evacuation of Kiribati even sooner and to secure a commitment from New Zealand to resettle Kiribati's population as it became necessary to do so.

He also procured assistance to expand the Marine Training Centre and thereby provide more skilled merchant marines, who in 2008 returned some 15% of Kiribati's national income. Workers from the islands were offered seasonal work in New Zealand horticultural and viticultural industries, and Australia proffered opportunities for Kiribas workers to take part in a parallel scheme to start later in the year. President Tong, in praising the plans for overseas jobs, stated that "We don't want to come begging. We want to come with dignity, we want to work."

Ironically, the sea that threatened the country might also contain mineral wealth that was becoming increasingly sought after in a resource-hungry world, and mineral-exploration giants were offering Pacific islands significant sums for the right to prospect in these potentially mineral-rich zones. By 2008 Kiribati was working with specialists from the United Nations Environmental Programme on claims—under Article 76 of the UN Convention on the Law of the Sea—for recognition of a huge submerged continental shelf area beyond the country's 370-km (200-nautical-mile) exclusive economic zone.

(CLUNY MACPHERSON)

KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF

Area: 122,762 sq km (47,399 sq mi)
Population (2008 est.): 23,867,000
Capital: Pyongyang
Head of state and government: Chairman of the National Defense Commission Kim Jong Il

In 2008 North Korea lived up to the traditional nickname for the Korean peninsula, "the Hermit Kingdom," by dragging its feet in nuclear talks and imposing a news blackout surrounding the health of its reclusive leader, Kim Jong Il. Meanwhile, relations with South Korea entered a deep freeze, and ties with the United States warmed slightly. The country's food situation remained precarious.

The ongoing international negotiations to rid North Korea of nuclear weapons and related programs made halting progress. Though no breakthrough occurred, in October the U.S. removed North Korea from the list of countries sponsoring terrorism. The most promising development came in June when the North blew up the cooling tower used at its main nuclear facility, one day after Pyongyang had made a long-awaited declaration of its nuclear assets. The document, however, made no mention of the country's nuclear arsenal, its suspected uranium-enrichment program, or the growing evidence of nuclear-related transfers to Syria. During December negotiations the parties failed to agree on a verification protocol.

One possible threat to denuclearization efforts was the questionable health of Kim Jong Il. Kim disappeared from public view in August and failed to attend an event marking the founding of his father's regime 60 years earlier. It was rumoured that Kim had suffered a stroke but had at least partially recovered. Unverified photographs released throughout the autumn purported to show Kim at factories, sporting events, and military bases. The 67-year-old Kim's illness underscored the fact that he had yet to name a successor.

Despite a decade of engagement between the countries, relations between North and South Korea deteriorated after conservative Lee Myung-bak became the South Korean president in February. Public tours of North Korea, one of the pillars of North-South cooperation, were suspended indefinitely after a North Korean soldier shot and killed a tourist from South Korea who had wandered into a restricted zone. Another cooperative venture, the industrial complex at Kaesong, was also threatened by the incident. In contrast, some musical diplomacy took place in February when the New York Philharmonic gave a performance that was broadcast throughout the country.

Conductor Loren Maazel of the New York Philharmonic rehearses with North Korea's State Symphony Orchestra on February 27, one day after he conducted the Philharmonic in North Korea's first concert by a major American orchestra.

Kyodo/AP

Life for the average North Korean remained difficult. The UN Food and Agriculture Organization estimated that a third of the North Korean population would experience hunger in 2009 unless there was a new wave of humanitarian assistance. Heartbreaking stories appeared in the media on the horrific conditions inside North Korea's gulags. Defections to China and South Korea continued. (PETER M. BECK)

KOREA, REPUBLIC OF

Area: 99,678 sq km (38,486 sq mi)
Population (2008 est.): 50,187,000
Capital: Seoul
Head of state and government: Presidents Roh Moo-hyun and, from February 25, Lee Myung-bak, assisted by Prime Ministers Han Duck-soo and, from February 29, Han Seung-soo

South Korea, a country heavily dependent on foreign trade and investment, was hit hard by the global economic downturn in 2008. (*See* Special Report on page 170.) To make matters worse, paralyzing demonstrations during the spring gave way to political deadlock in the fall. The only bright spot for the country was its better-than-expected showing at the Olympic Games in Beijing. (*See* Special Report on page 194.)

Despite having strengthened its economy in the wake of the 1997 Asian financial crisis, South Korea still found itself in the vortex of the 2008 global financial storm. Once again, foreign investors panicked and headed for the exits. The stock market plummeted nearly 40% for the year, while at one point the local currency lost half of its value against the U.S. dollar. Korea also experienced a trade deficit for the first time since 1997. Amazingly, the unemployment rate remained low (3.3% in November), and economic growth was positive for the year, but Pres. Lee Myung-bak warned that the economy could shrink in 2009.

Fortunately, the crisis did lead to something that two successive nuclear standoffs with North Korea had failed to accomplish, the first-ever summit between South Korea, China, and Japan, which took place on December 13. China and Japan agreed to provide South Korea with a badly needed foreign-currency swap, and the three countries agreed to make their gathering an annual occurrence.

Ahn Young-joon/AP

South Korean police on June 28 use water hoses and a barricade of lined-up buses in an attempt to break up a protest rally against the importation of American beef, which many believe to be unsafe to eat.

President Lee took office in February but within weeks faced his first political crisis as demonstrators protested his sudden decision to reopen the Korean market to American beef, prompting concerns about the potential importation of beef infected with bovine spongiform encephalopathy, or "mad cow" disease. The public's health concerns proved to be unfounded, and the popularity of U.S. beef bounced back, but the political damage had been done: President Lee's approval rating remained low for the rest of the year. Although Lee's Grand National Party won nearly two-thirds of the seats in National Assembly elections held in April, the party failed to pass any major legislation during the fall session, and the year closed out with a series of partisan brawls in the Assembly.

Relations with North Korea deteriorated dramatically in 2008 in the wake of the election of a more conservative president in Seoul (*see* NORTH KOREA), but ties with the United States experienced an upswing. In March Lee was invited by U.S. Pres. George W. Bush to stay at Camp David, and he became the first South Korean president to do so. The withdrawal of Korean troops from Iraq appeared to cause little friction. At the height of the Iraq war, South Korea had been second only to the United Kingdom in terms of the number of non-U.S. troops serving in Iraq.

In the culture and sports realms, there was a mix of tragedy and triumph for South Korea. One of the country's most beloved actresses, Choi Jin-sil, committed suicide at the age of 39 in October. The award-winning star of nearly 40 movies and television dramas, Choi had gone through a bitter public divorce and had battled depression for several years. Choi's death was a painful reminder that South Korea had one of the highest suicide rates in the world. Earlier in the year, an arsonist destroyed a top national treasure, the 600-year-old Great South Gate (Namdaemun). Authorities vowed to rebuild it. On a brighter note, at the Olympics South Korea won a record number of gold medals (13) and placed seventh overall in the medal count, exceeding all expectations.

(PETER M. BECK)

KOSOVO

Area: 10,908 sq km (4,212 sq mi)
Population (2008 est.): 2,143,000
Capital: Pristina
Chief of state: President Fatmir Sejdiu
Head of government: Prime Minister Hashim Thaci

On Feb. 17, 2008, Kosovo formally declared its independence from Serbia.

Just a month earlier (on January 9), Hashim Thaci (*see* BIOGRAPHIES) had been elected prime minister by a majority vote in the parliament. The United Nations Mission in Kosovo reported that there was progress in the development of viable government institutions and that Kosovo was consistent in reaching international standards with regard to human and minority rights. Though major violence was avoided, divisions between the majority Albanians and minority Serbs widened. Despite opposition by Kosovo's leaders, Serbs advocated the partition of the country. Most of the tension centred on the ethnically divided northern town of Mitrovica, where Serbia's influence on Kosovo's Serbs remained significant. In May Serbia organized elections in Kosovo that established parallel municipal authorities in Serb areas.

The country's constitution also ensured the rights and freedoms of minorities, including the Serbs, living in Kosovo. A report by the EU noted, however, that legislation adopted to deal with cultural and minority rights required more "effective monitoring" and that the rights of women and children were only "partially guaranteed." A report by the Organization for Security and Co-operation in Europe stated that about one-third of the roughly 40,000 Roma (Gypsies), Ashkali, and Egyptians residing in Kosovo were prevented from voting and that they were widely underrepresented in Kosovo's government.

Encyclopædia Britannica, Inc.

This map illustrates the ethnic distribution in newly independent Kosovo.

Organized crime, drug trafficking, and a thriving black market continued to be chief concerns amid an unemployment rate of more than 40%. For those under age 25, who accounted for about 50% of the population, unemployment was approximately 60%. Kosovo's per capita income remained among the lowest in Europe; the average monthly wage stood at about €185–€210 (€1 = about $1.40). In July an international donors conference pledged €1.2 billion in aid to help rebuild Kosovo's economy.

By year's end, 53 countries (including all of the neighbouring states except Serbia) recognized Kosovo's independence. In October the UN agreed to ask the International Court of Justice (ICJ) for a nonbinding advisory opinion on the legality of Kosovo's declaration of independence from Serbia. The ICJ was expected to respond by mid-2009.

(MILAN ANDREJEVICH)

Kosovars of Albanian ethnicity wear traditional costumes as they wave U.S. and Albanian flags to celebrate Kosovo's formal declaration of independence from Serbia on February 17.

Bela Szandelszky/AP

KUWAIT

Area: 17,818 sq km (6,880 sq mi)
Population (2008 est.): 3,530,000
Capital: Kuwait
Head of state and government: Emir Sheikh Sabah al-Ahmad al-Jabir al-Sabah, assisted by Prime Minister Sheikh Nassar Muhammad al-Ahmad al-Sabah

Relations between the Kuwaiti government and the parliament continued to deteriorate in 2008, with the latter insisting on more government accountability. This tension led to the dissolution of the parliament by Emir Sheikh Sabah al-Ahmad al-Jabir al-Sabah and a new general election, held on May 17. The opposition, composed of Islamists, liberals, and nationalists—scored a resounding victory, winning 33 of 50 seats. Women failed to gain representation, which indicated that Kuwait was still a conservative Islamic society.

The elections, however, failed to quell concerns in the National Assembly about the way in which the government was handling the development of the economy and presumed irregularities in the construction and financing of a gigantic new oil refinery. More important, some deputies insisted on calling Prime Minister Sheikh Nassar Muhammad al-Ahmad al-Sabah before the parliament for questioning.

Declining economic conditions in Kuwait for foreign workers, who made up two-thirds of the population, led in July to a strike by hundreds of them. Disturbances continued for three days, resulting in clashes with the security

force and the deportation of hundreds of workers (mainly Bengalis). In an attempt to address the problem, the government announced plans to raise the workers' minimum wage, revise work contracts, and improve living conditions. Kuwaiti nationals also protested the rise in food and commodity prices. In response, the government twice increased the salaries of Kuwaitis working in the public sector by 170 Kuwaiti dinars (about $643). In other news, on May 13 Sheikh Saad al-Abdullah al-Salim al-Sabah, ruler of Kuwait for a short period (Jan. 15–29, 2006), passed away. (*See* OBITUARIES.)

Relations between Kuwait and Iraq saw a noticeable improvement during the year. On July 18 Kuwait announced the appointment of an ambassador in Baghdad, the first since Iraq's 1991 invasion of Kuwait. Kuwait had not yet forgiven Iraqi debts estimated at $16 billion–$17 billion, and at the popular level, bitterness between the Kuwaiti and Iraqi people continued to exist.

(LOUAY BAHRY)

KYRGYZSTAN

Area: 199,900 sq km (77,182 sq mi)
Population (2008 est.): 5,281,000
Capital: Bishkek
Head of state: President Kurmanbek Bakiyev
Head of government (appointed by the president): Prime Minister Igor Chudinov

Despite large amounts of international assistance to the development of its economy, Kyrgyzstan continued in 2008 to flounder both politically and economically. According to the country's National Statistical Committee, by September more than $1 billion had been poured into Kyrgyzstan in the form of foreign investment and grants. Increasing numbers of Kyrgyzstani citizens were searching for work abroad, and in February the National Migration Agency reported that 250,000 Kyrgyz were employed in Russia—a figure that did not include the number working in Kazakhstan and other neighbouring countries. The World Bank noted that remittances from labour migrants made up 37% of Kyrgyzstan's GDP.

Popular dissatisfaction with life in Kyrgyzstan was exacerbated by the perception that the "Tulip Revolution" of 2005 had led to worse conditions rather than to an improvement in any area of life. Despite government commitments to fighting corruption, little was achieved in practice, and Pres. Kurmanbek Bakiyev continued to appoint his relatives to prominent posts. In January, Miroslav Niyazov, former head of the National Security Council, warned that the security situation in the country was deteriorating because the opposition had no legal means of political struggle, there was a growing distrust of the authorities in the population at large, steep rises in the price of basic commodities were worsening social vulnerability, and religious extremism was increasing.

Throughout the year the fragmented political opposition appeared to agree on one issue—the need to remove President Bakiyev. In June, Bakiyev signed legislation that mandated that the broadcast media (which had asked him to veto the bill on the grounds that it violated the country's democratic policies) produce at least 60% of the programming in Kyrgyzstan. Opponents warned that the legislation flouted the rights of viewers to choose what they wanted to watch or hear.

In January and February, Kyrgyzstan, along with the rest of Central Asia, experienced the coldest winter in decades. While the consequences were not as severe as in neighbouring Tajikistan, fears for the 2008–09 winter mounted, especially as an unusually dry summer reduced the amount of water that could be stored for winter power generation. Inhabitants of Kyrgyzstan were warned to expect major power shortages that might result in the closure of the country's hospitals. In September, in an effort to save resources for winter, Minister of Energy Saparbek Balkibekov proposed a cutback in the supply of electricity to 14 hours daily.

(BESS BROWN)

LAOS

Area: 236,800 sq km (91,429 sq mi)
Population (2008 est.): 5,963,000
Capital: Vientiane
Chief of state: President Choummaly Sayasone
Head of government: Prime Minister Bouasone Bouphavanh

Laos, which spent much of 2008 preparing to host the 2009 Southeast Asian Games, saw the event as heralding the country's further integration into the group of Southeast Asian countries. The regime's desire for regional recognition, however, bore a cost that the country could not manage alone. Thus, in exchange for a 50-year concession of 1,640 ha (4,052 ac) of wetland in the north of the capital, a Chinese-led joint venture agreed to build a sports complex on the outskirts of Vientiane in preparation for the Games. This agreement between the government and Chinese investors was received very poorly by the population living in the capital; residents of the affected area, as well as some Lao officials, expressed their concerns over the Chinese plans to construct a residential, commercial, and industrial complex that would be located in close proximity to That Luang, the Buddhist monument that was the country's national symbol. Faced with public discontent—relayed and amplified by foreign nongovernmental organizations and media—Deputy Prime Minister Somsavat Lengsavad gave a rare news conference in February in an attempt to clarify the terms of the agreement. Although work had yet to begin on That Luang marsh, the size of the area also became unclear (some unofficial reports indicated that the area had been reduced to 200–1,000 ha (about 494–2,471 ac).

Land concessions had emerged as a serious and complex issue over the past few years in Laos. Though such concessions officially involved long-term leases of state land to investors, they often covered village lands, owing to poorly defined and enforced regulations governing land rights. The most controversial aspect of land concessions concerned the lease of vast areas of cultivable land to foreign investors (mainly from Vietnam, Thailand, and China) for the commercial production of crops (notably rubber and cassava). Violent protests in early 2007 involving villagers in Salavan and Champasak provinces, whose lands and crops had been encroached upon by a commercial tree plantation, resulted in the government's proclaiming (May 9, 2007) an indefinite moratorium on large land concessions for industrial trees, perennial plants, and mining. This unprecedented decision might help to slow down the development of large-scale commercial agricultural schemes and to lessen their impacts on farmers'

livelihoods; it was unlikely, however, that the government would cease to pursue its strategy of attracting foreign investment by facilitating access to the country's "unexploited" natural resources. (VATTHANA PHOLSENA)

LATVIA

Area: 64,589 sq km (24,938 sq mi)
Population (2008 est.): 2,266,000
Capital: Riga
Chief of state: President Valdis Zatlers
Head of government: Prime Minister Ivars Godmanis

Domestically 2008 was a year of discontent in Latvia, as evidenced by demonstrations, referenda, and strikes, especially in the autumn. Dissatisfied with the performance of the parliament, the public demanded that the constitution be amended to facilitate the holding of early elections.

In 2008 Latvia's economy, which had enjoyed a GDP growth of 10.3% in 2007, was indirectly affected by the international financial crises and contracted to a trickle. Though the government of Prime Minister Ivars Godmanis could not curb inflation of 16.5% (compared with 6.5% in 2006 and 10.1% in 2007), prevent the 30–40% rise in the cost of natural gas and electricity, and keep earlier promises to raise pensions and the salaries of medical personnel and the police, it remained in power. By November the economy had contracted so severely that the parliament approved the much-criticized budget for 2009 that had been proposed by Godmanis and asked the IMF for financial assistance. A broader perspective on the country's current concerns was provided by the numerous festivities marking the 90th anniversary of Latvia's proclamation of independence.

In the realm of foreign affairs, Latvia deplored Russia's invasion of Georgia; Riga increased its assistance to that country and supported the EU's peace-fostering efforts there. The invasion of Georgia also raised security concerns in the Baltic states. Undeterred by Moscow's criticism of Latvia's stand on Georgia and Russia's delays in arranging the visit of Pres. Valdis Zatlers to Moscow, Riga focused on forging specific bilateral agreements with Russia. Latvia remained concerned about Russia's power politics abroad, not only militarily but also economically, as shown by Moscow's use of energy resources to obtain concessions abroad. These factors influenced Latvia to opt for the construction of a new electrical power plant that would use coal and biomass, rather than gas, which would have to be imported from Russia. Energy and trade were also the principal topics on the agenda when President Zatlers made official visits in October to Kazakhstan, Uzbekistan, and Turkmenistan. Latvians welcomed the news on October 17 that they would enjoy visa-free travel to the U.S.

(DZINTRA BUNGS)

In December Latvians protest against the increase in the country's standard value added tax (VAT) from 18% to 21%. The new rate was to go into effect on Jan. 1, 2009.

Ilmars Znotins—AFP/Getty Images

LEBANON

Area: 10,400 sq km (4,016 sq mi)
Population (2008 est.): 4,142,000 (including registered Palestinian refugees estimated to number about 400,000)
Capital: Beirut
Chief of state: Presidents Fouad Siniora (acting) and, from May 25, Michel Suleiman
Head of government: Prime Minister Fouad Siniora

On May 25, 2008, following an 18-month political standoff between various Lebanese factions and a brush with civil war between the Sunnis and the Shi'ites two weeks earlier, a new president was elected in Lebanon. Gen. Michel Suleiman, who was considered a consensus candidate, won 118 of the 128 parliamentary votes. The election of a new president was made possible by the Qatari-brokered Doha accord, which entailed important concessions on the part of the pro-Saudi, pro-Western Sunni-dominated government whereby the majority consented to turn a blind eye toward Hezbollah arms stockpiles and agreed to give veto power to the opposition. They also gave the Christian opposition, through a reenactment of the 1960 electoral law, the political strength to elect their own representatives without the need to enlist the votes of the Muslims. Ironically, the Christian opposition (led by Gen. Michel Aoun) cemented its alliance with the Hezbollah-Iran-Syria axis, while the Christian loyalists continued to be part of the March 14 movement, which comprised political organizations—including the Future Movement (led by Sunni leader Saad al-Hariri)—

Hussein Malla/AP

Gen. Michel Suleiman was sworn in as president of Lebanon on May 25.

opposed to a Syrian presence in Lebanon and which had good relations with Saudi Arabia and the U.S.

After the cabinet tried in March to assert its authority in security affairs, Hezbollah launched a militia-type attack in Beirut on the Future Movement offices and strongholds. The clashes ended with Hezbollah having the upper hand and the army standing idle. This was reflected later in the political arena when Hezbollah secured veto power in the cabinet and effectively controlled all major decisions. In August, Israel threatened to target "the entire Lebanese state, including Lebanese cities" in another war if greater legitimacy was given to Hezbollah. Nevertheless, a month earlier Israel and Hezbollah had participated in a prisoner-of-war exchange.

The security situation remained unstable, especially in the north of the country. Though Syria hinted at a possible military intervention in that area, major powers, including the U.S. and France, warned against any such move. A visit in August by President Suleiman to Damascus resulted in an agreement to establish diplomatic relations between the two countries. All other outstanding issues (i.e., political, economic, border demarcations, and humanitarian relations) were referred to joint committees. Syria was expected to regain part of its influence in Lebanon owing to the West's recognition of its regional role. Suleiman also visited the UN and Washington, D.C., but he was disappointed that Washington did not give a definite promise to rearm the Lebanese army with technologically advanced weapons, which would keep Hezbollah in a more powerful position than the army.

The political bickering took a heavy toll on the Lebanese economy. The gross national debt reached $43.2 billion after the first quarter of the year. The economy also relied more heavily on remittances from Lebanese working in the Arab Gulf states, Africa, or the U.S. The balance of trade was negatively affected because of the international rise in the prices of imported food and oil. In addition, the gap in electricity production and subsidies to this economically and politically important sector drained $2 billion annually from the Lebanese budget. On the positive side, the summer season proved very good for the economy. About 1.6 million visitors arrived in Lebanon; hotel occupancy rates neared 100%; and tourism was expected to generate $4.43 billion in direct and indirect revenue. There was a 26% rise in construction activity, but inflation pushed the government to increase the minimum wage by two-thirds. Lebanon, however, was one of the few countries that was not negatively affected by the worldwide financial crisis that occurred in October 2008.

(MAHMOUD HADDAD)

LESOTHO

Area: 30,355 sq km (11,720 sq mi)
Population (2008 est.): 2,020,000
Capital: Maseru
Chief of state: King Letsie III
Head of government: Prime Minister Bethuel Pakalitha Mosisili

In the Lesotho drought of 2007, one of the worst on record, some 400,000 people needed food aid, and when by September 2008 there was again no sign of rain, another humanitarian crisis was feared. More than 70% of Lesotho's food was imported, and the steep rise in food and fuel costs put food out of the reach of many. In the period March 2007–mid-2008, the price of the national staple, corn (maize), increased by more than 50%, and cooking oil climbed by more than 100%. The World Food Programme provided free meals to more than 80,000 children at primary school, especially in the rural, mostly mountainous, interior, but a survey carried out by the government and UNICEF in December 2007 found that half the children in the Thaba-Tseka district were chronically malnourished. Most Basotho depended on family members working in towns or in South Africa to send money for their support.

While Lesotho citizens were not particularly targeted in the outbreak of xenophobic violence in South Africa in early 2008, the outbreak aroused much concern in Lesotho. The country's HIV prevalence rate of 23.2% remained one of the world's highest; life expectancy fell to only 35 years; and more than 100,000 children had been orphaned by AIDS. The World Bank forecast a reduction in Lesotho's GDP by almost one-third by 2015 as a result of HIV/AIDS. On a brighter note, it was announced in September 2008 that one of the largest diamonds ever found had been discovered at the Letseng mine. In addition, after years of delay the feasibility study on the second phase of the giant Lesotho Highlands Water Project was finally completed.

(CHRISTOPHER SAUNDERS)

LIBERIA

Area: 97,754 sq km (37,743 sq mi)
Population (2008 est.): 3,543,000
Capital: Monrovia
Head of state and government: President Ellen Johnson-Sirleaf

Liberia's socioeconomic development achieved limited progress in 2008. The country ranked among the least developed in the world; almost 80% of the population lived below the national poverty line; unemployment stood at 80%; life expectancy was only 42 years; and electricity and potable water were in short supply. Widespread poverty and endemic corruption, coupled with political instability in neighbouring Guinea and Côte d'Ivoire, threatened national security. Consequently, the

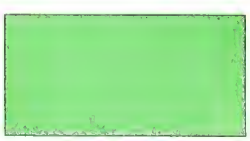
mandate of the UN Mission in Liberia (UNMIL) was extended to September 2009, retaining a force of about 13,000 peacekeepers in the country.

On February 21, U.S. Pres. George W. Bush ended his five-country, six-day tour of Africa in Liberia; he was the third U.S. president to visit. Although government officials warmly welcomed him, many Liberians harboured deep resentment that the United States had ignored their plight during the 1989–2003 civil war. They also called for "more trade, less aid." Disregarding widespread suspicion at home and on the continent about U.S. expansion in Africa, the Liberian government expressed its willingness to host the headquarters of the new and controversial U.S. Africa Command (AFRICOM).

In January 2008 the Truth and Reconciliation Commission, established to investigate war crimes committed during the civil war, began proceedings. Modeled on South Africa's postapartheid body, the seven-member commission heard testimony from people around the country, including gruesome accounts of shattered lives, child-soldier recruitment, severed limbs, and rape. Former rebel commander Milton Blahyi (also known as General Butt-Naked) testified about taking part in human sacrifices. Meanwhile, international attention turned to two important war crimes trials: the first was that of former president Gen. Charles Taylor in The Hague, and the second was that of his son Charles (Chuckie) Taylor, Jr., in the United States, which in October resulted in a conviction on charges of torture and related war crimes; sentencing was set for January 2009.

(LARAY DENZER)

LIBYA



Area: 1,759,540 sq km (679,362 sq mi)
Population (2008 est.): 5,871,000
Capital: Tripoli (policy-making body intermittently meets in Surt)
Chief of state: (de facto) Col. Muammar al-Qaddafi; (nominal) Secretaries of the General People's Congress Zentani Muhammad al-Zentani and, from March 3, Muftah Muhammad Kaiba
Head of government: Secretary of the General People's Committee (Prime Minister) Al-Baghdadi Ali al-Mahmudi

Mahmud Turkia—AFP/Getty Images

Libyan leader Col. Muammar al-Qaddafi (right) poses with Italian Prime Minister Silvio Berlusconi during the latter's official visit to Libya in August.

Five years of fence mending between Libya and Western countries culminated in a visit to Tripoli in September 2008 by U.S. Secretary of State Condoleezza Rice—the first direct contact by a high-ranking U.S. official since 1957, when Vice Pres. Richard M. Nixon visited the country. Rice's trip marked a major thaw in relations between the two countries and paved the way for trade and investment by American corporations, particularly in the energy sector, and negotiations for U.S. arms deals. Although in late October Libya completed the compensation payments to the families of the victims of the December 1988 Pan Am disaster over Lockerbie, Scot., the moneys due to the families of the victims of the 1986 Berlin disco bombing, for which Libya took responsibility, were yet to be paid. The U.S. Congress blocked the establishment of formal diplomatic relations and the exchange of ambassadors until this had been settled. Libya's record of human rights and persecution of dissidents also remained contentious.

During his August visit to Libya, Italian Prime Minister Silvio Berlusconi offered a formal apology for Italy's years of colonial rule as well as $5 billion in compensation for having occupied (1911–43) the country. In return for this, Italy was expected to receive favourable concessions in the energy sector and cooperation by Libyan authorities in combating illegal boat immigrants who sailed from Libyan territorial waters.

Despite differences with Egypt over French Pres. Nicolas Sarkozy's proposed Union for the Mediterranean, Libya maintained warm relations with Cairo. Libyan leader Col. Muammar al-Qaddafi opposed the proposal because it conflicted with both Arab and African unity, but Egypt agreed to chair the southern Mediterranean coalition of the partnership. During talks in July and September with Pres. Hosni Mubarak, Qaddafi discussed bilateral, Arab, and African relations. An announcement revealed that Libya was to pump $10 billion into Egyptian industrial, commercial, and agricultural projects. In a goodwill gesture, Libya released 128 Egyptians who had been serving jail sentences for various criminal offenses.

(AYMAN M. EL-AMIR)

LIECHTENSTEIN

Area: 160 sq km (62 sq mi)
Population (2008 est.): 35,500
Capital: Vaduz
Chief of state: Prince Hans Adam II
Head of government: Otmar Hasler

Even prior to the global banking crisis in 2008, Liechtenstein found itself in trouble with its own banking practices. In February German prosecutors investigating the giant Swiss bank UBS AG uncovered ties with LGT Group, the bank owned by the Liechtenstein royal family. The probe began when a former bank clerk at LGT, Heinrich Kieber, offered Germany's Federal Intelligence Service a CD-ROM with data on German clients who held secret accounts at the Liechtenstein bank as part of a cross-border tax-evasion scheme. Money smuggled out of Germany was used to set up Liechtenstein-based foundations, which were taxed very lightly and were allowed to disburse money to founders and their family members. The foundations could then open bank accounts outside Liechtenstein, where

owners could gain access to the moneys without paying German taxes. Liechtenstein's banking-secrecy laws prevented tracing the owners of the foundations.

Although Liechtenstein charged that Kieber had stolen the data while he was an LGT employee, German Finance Minister Peer Steinbrück paid some €5 million (about $7.3 million) for the disk. The scandal spread as Kieber was said to have sold three CDs containing names and account data to tax authorities in 12 countries, including the U.K., France, Italy, and the U.S. In July the U.S. Senate's Permanent Subcommittee on Investigations opened hearings on the probe of U.S. citizens holding these secret accounts. Liechtenstein claimed a violation of its sovereignty and argued that it was moving toward greater cooperation with investigators.

(ANNE ROBY)

LITHUANIA

Area: 65,300 sq km (25,212 sq mi)
Population (2008 est.): 3,358,000
Capital: Vilnius
Chief of state: President Valdas Adamkus
Head of government: Prime Minister Gediminas Kirkilas and, from December 9, Andrius Kubilius

Lithuania encouraged international support for Georgia following the Aug. 8, 2008, incursion into that country by Russian troops. On August 13, Lithuanian Pres. Valdas Adamkus traveled to Tbilisi—together with Estonian Pres. Toomas Hendrik Ilves, Latvian Prime Minister Ivars Godmanis, and Polish Pres. Lech Kaczynski—to support Georgia's democratically elected president. In their joint declaration, the leaders unconditionally supported Georgia's territorial integrity, demanded the withdrawal of the Russian troops, and suggested that the NATO Membership Action Plan be offered to Georgia.

After Russia declared that the Baltic states would pay for their support of Georgia, Lithuanian Foreign Minister Petras Vaitiekunas emphasized the seriousness of the threat. On September 29, President Adamkus met in Washington, D.C., with U.S. Pres. George W. Bush, who reiterated the U.S. commitment to invoke Article V of NATO's charter, proclaiming that the assaults against one member constituted an attack on all member states. In October, Adm. Michael G. Mullen, the U.S. chairman of the Joint Chiefs of Staff, reassured the Baltic countries that they could rely on NATO in the advent of a Russian attack.

The October 12 general election was followed by a runoff on October 26. In the parliamentary balloting, the opposition Homeland Union (TS) took 45 seats, followed by the Lithuanian Social Democratic Party (25); the National Revival Party (16), founded in 2007 by television quiz-show host Arunas Valinskas; the For Order and Justice Party (15); the Liberal Movement (11); the coalition of the Labour Party and Youth (10); the Liberal and Centre Union (8); the Union of Peasants and People (3); Lithuanian Poles' Electoral Action (3); New Union (1); and 4 independent candidates. The TS, led by former prime minister Andrius Kubilius, agreed to form a centre-right coalition with both Liberal parties and the National Revival Party.

Despite the slowdown in the global economy, GDP growth in Lithuania was 3.1% in the third quarter compared with the same period of the previous year. On Jan. 1, 2008, foreign direct investment reached nearly $15 billion, and it was up to nearly $16 billion on July 1.

(DARIUS FURMONAVIČIUS)

LUXEMBOURG

Area: 2,586 sq km (999 sq mi)
Population (2008 est.): 488,000
Capital: Luxembourg
Chief of state: Grand Duke Henri
Head of government: Prime Minister Jean-Claude Juncker

Luxembourg's diversified economy continued to provide an extraordinarily high standard of living in 2008, with a GDP per capita ranked second in the world, after Qatar. Although the meltdown in the world's financial markets was expected to slow the rate of growth of Luxembourg's economy during the year, its growth was still projected to continue above the European average.

With most of the country's banks foreign owned, Luxembourg was spared the brunt of the global crisis in banking. Instead, the country was able to help prop up some failing institutions. On September 28 Belgium, Luxembourg, and The Netherlands pumped €11.2 billion (€1 = about $1.40) into the Benelux banking group Fortis NV and agreed to nationalize 49% of the bank's operations within each respective country. Two days later Luxembourg joined with Belgium and France to inject almost €6.4 billion into the French-Belgian banking group Dexia, which had seen its U.S. bond insurer FSA suffer amid the collapsing U.S. mortgage market. After French Pres. Nicolas Sarkozy called for Luxembourg's support for a structural reform of global finances, Prime Minister Jean-Claude Juncker responded that Luxembourg "will not give up its banking secrecy tomorrow morning, but we will take part in any discussions on improving transparency on financial markets."

(ANNE ROBY)

MACEDONIA

Area: 25,713 sq km (9,928 sq mi)
Population (2008 est.): 2,039,000
Capital: Skopje
Chief of state: President Branko Crvenkovski
Head of government: Prime Minister Nikola Gruevski

Macedonia's bid to join NATO was vetoed on April 2, 2008, by Greece during the alliance's summit meeting in Bucharest, Rom. Prior to the summit, a round of intense UN-mediated talks between Skopje and Athens over Macedonia's name had failed to produce any results. Though talks continued later in 2008, both sides stuck to their previous positions.

In March the Democratic Party of Albanians (DPA/PDSh) left the government to protest the refusal of the main ruling party, the Internal Macedonian Revolutionary Organization–Democratic Party for Macedonian National Unity (VMRO-DPMNE), to recognize Kosovo's independence and to demonstrate disagreement on interethnic issues; this left the government without a parliamentary majority. On April 12 the parliament voted to dissolve itself and called new elections.

Ognen Teofilovski—Reuters/Landov

Prime Minister Nikola Gruevski of Macedonia salutes his supporters at a parliamentary election rally in May.

In the June 1 elections, the VMRO-DPMNE of Prime Minister Nikola Gruevski allied with 18 small parties and emerged as the victor by capturing 47% of the vote and winning 63 of the 120 seats in the new parliament. The Sun Coalition for Europe, led by the Social Democratic Union of Macedonia (SDSM), received 23% of the vote and 27 seats. Among the ethnic-Albanian parties, the Democratic Union for Integration (DUI/BDI) won 12% and 18 seats, and the DPA/PDSh captured 8% and 11 seats. One seat went to the Party for a European Future (PEI). Election day was overshadowed by violence in ethnic-Albanian areas, which left one person dead. As a result of the violence and other irregularities, the polls were partially invalidated, and repeat elections were held on June 15 in 187 precincts. Another round of balloting was held on June 29 in 15 precincts where the June 1 and June 15 rounds were invalidated. On October 20, nine ethnic Albanians were sentenced to terms of between five and six and a half years in prison for their role in the violent incidents.

On July 4, Gruevski and DUI/BDI leader Ali Ahmeti reached an agreement to form a coalition government that would also include the PEI. On July 11, Gruevski presented his new government to the parliament, which approved it without debate, owing to a temporary boycott by the SDSM and the PDSh.

On July 17, Pres. Branko Crvenkovski (of the SDSM) announced that he would not seek another term in 2009, citing disagreement with the government on many policy issues. In September the SDSM held its eighth party congress, at which Radmila Sekerinska was replaced as party leader. Strumica Mayor Zoran Zaev was elected acting party chairperson until May 2009, when Crvenkovski's presidential term ended. Although Zaev was arrested in the summer of 2008 on charges of having misappropriated €8 million (about $10.1 million) in public funds, Crvenkovski pardoned him.

On July 10 the International Criminal Tribunal for the Former Yugoslavia acquitted former interior minister Ljube Boskovski of having taken part in war crimes during the 2001 interethnic conflict. His co-defendant, former police officer Johan Tarculovski, was found guilty and sentenced to 12 years' imprisonment.

Macedonia's GDP was expected to grow about 5% in 2008. Inflation, however, was expected to rise to 7%, and unemployment was anticipated to remain high. In November the European Commission noted progress in some areas in Macedonia, but did not give the green light for the start of EU accession talks.

On December 9, former prime minister Vlado Buckovski and former chief of staff Metodi Stamboliski were sentenced to three and a half years in prison for abuse of power and corruption. Nikola Kljusev, who was Macedonia's first postindependence prime minister (Jan. 27, 1991–Aug. 17, 1992), died on January 16 at the age of 80.

(STEFAN KRAUSE)

MADAGASCAR

Area: 587,051 sq km (226,662 sq mi)
Population (2008 est.): 20,215,000
Capital: Antananarivo
Chief of state and head of government: President Marc Ravalomanana, assisted by Prime Minister Charles Rabemananjara

Though the cyclones that hit the northern part of Madagascar in February 2008 did not do as much damage as the particularly severe ones of the previous year, hundreds of thousands of people were left without homes, and much of the harvest in the areas affected was

On March 18, a month after the area was devastated by Cyclone Ivan, residents of Ambahohabe, Madag., push a bush taxi across the river where a bridge used to stand.

Jasleen Sethi—Reuters/Landov

destroyed. The south of the island suffered severe drought, and the steep rise in food and fuel prices in 2008 brought further hardship to many. Rice was the country's main crop, and Madagascar had the potential to meet its needs, but more than 200,000 tons were imported—at relatively high prices. The World Bank aided the government to try to boost local production of rice above the current 3.5 million metric tons and to diversify agricultural production, especially by growing sorghum in the south. Madagascar was the world's main supplier of vanilla and accounted for roughly two-thirds of global production.

The government's poverty-reduction strategy, the Madagascar Action Plan, aimed to reduce the proportion of people living on less than $2 a day to 50%. In 2008 it was estimated that 85% of the population of 20 million still fell into that category and that half of all children below the age of five suffered from chronic malnutrition.

(CHRISTOPHER SAUNDERS)

MALAWI

Area: 118,484 sq km (45,747 sq mi)
Population (2008 est.): 13,932,000
Capital: Lilongwe; judiciary meets in Blantyre
Head of state and government: President Bingu wa Mutharika

At the beginning of 2008, heavy rains and floods, which destroyed homes and crops in the 14 affected districts in Malawi, also aroused fears of food shortages. The government's assurances that there were adequate reserves from previous years failed to silence criticisms of the export in 2007 of 300,000 metric tons of corn (maize) to Zimbabwe. The food-shortage fears, however, eventually proved unfounded. The government's distribution of subsidized seed and fertilizers was so effective that it even became possible to export some of the surplus grain.

There was concern, nevertheless, over the harassment of several journalists by police in March and the arrest in May of four opposition officials accused of having plotted to overthrow Pres. Bingu wa Mutharika. The situation became sufficiently strained for the country's Roman Catholic bishops to issue a pastoral letter on May 11, calling upon all involved to create a peaceful atmosphere in order to ensure that the next elections would be free and fair.

The signing on May 12 of a memorandum of understanding with China was accompanied by a promise of generous Chinese aid; there were some misgivings, however, concerning Chinese business practices. Also offering assistance were the EU (in May) and the Commonwealth Business Council (in July).

(KENNETH INGHAM)

MALAYSIA

Area: 329,876 sq km (127,366 sq mi)
Population (2008 est.): 27,027,000
Capital: Kuala Lumpur; administrative centre, Putrajaya
Chief of state: *Yang di-Pertuan Agong* (Paramount Ruler) Tuanku Mizan Zainal Abidin ibni al-Marhum Sultan Mahmud
Head of government: Prime Minister Datuk Seri Abdullah Ahmad Badawi

For the first time since Malaysia became independent in 1957, the governing National Front (BN) coalition faced the prospect of losing power in 2008. Voters' frustration with Prime Minister Abdullah Badawi's failure to address ethnic tensions, corruption in the government and judiciary, and economic weaknesses led to unprecedented losses for the BN in general elections in March. The People's Alliance, an opposition coalition led by Anwar bin Ibrahim (*see* BIOGRAPHIES), a former deputy prime minister (1993–98), won control of 5 of Malaysia's 13 states and broke the BN's two-thirds majority in the parliament, an advantage that for 34 years had empowered the governing coalition to alter the country's constitution at will. In August, Anwar himself easily won election to the parliament. With support for Abdullah evaporating, Anwar recruited defectors among the BN's parliamentary bloc, and on September 18 he called for a no-confidence vote. Although Abdullah refused to reconvene the parliament, then in recess, he was forced to acknowledge growing opposition from within his own party, the United Malays National Organization (UMNO). On October 8 Abdullah announced that he would not defend the presidency of UMNO, the traditional stepping-stone to the prime ministry, in party elections in March 2009. In early November 2008, Deputy Prime Minister Najib Razak secured the party presidency by winning endorsements from a large majority of UMNO's 191 branches, which thus paved the way for his succession as prime minister.

The volatile political situation effectively immobilized a government enervated by scandal and corruption. A sen-

Malaysian opposition leader Anwar bin Ibrahim (right) chats with his wife, Wan Azizah Wan Ismail, at the People's Justice Party (PKR) conference on November 29. Wan Azizah led the PKR in the 2008 parliamentary elections and then relinquished her seat to her husband.

Zainal Abd Halim—Reuters/Landov

sational murder trial involving an aide to Razak was a continuing distraction. In late September the detention of a prominent political blogger under the country's controversial Internal Security Act was widely criticized as an attempt to stifle dissent. Previously, the government had shut down the popular opposition Web site Malaysia Today. In its January report, Human Rights Watch criticized the government's failure to investigate abuses allegedly committed by members of RELA, a large, poorly regulated paramilitary force employed by the government to help control illegal immigration.

Malaysia's economy continued its strong growth, with GDP growth of 6.7% during the first half of 2008. The country benefited from surging fuel prices, with the value of its palm-oil and crude-petroleum exports increasing by more than 50%. Overall, export values for the same period were up 17% from 2007, with electrical and electronic products leading the way. For the remainder of the year, however, economic reports were more sobering. Inflation, already on the rise, soared to 8.5% in July, the highest level in 27 years. Analysts attributed the spike to a 40% reduction in government fuel subsidies in June. In September palm-oil exports fell by almost 20%, prompting fears of a stock buildup. In early October, following the string of collapses in the U.S. on Wall Street, government officials expressed confidence that Malaysia would withstand the spreading financial crisis, but analysts warned that the impact on the country's crucial Asian export markets could have severe repercussions. (JANET MOREDOCK)

MALDIVES

Area: 298 sq km (115 sq mi)
Population (2008 est.): 309,575, excluding 76,425 foreign workers employed on the resort islands
Capital: Male
Head of state and government: Presidents Maumoon Abdul Gayoom and, from November 11, Mohamed Nasheed

The adoption in August 2008 of a liberal democratic constitution marked the beginning of a remarkable political

Sinan Hussain/AP

Mohamed Nasheed, the first democratically elected president of Maldives, addresses the press after his inauguration on November 11.

change in Maldives, which on October 8 held multiparty elections for the first time in its history. Observers from the UN, the Commonwealth of Nations, and the EU monitored the balloting, in which voter turnout was registered at about 86%. A runoff poll was held on October 28, however, after none of the six candidates secured the required 50% of the vote to win. The two candidates who secured the highest percentage of the vote in the first round—incumbent Pres. Maumoon Abdul Gayoom of the Maldive People's Party (41%) and Mohamed Nasheed of the Maldivian Democratic Party (25%)—contested the second poll. In that race Nasheed, supported by the opposition, emerged victorious with 54% of the vote; President Gayoom's defeat signified the end of his 30-year rule and heralded a new era in Maldivian politics. Nasheed was inaugurated on November 11. The constitution also fixed a maximum of two five-year terms for candidates seeking election to the presidency, strengthened the People's Majlis (parliament), and ensured the independence of the judiciary.

In December the administration of President Nasheed announced that it had initiated work toward the introduction of decentralized administration in the atolls and that it planned to establish a ferry network to connect all the country's islands. The government also intended to end import duties on essential foodstuffs and to provide a stipend to the elderly.

(PONMONI SAHADEVAN)

MALI

Area: 1,248,574 sq km (482,077 sq mi)
Population (2008 est.): 12,324,000
Capital: Bamako
Chief of state: President Amadou Toumani Touré
Head of government: Prime Minister Modibo Sidibé

Efforts to resolve the ongoing Tuareg rebellion in the deserts of northern Mali met with mixed success in 2008. On March 7, Tuaregs led by Ibrahim Ag Bahanga released the last 22 hostages captured in August 2007. Two weeks later Tuaregs attacked a military convoy, taking at least 30 soldiers hostage and capturing eight vehicles. Libyan mediators intervened, and on April 4 a cease-fire was signed. The rebels agreed to release the hostages in return for a reduction in the number of Malian troops stationed in the area. On May 21 the truce was broken when rebels attacked an army post in Abeibara, just south of the Algerian border. Seventeen rebels and 10 soldiers were killed in the daylong fighting, with at least 30 others wounded. Each side accused the other of breaking the April 4 pact. Intense negotiations brokered by Libya resulted in the release on September 9 of 44 soldiers. The government freed all of its rebel prisoners in the hope that a lasting peace treaty would be reached. The conflict in the north led to a vast increase in the illegal-weapons trade.

In January a gunfight between customs officers and smugglers resulted in the seizure of 750 kg (1,650 lb) of cocaine. In June the High Islamic Council of Mali expressed strong opposition to a pending parliamentary bill abolishing the death penalty, stating that such a law was against Islamic principles.

Secondary-school teachers struck for seven months, refusing to grade any examinations. This left the prospect of a school year for which no credit would be awarded, although students continued to prepare to take the June baccalaureate. On July 10, as the Group of Eight meeting in Japan ended, the seventh annual People's Forum closed in Bamako, issuing a proclamation demanding the end of privatization in Mali and an end to government corruption. (NANCY ELLEN LAWLER)

MALTA

Area: 316 sq km (122 sq mi)
Population (2008 est.): 412,000
Capital: Valletta
Chief of state: President Eddie Fenech Adami
Head of government: Prime Minister Lawrence Gonzi

In Malta's general election held in March 2008, the Nationalist Party remained in power after ruling for 10 consecutive years and most of the past 20 years. The victory margin between the two main parties was narrow, amounting to only 1,580 votes. On a voter turnout of 93% (versus 96% in 2003), the Nationalists polled 143,468 votes, while 141,888 ballots went to the Labour Party; this represented 49.34% and 48.79%, respectively, of the valid votes cast. The Nationalists secured only 31 seats, while the Labourites took 34 seats, but under Maltese electoral law the Nationalists (winners of the popular vote) were assigned an additional 4 seats to enable them to govern with a majority. Nationalist leader Lawrence Gonzi was again sworn in as prime minister on March 11.

Maltese Prime Minister Lawrence Gonzi appears with his wife, Kate, in Valletta on March 11 after being sworn into office for a second term.

Darrin Zammit Lupi—Reuters/Landov

Alfred Sant, the Labour leader, resigned his position as the party suffered its third consecutive electoral defeat under his leadership. On June 6 Joseph Muscat, a 34-year-old member of the European Parliament, was elected Sant's successor, with 66.36% of the valid votes cast. Muscat resigned from the European Parliament, and when a Labour member gave up his seat in the Maltese parliament, Muscat took that seat. He was sworn in as leader of the opposition on October 1.

On January 1, after three years of working to get the economy back on track, Malta joined the euro zone, replacing the Maltese lira, which had been in existence since Malta abandoned the British system in May 1972. Illegal immigration was on the increase throughout the year, as Frontex, the EU's border security agency, did not achieve the positive results anticipated.

(ALBERT GANADO)

MARSHALL ISLANDS

Area: 181 sq km (70 sq mi)
Population (2008 est.): 53,200
Capital: Majuro
Head of state and government: Presidents Kessai Note and, from January 14, Litokwa Tomeing

On Jan. 7, 2008, the parliament of the Marshall Islands elected Speaker Litokwa Tomeing, a traditional chief, to succeed Kessai Note as president. In November 2007 Tomeing had defected to the opposition party, Aelon Kein Ad (Our Islands), and the AKA defeated Note's United Democratic Party in parliamentary elections the following week.

In July President Tomeing announced a state of economic emergency. After GDP growth of 2% was reached in 2007, primarily from increases in transfers from the U.S., growth was projected to fall in 2008 to 1%. Debt as a percentage of GDP was expected to reach 75%, while debt servicing would account for some 40% of exports, and a number of loans were falling due for repayment. Revenues accounted for only 45% of total expenditure, and the government remained the largest employer, with public-sector wages accounting for some 42% of government expenditure. Some observers blamed the availability of annual transfers made by the U.S. government under the amended Compact of Free Association 2004–23, which freed the Marshall Islands government from the necessity of making the kind of structural adjustments that had been forced on other small states. Meanwhile, $8 million–$10 million in tax remained uncollected, and there was little attempt to invest in the private sector. In two small signs of change, a tuna-loining plant reopened in early 2008, and the government was considering opening its National Telecommunication Authority to competition.

(CLUNY MACPHERSON)

MAURITANIA

Area: 1,030,700 sq km (398,000 sq mi)
Population (2008 est.): 3,204,000
Capital: Nouakchott
Chief of state: President Sidi Mohamed Ould Cheikh Abdallahi and, from August 6, Chairman of the High Council of State Mohamed Ould Abdel Aziz
Head of government: Prime Ministers Zeine Ould Zeidane, Yahya Ould Ahmed El Waghef from May 6 to August 6, and, from August 14, Moulaye Ould Mohamed Laghdaf

Mauritania's brief experiment with democracy ended on Aug. 6, 2008, when a military coup toppled Pres. Sidi Mohamed Ould Cheikh Abdallahi, the country's first democratically elected president since independence in 1960. The coup, led by Gen. Mohamed Ould Abdel Aziz, followed an unpopular cabinet reshuffle in May and a July no-confidence vote passed by the National Assembly, which President Abdallahi then threatened to dissolve. Demonstrators backing the coup clashed with supporters of the ousted government, but calm returned to the capital within a few days. New elections were promised, but no date was specified. Ignoring international condemnation of the coup, the freezing of aid from major donors, and suspension from the African Union, General Abdel Aziz formed a new government during August.

An Algeria-based group, al-Qaeda in the Islamic Maghreb (AQIM), claimed

responsibility for the deaths of four French tourists in the Mauritanian town of Aleg in December 2007. Five of AQIM's alleged members were arrested in Guinea-Bissau on Jan. 11, 2008. Subsequent security fears prompted the cancellation of the Dakar Rally. Twelve Mauritanian soldiers were ambushed in the north by AQIM on September 15; their bodies were found four days later.

The UN-organized repatriation of 24,000 Mauritanian refugees who had been living in Senegal for nearly 20 years began in January. By July some 4,000 had returned to Mauritania, but the program came to a virtual standstill as the refugees awaited the policy of the new government.

(NANCY ELLEN LAWLER)

MAURITIUS

Area: 2,040 sq km (788 sq mi)
Population (2008 est.): 1,269,000
Capital: Port Louis
Chief of state: President Sir Anerood Jugnauth
Head of government: Prime Minister Navin Ramgoolam

The ongoing court battle between the British government and exiles from Diego Garcia, who had lived for 40 years in Mauritius, continued through much of 2008. Following a series of government appeals to prevent island resettlement, British lawmakers in July argued that the islanders and their descendents should be allowed to return immediately. Some 2,000 residents of the Chagos Islands had been forced to leave the Indian Ocean archipelago, a British protectorate, when the British government brokered a deal with the United States to lease the largest island, Diego Garcia, as an air base. Diego Garcia was used more recently as a base for U.S. military forces engaged in the Afghanistan and Iraq wars. The British High Court in 2000 and the Court of Appeals in 2007 had ruled in favour of the Chagossians' right to return, but in October 2008 that ruling was overturned in the House of Lords.

In a bid to strengthen trade ties with China, the Mauritian government agreed to a $730 million project, the country's largest foreign direct investment, to build a trade-development zone that would house several Chinese businesses. Mauritius's two main economic sectors, sugarcane and textiles, had suffered downturns since the lifting in 2005 of trade preferences, and officials hoped the deal would result in making the country a centre for regional economic development.

(MARY EBELING)

MEXICO

Area: 1,964,375 sq km (758,450 sq mi)
Population (2008 est.): 106,683,000
Capital: Mexico City
Head of state and government: President Felipe Calderón Hinojosa

Although Mexican Pres. Felipe Calderón maintained favourable overall public-approval ratings, he encountered considerable difficulties in advancing his policy agenda during 2008. The most serious challenge confronting Mexico was an increasingly violent struggle against drug traffickers. Since assuming office in 2006, President Calderón had dispatched approximately 30,000 army troops and federal police to 10 different Mexican states in a high-visibility offensive against drug cartels. This initiative yielded significant results. During 2007–08 the government arrested several prominent traffickers (including Sandra Ávila Beltrán, known as the "queen of the Pacific" for her leadership of the Sinaloa cartel), and it maintained its policy of extraditing cartel leaders to the United States. Some sources judged that the rising retail price and the declining purity of cocaine sold in the U.S. reflected the effectiveness of Mexico's crackdown.

These advances, however, came at a very high price for Mexico. As shipping cocaine, methamphetamines, and other drugs into the U.S. became more difficult, traffickers began selling a higher proportion of their product in Mexico, where addiction levels rose steadily. Fragmented cartels waged war against each other for control over lucrative smuggling routes, and they increasingly turned their formidable firepower (derived from sophisticated armaments smuggled from the U.S.) against army and police personnel. In a particularly gruesome turn, they frequently beheaded their victims as a macabre sign of their determination. The violence claimed victims ranging from rival cartel members to senior federal police commanders and law-enforcement personnel, innocent bystanders caught up in gunfights, and members of Mexican-style country music groups (*gruperos*), whose song lyrics often depicted the lifestyle of drug traffickers. Most disturbing, the overall incidence of drug-related violence (more than 5,600 deaths in 2008) was on the rise, with no clear indication that the Mexican government had yet gained the upper hand.

The Calderón administration's high-profile attempt to open the petroleum industry to private investment and to reform the state-owned Mexican Petroleum Co. (PEMEX) also encountered resistance. With Mexico's oil production and proven reserves steadily falling, and with oil export receipts accounting for nearly 40% of the federal government's total revenue, in April President Calderón introduced legislation that would give PEMEX greater budgetary autonomy, reform its management, permit private contractors to build and operate refineries and to distribute and store refined petroleum products, and allow PEMEX to offer performance incentives to private firms. Calderón was compelled to accept opposition legislators' demands for broad public debate of energy policy, however, because he needed multiparty congressional support for his initiative. During May and June the Senate held widely publicized hearings on the question, and in July the centre-left Party of the Democratic Revolution (PRD) sponsored a referendum in nine states and the Federal District. Although the legislation finally adopted by the Congress in October included key elements of Calderón's original plan, it barred so-called risk contracts offering incentives to private firms engaged in petroleum exploration and production. Moreover, the national debate over energy policy permitted Andrés Manuel López Obrador (the PRD's de facto leader and Calderón's main opponent in the bitterly disputed 2006 presidential election) to revive his political fortunes by leading the nationalist opposition to an expanded private-sector role in the energy sector.

Although the federal government's policy setbacks might pose problems for the ruling National Action Party (PAN) in the 2009 midterm congressional elections, the PAN's difficulties

were minor compared with those affecting the PRD. In March, Alejandro Encinas, a former governor of the Federal District and López Obrador's preferred candidate for party leader, appeared to have narrowly defeated Jesús Ortega of the more moderate New Left faction in the race for party president. Not for the first time in the PRD's 19-year history, however, the election was badly tarnished by ballot fraud and other irregularities. Months of wrangling ensued. In July interim party leaders finally agreed to annul the results and postpone the election until 2010. In November, though, the Electoral Tribunal of the Federal Judicial Branch ruled that in fact Ortega had won, opening the way for him to take charge.

In August the Supreme Court rejected appeals filed by the federal attorney general and the National Human Rights Commission against a 2007 Federal District law that decriminalized abortion during the first 12 weeks of pregnancy. In ruling that the Federal District government had not violated Congress's constitutional authority to legislate on health and penal matters, the court opened the way for Mexican state governments to reexamine abortion policy.

Mexico-U.S. relations during the year focused heavily on the challenges posed by illegal drug trafficking and undocumented migration. Following lengthy bilateral negotiations, in October 2007 the United States announced that it would support Mexico's antinarcotics fight with a three-year technical assistance program (the Mérida Initiative), which would commit $1.4 billion in equipment and training. The Mexican government nevertheless objected to U.S. congressional amendments that conditioned the aid on the Mexican military's human rights record, and it insisted that the U.S. government do more to control the flow of illegal firearms into Mexico. In June 2008 the U.S. Congress finally approved revised legislation that provided a $400 million aid package to Mexico during the first year of the program.

The U.S. Congress failed to enact a comprehensive immigration reform, creating a policy vacuum that encouraged state and local governments in the United States to devise their own approaches to illegal immigration. The federal government did, however, proceed with the construction of physical barriers along major sections of the Mexico-U.S. border, an action that the Mexican government severely criticized as a major obstacle to improved bilateral understanding.

With the U.S. economy sliding into recession, Mexico's GDP grew by only an estimated 1.6% in inflation-adjusted terms during 2008. Remittances from Mexican workers residing in the United States declined. Pressures from rising food, gasoline, and electricity prices in early 2008 pushed the annual rate of inflation up to 6.6%. The widening international financial crisis placed strong pressures on the peso-U.S. dollar exchange rate, and declining petroleum prices in late 2008 threatened to reduce future government revenues. The Calderón administration proceeded with important infrastructure projects in part to stimulate employment growth, but overall job creation in the formal sector of the economy faltered. (KEVIN J. MIDDLEBROOK)

The bullet-riddled bodies of 13 men, who had been executed with their hands tied behind their backs, lie at the edge of a field in the drug-plagued Mexican state of Sinaloa in December.

AP

MICRONESIA, FEDERATED STATES OF

Area: 701 sq km (271 sq mi)
Population (2008 est.): 110,000
Capital: Palikir, on Pohnpei
Head of state and government: President Emanuel Mori

The economy of the Federated States of Micronesia (FSM) continued to deteriorate in 2008 as the economy contracted by an estimated 3.5%. Meanwhile, external debt represented 25.1% of GDP, debt servicing consumed the equivalent of 6% of goods and services, GDP per capita declined (despite net emigration rates of about 2%), and budget deficits held at about 2.5% of GDP. (The fiscal situation was believed to be worse in Kosrae and Chuuk than in the other states.) The FSM remained highly dependent on U.S. government transfers, provided under the amended Compact of Free Association, which represented 65% of the FSM's revenue.

While these U.S. transfers were declining, they were being offset by payments by the U.S. to the FSM Trust Fund, which would eventually replace compact income, and by bilateral payments from China and Japan. The relative certainty of this other income freed the FSM government from pressure to initiate structural reforms, such as increased private-sector investment and greater fiscal discipline, which might produce higher economic growth rates. As a consequence, government expenditure accounted for some 40% of GDP, and the government provided 51% of the country's employment.

(CLUNY MACPHERSON)

MOLDOVA

Area: 33,843 sq km (13,067 sq mi), including the 4,163-sq-km (1,607-sq-mi) area of the disputed territory of Transdniestria (Transnistria; Pridnestrovie)
Population (2008 est.): 3,760,000 (excluding about 750,000 Moldovans working abroad but including the more than 500,000 persons in Transdniestria)
Capital: Chisinau
Chief of state: President Vladimir Voronin
Head of government: Prime Ministers Vasile Tarlev and, from March 31, Zinaida Greceanii

Moldovan Pres. Vladimir Voronin met in January 2008 with his Russian counterpart, Vladimir Putin, and on August 25 with Putin's successor, Dmitry Medvedev. (*See* BIOGRAPHIES.) The future of the breakaway territory of Transdniestria dominated the talks.

In a referendum held in 2006, 97% of Transdniestrian residents had expressed a desire to join the Russian Federation, but the Russian preference was for a reunified Moldova in which the breakaway region would enjoy substantial autonomy and be able to influence the central government. Until 2007 President Voronin was willing to count on the mediation efforts of the EU and the United States as long as Russia propped up Transdniestria and stationed troops there, but Western engagement failed to produce any breakthrough. Even before the Russian seizure of territory in Georgia in August, Voronin appeared to be moving away from the West and toward a reliance on Russia to broker a settlement, even if such a pact weakened Moldovan sovereignty. On April 11, for the first time since 2001, Voronin met with Igor Smirnov (the leader of the Transdniestria regime), with whom he agreed to launch confidence-building measures designed to lead to reunification. This was seen as a success for Russian diplomacy, and following the meeting with President Medvedev, a new negotiating process began to take shape in which Russian priorities were clearly visible. Russia hoped that strong Transdniestria representation in Moldovan institutions would prevent the country from harmonizing its laws and policies with those of the EU and pull it back into a firm Eastern orbit. The West had been unable to offer any alternative negotiating package, and it was thought that Voronin, who could not stand for reelection in 2009, might wish to secure a place in history as the architect of reunification even if it was on terms that would boost Russian influence over the whole of Moldova. Many in the ruling Party of Communists of the Republic of Moldova, which enjoyed substantial control over the media and business life, saw a pro-Russian strategy as guaranteeing their hold on power.

(TOM GALLAGHER)

MONACO

Area: 2.02 sq km (0.78 sq mi)
Population (2008 est.): 34,300
Chief of state: Prince Albert II
Head of government: Minister of State Jean-Paul Proust

The parliamentary elections held in Monaco on Feb. 3, 2008, had a high voter turnout of 77%. The Union for Monaco (UPM), with 52.2% of the vote, won 21 of the National Council's 24 seats, and the Rally and Issues for Monaco (REM) party took the remaining 3 seats, despite having taken 40.5% of the balloting. A third party, Monaco Together, with only 7.3% of the vote, picked up no seats.

The principality was abuzz with hopes of a possible royal wedding between Prince Albert II and Charlene Wittstock, a former South African swimming champion. The couple's romance first came to notice at the 2006 Turin Winter Olympics. Since then, although there had been no publicly announced engagement, Wittstock had appeared at many official functions with Albert and with his sister Princess Caroline. A government source said of the prince, who turned 50 in March, "Albert has never settled down in the past, but knows that the time is now right to produce the next ruler of Monaco."

Monaco's plan to reclaim more land from the sea continued to move forward during the year. The current land-reclamation project would increase Monaco's area by approximately 10 ha (about 25 ac).

(ANNE ROBY)

MONGOLIA

Area: 1,564,116 sq km (603,909 sq mi)
Population (2008 est.): 2,652,000
Capital: Ulaanbaatar
Chief of state: President Nambaryn Enkhbayar
Head of government: Prime Minister Sanjaagiin Bayar

The Mongolian political scene in 2008 was dominated by the June 29 elections to the Mongolian Great Khural (Hural; national assembly) and the subsequent riot over the results. A total of 311 party candidates and 45 independents registered in 26 constituencies to contest the 76 seats. The Mongolian People's Revolutionary Party (MPRP) and the Democratic Party (DP) each fielded 76 candidates, and 36 stood for the Citizens' Alliance (CA), which was formed by the new Citizens' Movement Party in alliance with the Mongolian Green Party and the Mongolian Social Democratic Party.

On the basis of preliminary results, MPRP Chairman Sanjaagiin Bayar thanked the Mongolian people on June 30 for reelecting the MPRP, but DP Chairman Tsakhiagiyn Elbegdorj demanded a recount. On July 1 crowds gathered in central Ulaanbaatar, and young rioters stoned and set fire to the headquarters of the MPRP. Five people were killed, four by gunshot wounds. Pres. Nambaryn Enkhbayar then declared a state of emergency; armoured cars patrolled the central streets, a night curfew was enforced, and media censorship was imposed, but there was no further violence, and on July 4 the state of emergency was lifted. CA leaders Jalbaasurengiin Batzandan and Otgonjargalyn Magnai and Republican Party Chairman Bazarsadyn Jargalsaikhan were arrested on charges of incitement.

Partial election results released on July 14 by the General Election Committee (GEC) confirmed the election of 66 candidates (the MPRP, 39; the DP, 25; the Civil Will Party, 1; and Independents, 1). President Enkhbayar decreed the opening of the new Great Khural on July 23, but the DP members staged a boycott to protest the GEC's failure to produce full results. Eventually, the DP members agreed to attend the Great Khural on August 28, when the confirmed members took the oath.

Gerry Shih/AP

A young man flees a violent confrontation between police and rioters in the Mongolian capital of Ulaanbaatar on July 1.

Elbegdorj then resigned the DP chairmanship and was replaced by Norovyn Altankhuyag.

MPRP Chairman Bayar then proposed the formation of a "joint" government with the DP, and the two parties concluded a formal agreement to share posts. On September 11, Bayar was reelected prime minister, and Altankhuyag became chief deputy prime minister. The new cabinet of 15 ministers (11 ministries) included 6 DP members. By year's end the official election results for the last four seats, in Ulaanbaatar Bayangol constituency, remained undeclared.

(ALAN J.K. SANDERS)

MONTENEGRO

Area: 13,812 sq km (5,333 sq mi)
Population (2008 est.): 626,000
Capital: Podgorica (Cetinje is the old royal capital)
Chief of state: President Filip Vujanovic
Head of government: Prime Ministers Zeljko Sturanovic and, from February 29, Milo Djukanovic

Montenegro's marked improvement in the economy continued to attract foreign investors in 2008. The biggest gains were attributed to a rise in tourism and construction. The World Travel and Tourism Council ranked Montenegro as a top tourism destination, with growth estimated at 10% annually through 2016. The country's central bank estimated that foreign direct investment increased 7% over that of 2007, and per capita investment of some $2,200 was regarded as among the highest in Europe. The GDP was about 7%; inflation fell from 6.7% in 2007 to 4%; and unemployment rates dropped from 12.2% to 11%. At the beginning of 2008, full private control of the country's banking and telecommunications sectors and oil industry was achieved as the number of majority-owned enterprises by the state declined to about 54%.

In April Montenegro concluded a World Trade Organization agreement with the EU and attended a major NATO conference in Bucharest, Rom. In 2006 Montenegro had officially entered NATO's "Partnership for Peace," and in 2007 the country had signed the Stabilization and Association Agreement with NATO.

In October the country recognized Kosovo's independence. Western observers regarded the action as a snub to Serbia, Montenegro's traditional ally, and pro-Serbian opposition parties staged protests demanding the withdrawal of recognition. Montenegrin officials explained that by not recognizing Kosovo, it could slow its own efforts toward European integration. Montenegro formally applied for EU membership on December 15.

A progress report by the European Commission noted some marked improvements in the country over the previous two years but cautioned that Montenegro needed to implement judiciary reforms and to show "greater political will" in combating corruption and organized crime. The report also stated that Montenegro showed progress in addressing human rights concerns and the protection of minorities, though some ethnic tensions remained that contributed to "uneven regional economic development."

In February, Prime Minister Zeljko Sturanovic resigned owing to ill health, and the parliament elected Milo Djukanovic, former Montenegrin president (1998–2002) and prime minister (1991–98 and 2003–06), as head of the government. Presidential elections were held in April, and incumbent Pres. Filip Vujanovic was elected for a second five-year term, winning 52% of the vote.

(MILAN ANDREJEVICH)

MOROCCO

Area: 710,850 sq km (274,461 sq mi), including the 252,120-sq-km (97,344-sq-mi) area of the disputed Western Sahara annexation
Population (2008 est.): 32,103,000, of which Western Sahara 497,000 (excluding 90,000 Saharawi refugees living near Tindouf, Alg., from 1975)
Capital: Rabat
Head of state and government: King Muhammad VI, assisted by Prime Minister Abbas al-Fassi

In 2008 Morocco suffered as a result of the global economic crisis that precipitated high energy and food prices. Consumer prices rose by 5.4%, and inflation climbed to 3%; in the first half of the year, food imports were up by 66%, and energy imports increased 62.5%. As a result, consumer subsidies rose by about $5.2 billion, compared with an annual budget allocation of about $2 billion. In addition, imports were expected to rise by $4 billion to $33 billion during the year. Foreign direct investment, however, continued to be strong, at $3 billion, and remittances reached $3.5 billion by June.

The political scene remained gloomy after the September 2007 legislative elections. Muhammad al-Yazghi, the leader of the left-wing Socialist Union of Popular Forces (USFP), which had experienced a drop in voter support, resigned in the wake of the elections. Despite having failed to elect a replacement at its mid-June congress, in mid-November the USFP chose veteran politician Abdalwahid al-Radi as its new leader. Though the Justice and Development Party (PJD) also did worse than anticipated and was expected to choose more radical leadership, the Islamist PJD in July instead selected as its leader veteran moderate and palace loyalist 'Abd al-Illah Benkirane. Former deputy interior minister Fouad Ali al-

Himma, a close associate of King Muhammad VI, announced in July that he would form a new party, the Authenticity and Modernity Party, just as the king indicated that he wanted parties to coalesce into larger groups to improve political activities.

The security situation continued to be worrying, especially following the March 2007 suicide bombing of an Internet cafe in Casablanca; 47 people were convicted (one was sentenced to up to 30 years' imprisonment) in October 2008 for having taken part in the blast. In June, 29 persons from Tetouan were sentenced for having recruited Moroccan fighters for terrorist attacks in Iraq. The uncovering of a major terrorist ring—led by 'Abd al-Qadir Belliraj, a former member of the 1970s extremist group al-Shabiba al-Islamiya (Islamic Youth)—led to 35 arrests in February.

Despite direct negotiation between Morocco and the Polisario Front over the disputed region of the Western Sahara, a solution was not found. Though King Muhammad VI supported French Pres. Nicolas Sarkozy's initiative for the establishment of a Union for the Mediterranean, he failed to attend the inaugural conference in July in Paris, owing to his irritation over French overtures to Algeria (where Polisario camps housed Saharawi refugees).

(GEORGE JOFFÉ)

MOZAMBIQUE

Area: 799,379 sq km (308,642 sq mi)
Population (2008 est.): 21,285,000
Capital: Maputo
Head of state and government: President Armando Guebuza, assisted by Prime Minister Luisa Diogo

Heavy rains in January 2008 caused severe flooding in the Zambezi Valley, but prompt action by the government and aid workers enabled thousands of people to be relocated in camps on higher ground. Some of the camps were threatened by rain in February, and by the end of that month, 100,000 people were still homeless and more than 200,000 needed humanitarian assistance. An additional 55,000 people were driven from their homes in early March when a cyclone struck the northern coast.

Mozambique's reputation for economic and political stability stood the country in good stead. Aid for a variety of projects in the fields of education, science, technology, agriculture, and management training was made available by The Netherlands, Cuba, Vietnam, Japan, Portugal, and South Korea, and the pipeline carrying natural gas to South Africa promised to offer future benefits for 25 years.

In spite of these initiatives, the effect of the floods meant that the country faced shortages of corn (maize) and rice, and there was a shortfall too on the import of wheat. The country's GDP was falling, and the balance of trade was worsening. Riots erupted in Maputo in February over the sharp rise in fares on public transport, and early in the year criminals were lynched in various locations. Pres. Armando Guebuza responded by dismissing the transport minister and the justice minister, the latter's department having been subjected to frequent criticism for its inefficiency. The environment minister was dismissed owing to anxiety over deforestation and illegal logging, and the foreign minister was demoted.

Following the unexpected return in May of thousands of Mozambicans from South Africa, a state of emergency was called. The local population in South Africa had turned on the Mozambican immigrants, who, they believed, were taking work from South African nationals.

These various setbacks did not affect the ruling Mozambique Liberation Front's (Frelimo's) hold on power. Despite a reshuffle of senior officials in January, the main opposition party, Mozambique National Resistance/Electoral Union (Renamo/UE), faced a number of challenges after the party's leader, Afonso Dhlakama, withdrew his support in August from Daviz Simango, the popular and successful mayor of Beira. As a result, Simango said that he would stand as an independent candidate in the municipal elections in November. The National Council of Renamo responded by expelling him from the party. The action caused considerable resentment in Beira; two senior party advisers resigned, and other members voiced similar disquiet. Overall, Frelimo won an overwhelming victory in the municipal elections; Simango was reelected mayor of Beira, but without any party support his task would prove difficult.

(KENNETH INGHAM)

MYANMAR (BURMA)

Area: 676,577 sq km (261,228 sq mi)
Population (2008 est.): 47,758,000
Capital: Naypyidaw (site near Pyinmana)
Head of state and government: Chairman of the State Peace and Development Council Gen. Than Shwe, assisted by Prime Minister Thein Sein (acting)

The year 2008 marked the 20th anniversary of the nationwide pro-democracy uprising in Myanmar that sparked a brutal military crackdown. In February the ruling junta announced its decision to push ahead with its "road map to disciplined democracy" by holding a referendum on a military-sponsored draft constitution in May, to be followed by multiparty elections in 2010. The new constitution enshrined a leading role for the military in any future government. The 2010 elections would be the first since 1990, when the military ignored the results of a landslide victory for opposition leader Aung San Suu Kyi's National League for Democracy.

Suu Kyi had been under house arrest for more than 13 of the past 19 years. In 2008, however, for the first time, she refused to meet the few officials permitted to see her, including Labour Minister Aung Kyi and the UN special envoy to Myanmar, Ibrahim Gambari. Her refusal to see Gambari underscored her opposition to his apparent backing of the junta's "road map" process. After rejecting food supplies in August and September, Suu Kyi managed to wrest modest concessions from the military. In a move in late September apparently aimed at easing international pressure, the military junta granted amnesty to some 9,000 prisoners, though only a small number of them were political prisoners.

Tragedy struck in early May when Cyclone Nargis swept across Myanmar's Irrawaddy Delta. The storm, which left more than 138,000 dead or missing, caused more than $4 billion in damages. (*See* DISASTERS.)

The economy remained weak, with real GDP growth estimated at 0.9% in 2008. According to the Economist Intelligence Unit, inflation averaged 27.7%, owing partly to the surge in food prices in the wake of the cyclone.

Khin Maung Win—AFP/Getty Images

Families displaced by Cyclone Nargis, which swept across Myanmar's Irrawaddy Delta in May, take shelter in makeshift huts.

The fiscal deficit was about 4% of GDP, the highest in Asia. On the positive side, foreign exchange reserves doubled to $2 billion in 2008, and export revenues were buoyant at $3.5 billion, largely as a result of exports of oil, natural gas, and gems.

On the diplomatic front, China continued its substantial financial and political support for Myanmar's beleaguered regime. During the April visit to India of Gen. Maung Aye (the second-ranking general in the junta), he concluded an agreement for an India-funded multinodal transportation corridor that would link northeastern India with Myanmar's Sittwe port through the Kaladan River. Myanmar and North Korea engaged in several high-level contacts that raised new concerns about nuclear proliferation. The EU called for the imposition of an international arms embargo on Myanmar.

(MOHAN MALIK)

NAMIBIA

Area: 824,116 sq km (318,193 sq mi)
Population (2008 est.): 2,089,000
Capital: Windhoek
Chief of state and head of government: President Hifikepunye Pohamba, assisted by Prime Minister Nahas Angula

The Rally for Democracy and Progress (RDP), a new party that had been launched in Namibia in November 2007 by Hidipo Hamutenya, previously a leading figure in the ruling South West Africa People's Organization (SWAPO), did not do well in a constituency by-election held in early 2008; the RDP accused SWAPO of having rigged the election. Tensions increased between the two parties, with each accusing the other of pandering to ethnic loyalties. In May an RDP rally in the township of Katutura, in Windhoek, was called off in the face of SWAPO threats.

Though SWAPO founder Sam Nujoma had bowed out as president of the party in December 2007 (following SWAPO's fourth congress, held in November), as "father of the nation" he retained much influence. In the cabinet reshuffle in April 2008, the most significant aspect was the return to government, after a six-year absence, of Hage Geingob, the deputy president of SWAPO and former prime minister, who became minister of trade and industry. Though the next presidential and parliamentary election was not due until late 2009, there was much jockeying between factions in SWAPO, with some hoping that Geingob would succeed Pres. Hifikepunye Pohamba. Meanwhile, the treason trial continued in the High Court in Windhoek for those who in 1999 had taken up arms for the secession of the Caprivi. A strike at TransNamib crippled road and rail transport before the Labour Court ordered the striking workers to return to work. In other news, in April a 16th-century Portuguese trading ship that had lain undisturbed for hundreds of years on Namibia's "Skeleton Coast" was unearthed in mining operations.

(CHRISTOPHER SAUNDERS)

NAURU

Area: 21.2 sq km (8.2 sq mi)
Population (2008 est.): 10,200
Capital: Government offices in Yaren district
Head of state and government: President Marcus Stephen

On Jan. 31, 2008, Nauru celebrated 40 years of independence from Australia, with Taiwanese Vice Pres. Annette Lu attending the ceremony as guest of honour. Meanwhile, constitutional wrangling caused political deadlock in Nauru. Rules banning any MP with dual citizenship were passed in late March during an Easter Saturday session of Parliament attended only by opposition MPs (Chief Justice Robin Millhouse later declared the session invalid). Pres. Marcus Stephens responded by dissolving Parliament and calling a snap election, from which he emerged with an increased majority of 12 seats in the 18-seat Parliament.

In February a group of Sri Lankan refugees left Nauru for Australia. They were the last asylum seekers to be detained at Australia's controversial offshore processing centre. Nauru's economy was badly affected by Australia's decision to close the establishment. Finance Minister Kieren Keke (who held dual Nauruan-Australian citizenship) predicted that the closure would cut economic activity on the island by 20%. In Nauru each individual, he explained, supported a number of families in a kinship system, so the loss of 100 jobs would probably have an impact on 1,000 people, or 10% of the population. Former president René Harris, who negotiated the original processing-centre deal with Australia, died in July. (*See* OBITUARIES.) On a brighter note, Keke announced in September that Nauru was again making money from phosphate mining, as the global food crisis had driven up the price of fertilizer.

(A.R.G. GRIFFITHS)

NEPAL

Area: 147,181 sq km (56,827 sq mi)
Population (2008 est.): 28,757,000
Capital: Kathmandu
Head of state: Prime Minister Girija Prasad Koirala (interim head of state) and, from July 23, President Ram Baran Yadav
Head of government: Prime Ministers Girija Prasad Koirala and, from August 18, Pushpa Kamal Dahal (also known as Prachanda)

Nepal held an internationally supervised election for its new 601-member Constituent Assembly (CA) on April 10, 2008, with the Communist Party of Nepal (Maoist) emerging as the largest single party, securing 220 seats. Of 54 parties that contested the election, 25 secured enough votes to be represented in the CA. At its first meeting, on May 28, the CA dissolved the 240-year-old monarchy. On July 21 the CA elected Ram Baran Yadav the first president of Nepal. Pushpa Kamal Dahal—popularly known as Prachanda—of the Communist Party of Nepal (Maoist) was elected prime minister. (*See* BIOGRAPHIES.)

In other news, Tibetan refugees in Nepal staged multiple anti-Chinese demonstrations that provoked sharp responses from China. Prachanda, meanwhile, attended the closing ceremony of the Olympic Games in Beijing on August 24. He paid official visits to India and to the United Nations in September. Violence in Nepal's southern region and disputes over the integration of Maoist combatants into the national army prompted a visit by UN Secretary-General Ban Ki-moon on October 31.

In early December the United Nations announced at a news conference in Kathmandu that Prime Minister Pushpa Kamal Dahal had agreed to a date whereby nearly 3,000 Maoist child soldiers would be released from military camps. In coordination with the UN, the combatants would be discharged at the end of February 2009.

A breach in the Kosi River barrage in August displaced nearly 100,000 people in eastern Nepal (and more than 2,000,000 people in adjacent Bihar state, India). The heavy rainfall that occurred in western Nepal also affected some 160,000 people. On October 8 a small aircraft crashed in Lukla, killing 18 passengers. (KESHAB POUDEL)

NETHERLANDS, THE

Area: 41,543 sq km (16,040 sq mi)
Population (2008 est.): 16,433,000
Capital: Amsterdam; seat of government, The Hague
Chief of state: Queen Beatrix
Head of government: Prime Minister Jan Peter Balkenende

The Netherlands strengthened its ties with other members of the European Union in September 2008 when the Dutch parliament ratified the Treaty of Lisbon, which had been signed by the heads of the member countries on Dec. 13, 2007. The parliament voted in July to extend the Dutch contribution to the NATO training mission in Iraq, as well as to maintain troops in the EU's mission in Bosnia and Herzegovina. The Netherlands also continued its "Defense, Development and Diplomacy" mission in Afghanistan.

Early in the year, right-wing parliamentarian Geert Wilders remained firmly in the news for a number of weeks as he threatened to unveil a film entitled *Fitna* that he said would warn of the "dangers of Islam." Various Dutch groups and individuals, concerned that the film might inflame fear and misunderstanding, sought to distance themselves from Wilders's point of view. When *Fitna* was finally released on the Internet in March, its reception remained relatively muted, as the message presented in the film was Wilders's well-known and widely contested view that Islam is incompatible with Dutch democratic values. The country breathed a collective sigh of relief at the relatively calm reception.

The economy of The Netherlands was reasonably stable in 2008, though its strongly international orientation made it vulnerable to the worldwide turbulence in the autumn. Unemployment was low at 2.6%; the national pension system and social security funds remained healthy. In an effort to curb inflation, Prime Minister Jan Peter Balkenende's government rescinded previous plans to raise the value-added tax (VAT) by 1%. In light of the aging population and high standards for social services, the government sought to stimulate productivity and to encourage older citizens to work. Financial incentives were offered to individuals who would continue to work after age 62 and to employers who would hire seniors as well as to employers who offered positions to the long-term unemployed or those who were partially disabled. The Netherlands saw the first three-month decrease in the prices of homes in 18 years; the sales volume also dropped dramatically.

In response to the international crisis in the banking and financial markets, the government attempted to shore up the markets and various companies. It acquired all Dutch operations of the Belgian-Dutch financial service group Fortis, which made the state responsible for Fortis Bank Nederland, Fortis Insurance, and the Fortis segment of ABN AMRO. Subsequently, in consort with other EU member states, The Netherlands set aside €200 billion (€1 = about $1.40) in guarantees for interbank lending. It also injected €10 billion into ING, the largest company in the country, having set aside €20 billion in support of troubled Dutch companies. By year's end it was not clear what the long-term effect of the financial crisis would be.

(JOLANDA VANDERWAL TAYLOR)

NEW ZEALAND

Area: 270,692 sq km (104,515 sq mi)
Population (2008 est.): 4,268,000
Capital: Wellington
Chief of state: Queen Elizabeth II, represented by Governor-General Anand Satyanand
Head of government: Prime Ministers Helen Clark and, from November 19, John Key

After nine years in office, the Labour-led government of Prime Minister Helen Clark was defeated in New Zealand's triennial elections held on Nov. 8, 2008, losing control of the unicameral House of Representatives to an administration led by National Party leader John Key. (*See* BIOGRAPHIES.) Polling 44.93% of votes under the MMP (mixed-member proportional) electoral system, National won 58 seats; Labour received 33.99% (43 seats), and the Green Party took 6.72% (9 seats). The Maori and ACT New Zealand parties each won five seats, and United Future took one. The latter three parties reached an accord, including ministerial posts, to support the Key ad-

Sandra Mu/Getty Images

National Party leader John Key addresses a press conference in Auckland, N.Z., on November 9, one day after leading his party to victory in the country's general elections; Key took office as prime minister on November 19.

ministration, which assumed office on November 19. In conceding Labour's defeat, Clark and Deputy Prime Minister Michael Cullen also resigned their roles as party leader and deputy leader, respectively, and were replaced in a caucus ballot three days later by Phil Goff and Annette King—previously trade minister and justice minister, respectively.

On the new Parliament's commencement in early December, Key initiated a 100-day action plan that included tax cuts to begin in April 2009; a line-by-line review of departmental spending; enhancement of the country's infrastructure; tougher laws to combat violent youth crime, criminal gangs, and the drug trade; a transitional relief package for those individuals worst hit by job losses; and a reassessment of the effects of the global economic crisis. The Clark administration had earlier agreed to underwrite retail and wholesale deposits in New Zealand-registered banks.

New Zealand First party leader Winston Peters was censured by Parliament in a 62–56 vote on September 23 after the Privileges Committee ruled by majority that he had knowingly failed to declare a $NZ 100,000 (about U.S.$70,000) donation to his party in 2005. Clark dismissed Peters as foreign affairs minister, and his party subsequently lost all its seven seats in Parliament.

The May 22 budget projected expenditure for fiscal 2008–09 of $NZ 78.8 billion (about U.S.$62 billion), up 8.7%, and revenue of $NZ 80.1 billion (about U.S.$63.1 billion), up 4%; the 2007–08 surplus was forecast to shrink. The main budget allocations were for social security and welfare, health, education, economic and industrial services, law and order, and defense. A deal was signed on June 30 allowing the government to repurchase for $NZ 665 million (about U.S.$506 million) the rail network and interisland ferry service that was sold by the former National government to a private consortium in 1993 for $NZ 328.3 million (about U.S.$177.5 million).

In April New Zealand became the first Organisation for Economic Co-operation and Development member country to conclude a comprehensive free-trade agreement with China, in a deal calculated to boost New Zealand's annual exports to China, currently valued at some $NZ 2 billion (about U.S.$1.5 billion), by up to $NZ 400 million (about U.S.$300 million). New Zealand would ultimately concede tariff-free access to China for 96% of its products by 2019. In tandem with the deal were legally binding agreements on labour and the environment. New Zealand also agreed to a closer economic partnership agreement with Japan, made progress on free-trade negotiations with India, and commenced preparatory talks on a free-trade deal with South Korea.

New Zealand lost two historically significant figures early in the year. Explorer Sir Edmund Hillary, who first conquered Mt. Everest in 1953 with Sherpa Tenzing Norgay, died on January 11. Maori poet Hone Tuwhare, who in 1999 became New Zealand's second poet laureate, died on January 16. (*See* OBITUARIES.) (NEALE MCMILLAN)

NICARAGUA

Area: 130,373 sq km (50,337 sq mi)
Population (2008 est.): 5,667,000
Capital: Managua
Head of state and government: President Daniel Ortega Saavedra

In 2008 Nicaraguan Pres. Daniel Ortega neared the completion of his second year in office. The coalition between the Constitutionalist Liberal Party (PLC) and the Nicaraguan Liberal Alliance, which held the majority of seats in the National Assembly, collapsed, leading the PLC to renew its pact with Ortega's Sandinista National Liberation Front (FSLN). The Supreme Electoral Council, which administered and monitored Nicaragua's elections, decertified the minority Conservative Party, the Sandinista Renewal Movement, and two indigenous parties, thereby stripping them of public electoral financing. Despite the renewed PLC-FSLN pact, the Supreme Court was unable to convene because of conflicts between the two parties over the distribution of judges across the court's four chambers.

Following local elections on November 9, in which the FSLN was declared the winner in at least 91 contests, supporters of opposition political parties, alleging widespread fraud, took to the streets November 10–19 and clashed with police. In December the U.S. suspended an aid program and demanded an inquiry into the allegations.

Nicaragua's budget for 2008 expanded social expenditures but remained within the guidelines of the International Monetary Fund. Ortega claimed $520 million in Venezuelan aid; however, this remained off the official budget and without state oversight. Much of this aid was intended for the Sandinistas' Citizen Power Councils, which had organized many of the FSLN's governmental social programs.

The central bank of Nicaragua worked to increase foreign reserves and to return to more orthodox monetary policies aimed at controlling inflation. Nonetheless, high food and oil prices dampened economic growth, which was projected to slow to 3%, while raising inflation to a projected 21%. The government increased the minimum wage by 18%. Exports grew strongly, owing to rising coffee prices and expansion in the U.S. market. Despite a close relationship with Venezuela and an often conflictive one with the U.S., Nicaragua remained committed to the Central America–Dominican Republic Free Trade Agreement, which Venezuela opposed. Nicaragua sought to reduce its dependence on oil by bringing wind turbines and other renewable-resources projects online and signing an agreement with Brazil to build a 160-MW hydroelectric plant.

Claiming the need for self-defense, particularly in regard to recent disputes with Colombia, Ortega pulled back from his 2007 offer to destroy more than half of Nicaragua's arsenal of SAM-7 missiles. In October the Nicaraguan government faced criticism from the UN Human Rights Committee for its comprehensive ban on abortion, which prohibited even therapeutic abortions.

(JUSTIN WOLFE)

NIGER

Area: 1,189,546 sq km (459,286 sq mi)
Population (2008 est.): 14,731,000
Capital: Niamey
Head of state and government: President Mamadou Tandja, assisted by Prime Minister Seyni Oumarou

The Tuareg rebellion in northern Niger escalated during 2008. On January 8 a land mine exploded in a residential district of Niamey, where many army officers lived, and on January 21 Movement of Nigerians for Justice (MNJ) members killed 7 policemen in Tanout, 900 km (550 mi) northeast of Niamey, and kidnapped 11 others, including the mayor. On June 26 the MNJ released 4 French miners (who had been abducted three days earlier) from the uranium diggings near Arlit. One of the MNJ's main objectives was to secure for the Tuareg people a greater share of the profits from the mineral wealth in northern Niger. The government said that 17 rebels had been killed on June 27 in fighting near Tezirzait, but the MNJ claimed that 26 soldiers had also died. On July 18 the government halted all operations of the French branch of the aid organization Doctors Without Borders, insisting that it had links with the rebels. The MNJ announced on August 19 that it would welcome talks with the government but denied reports that it was prepared to surrender its firearms. During a government showcase disarmament ceremony on August 24, dozens of land mines accidentally exploded while a number of former Tuareg rebels were handing in their weapons; at least one man was killed, and 40 were injured.

The government released two French television reporters on January 18. They had been arrested a month earlier for having interviewed Tuareg leaders. Two local journalists, arrested on the same charge of having endangered state security, remained in prison. On June 26 former prime minister Hama Amadou was arrested and charged with having embezzled nearly $240,000 in public funds.

The government announced in June that the China National Petroleum Corp. would invest $5 billion to develop Niger's oil resources following completion of a new refinery. Production was scheduled to begin in 2009. The news, however, was met with furious opposition from unions and civil rights groups, which demanded to know how the deal was struck and how the money would be distributed.

(NANCY ELLEN LAWLER)

NIGERIA

Area: 923,768 sq km (356,669 sq mi)
Population (2008 est.): 146,255,000
Capital: Abuja
Head of state and government: President Umaru Musa Yar'Adua

During 2008 Nigeria's economy was severely affected by the global financial crisis that forced the central bank to revise financial policy and caused Nigerian industrialists to panic and begin withdrawals from their local and overseas accounts. The price of crude oil, the country's major export, underwent wild fluctuations—beginning the year at $95, peaking at $147 in July, and then plunging below $70 in October. Earlier in the year Nigeria's prospects had looked hopeful to achieve the Millennium Development Goals and realize its Vision 2020: the average growth rate was about 6.9%; external reserves amounted to about $63 billion; the naira (national currency) had appreciated significantly against leading currencies; and the non-oil sector showed strong performance. By mid-October, however, the government had completely depleted $14.6 billion in windfall oil profits. Meanwhile, fears that the world oil price might fall below Nigeria's benchmark figure of $62 a barrel necessitated a rethinking of budgetary priorities for 2009.

Pres. Umaru Musa Yar'Adua, who had come to power in May 2007 after a flawed election in April, consolidated his position, though he was criticized for his gradual approach in implementing campaign promises and was nicknamed "Baba-go-slow." In February his election as president was upheld by a tribunal, which freed him to assert his independence from former president Olusegun Obasanjo. Yar'Adua instituted a reform of the oil sector, tightened his grip on the military, and reduced corruption; he faced daunting problems, however, in repairing the electricity grid. In August worries about his health surfaced owing to his prolonged 19-day trip to Saudi Arabia for religious and medical reasons, but his vigorous return to public life allayed these fears.

Transparency International (TI), a global watchdog organization in the fight against corruption, acknowledged "significant improvement" in Nigeria's status, moving it up on TI's corruption index from 147 (in 2007) to 121 of 180 countries (in 2008). The Economic and Financial Crimes Commission (EFCC) was praised for some high-profile arrests but was also ridiculed as a tool for attacking the government's political enemies. The EFCC claimed that it had obtained about 250 convictions and recovered about $4 billion in confiscated assets and fines. Nevertheless, powerful interests obstructed its activities. Some state governors arrested under EFCC charges of corruption had also been generous contributors to Yar'Adua's presidential campaign. They joined other implicated members of the political elite to force the dismissal of the first EFCC director and turned the spotlight

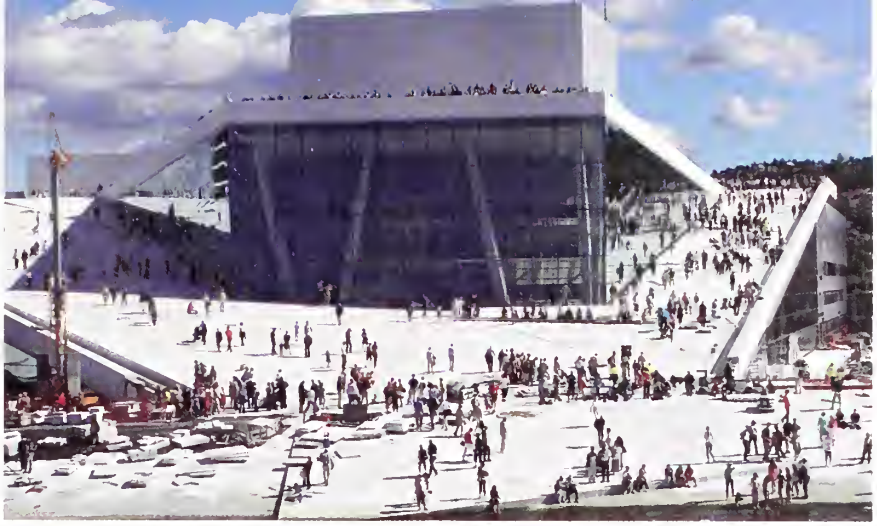
Members of the Movement for the Emancipation of the Niger Delta arm themselves in preparation for an operation against the Nigerian army in September.

Pius Utomi Ekpei—AFP/Getty Images

in the direction of former president Obasanjo and his family. In mid-October, however, the EFCC dismissed the charges against Obasanjo and 31 state governors for lack of sufficient evidence.

Violence in the Niger delta surged to new levels, pushing the region to the verge of anarchy and resulting in the loss of billions of dollars in oil revenue. A volatile mix of armed militias, criminal gangs, unemployed youths, greedy politicians, corrupt police and military officers, and intransigent oil companies competed for a share in oil profits. In June and again in September, the Movement for the Emancipation of the Niger Delta (MEND) spearheaded two well-organized, sophisticated armed operations against the oil companies and the federal army, which succeeded in disrupting production and forcing Royal Dutch Shell to suspend production temporarily. In some areas oil production fell from 20% to 50% of capacity. Unilateral cease-fire declarations demonstrated the militants' strength and discipline and reinforced their demand to participate in a "stakeholders' summit" to discuss local autonomy and a more equitable distribution of oil revenue. Rather than address the socioeconomic roots of unrest, the Joint Task Force launched military attacks on rebel camps and arrested hundreds of suspected militants, while the Senate passed legislation criminalizing organized violence and acts of terrorism. Meanwhile, ordinary people lived in poverty on devastated land with little hope of relief in the near future.

(LARAY DENZER)



Visitors walk along the sloping roof of the newly constructed Norwegian Opera and Ballet in Oslo on April 12, the opera house's opening day.

Albert Nieboer—dpa/Landov

NORWAY

Area: 385,199 sq km (148,726 sq mi), including the overseas Arctic territories of Svalbard (61,020 sq km [23,560 sq mi]) and Jan Mayen (377 sq km [145 sq mi])
Population (2008 est.): 4,762,000
Capital: Oslo
Chief of state: King Harald V
Head of government: Prime Minister Jens Stoltenberg

Norway's economy remained strong in 2008, despite turbulence in the global financial market and slower economic growth in most of Europe. Oil prices reached new heights in the summer before retreating in the autumn, and exports of fish and industrial products continued to expand. Meanwhile, inflation reached 3.5%, and a tight labour market induced the central bank to raise the key policy rate to 5.7% in the spring. Housing loans also became more expensive, at around 7%, and during the summer the heated housing market slowed down. During the global financial crisis that began in September, the Government Pension Fund experienced big losses in its investments in international financial instruments. Economists, seeking to bring calm, proclaimed that such a large fund with long-term investments could handle short-term losses, and the public seemed to trust these reassurances. Norwegians had experienced high growth in personal income during the previous years, and economists from the Organisation for Economic Co-operation and Development anticipated that Norwegian consumers would have 2.6% higher purchasing power for the year.

Although analysts predicted a soft landing for the economy, eight municipalities suffered in the financial crisis. During 2001–06 they were advised by the company Terra Securities to invest their future hydropower-related income in high-risk American hedge funds. In November 2007 it became clear that both the investments and the future incomes were lost. Prolonged trials against Terra and the bank consortium Acta filled newspaper headlines in 2008 and triggered debates about community investments and financial advisers.

The red-green coalition government of Prime Minister Jens Stoltenberg presented several important initiatives during the year. On Svalbard, in the far north, a Global Seed Vault was opened in the spring, with some 268,000 distinct samples of seeds from all over the world placed into secure cold storage. Even under the worst scenario of global warming, the seeds would remain frozen for 200 years. (*See* ENVIRONMENT: Sidebar.) Norway also invested $1 billion in Brazil's Amazonas Fund to prevent deforestation and global warming. In the autumn the Storting (parliament) ruled that in the future Norway's hydroelectric plants would be publicly held enterprises. The government was the target of harsh criticism for its low investments in railroads and for planning offshore oil drilling in the vulnerable fisheries off Lofoten islands in the North Sea.

A gala performance on April 12 opened Norway's first opera house, the newly constructed Norwegian Opera and Ballet overlooking Oslo Fjord. The architecture firm Snøhetta designed the sparkling white marble and glass building, for which groundwork had begun in 2003. The gala, which was broadcast to a national television audience, included the opera building workers singing Giuseppe Verdi's "Slave Chorus" among many other highlights. Walks on the building's sloping roof quickly became a popular activity. Among the numerous festivals held, both inside and on the roof, was a commemoration on June 17 of the 200th anniversary of the birth of the national poet Henrik Wergeland.

King Harald and Queen Sonja celebrated their 40th wedding anniversary with an Adriatic and Mediterranean cruise in 2008. The royal pair also visited Portugal in May and attended the Olympic Games in Beijing in August.

(HILDE SANDVIK)

OMAN

Area: 309,500 sq km (119,500 sq mi)
Population (2008 est.): 2,651,000
Capital: Muscat
Head of state and government: Sultan and Prime Minister Qaboos bin Said (Qabus ibn Sa'id)

In 2008 Oman retained its role as the global guardian of the Strait of Hormuz, a strategically vital route for much of the world's daily hydrocarbon exports. Simultaneously, Oman continued to view with concern repeated U.S. and Israeli threats to use whatever means necessary—including armed force—against Iran, the sultanate's most important maritime neighbour (located directly across the strait), in the event that Iran refused to cease its uranium-enrichment program. While realizing the necessity of cordial relations with both Tehran and Washington, D.C., the sultanate remained reliant upon the 1980 Facilities Access Agreement, which allowed the U.S. military provisional use of Oman's defense facilities in the event of an actual or imminent threat of attack by Iran or any other state. The challenges implicit in this situation were among other prominent issues and matters of policy that Oman had under consideration as it hosted the Gulf Cooperation Council's annual ministerial and heads of state summit, which was held in Muscat on December 27–29.

Petroleum prices remained the key determinant of Oman's economy, which grew 6% during the year. Energy exports again produced ample funding for the ongoing expansion of the sultanate's burgeoning tourism and transportation sectors. Three new airports were opened to better accommodate the influx of tourists. Meanwhile, the ports of Sohar and Salalah continued to grow, with Salalah gaining the distinction of being the only port between Europe and Singapore that could handle the world's largest container vessels. Bolstering the country's appeal to foreign visitors was *Vogue* magazine's declaration of Oman as the top travel destination for 2008.

(JOHN DUKE ANTHONY)

PAKISTAN

Area: 796,096 sq km (307,374 sq mi), excluding the 85,793-sq-km (33,125-sq-mi) Pakistani-administered portion of Jammu and Kashmir
Population (2008 est.): 161,910,000 (excluding nearly 4,795,000 residents of Pakistani-administered Jammu and Kashmir as well as about 2 million Afghan refugees)
Capital: Islamabad
Head of state and government: Presidents Gen. Pervez Musharraf, Mohammadmian Soomro from August 18, and, from September 9, Asif Ali Zardari, assisted by Prime Ministers Mohammadmian Soomro and, from March 25, Yousaf Raza Gillani

The successors of former prime minister Benazir Bhutto, who was assassinated while campaigning in December 2007, took control of Pakistan's government in February 2008 following the legislative electoral victory of Bhutto's Pakistan People's Party (PPP). The new legislature assumed its responsibilities in March and elected PPP stalwart Yousaf Raza Gillani prime minister and Fehmida Mirza its first female speaker. The first truly civilian government since Pres. Pervez Musharraf took power in a 1999 coup anticipated a period of normalcy, but infighting between key political personalities, severe economic dislocation, and sustained acts of terrorism offered no hiatus. Asif Ali Zardari (*see* BIOGRAPHIES), Bhutto's widower, who succeeded her as PPP leader, launched a reconciliation process that for a brief period allowed former prime minister Mohammad Nawaz Sharif's Pakistan Muslim League (PML) to join the ruling coalition. The two principals differed on a range of issues, however, notably the reinstatement of judges dismissed by President Musharraf in 2007. Under threat of impeachment, Musharraf relinquished the presidency in August, but his departure only intensified the Sharif-Zardari rivalry. Sharif broke with Zardari in late August and joined the opposition. On September 6 the legislature elected Zardari Pakistan's new president. The previous day three dismissed judges were reinstated by the Supreme Court, which had been expanded from 16 to 29 members. Former chief justice Iftikhar Mohammed Chaudhry was not among those reinstated. Suicide bombings, assassinations, and military operations against entrenched terrorists remained the top preoccupation of Pakistan's government. In late September Islamabad cited 88 suicide attacks since the Red Mosque assault in July 2007, causing 1,188 deaths, including 847 civilians. The 15-month toll was twice as high as in the previous five years.

The war on terrorism intensified over the year, commencing with the killing in January of Abu Laith al-Libi, a senior al-Qaeda commander, by a U.S. CIA drone. Despite protestations, numerous U.S. drone attacks throughout the year claimed an increasing number of al-Qaeda and Taliban operatives. In Waziristan, Baitullah Mehsud, leader of a Pakistani Taliban coalition, threatened attacks on the country's major cities, and many metropolitan areas were repeatedly assaulted. In February a suicide bomber killed the army's surgeon general, Lieut. Gen. Mushtaq Baig, and in November retired major general Amir Faisal Alvi, former commander of the Special Services Group, was murdered. Earlier, Maj. Gen. Javed Sultan, commander of the Kohat region,

A Pakistani gunman—who was later arrested and identified as Mohammad Ajmal Amir—walks through the Chhatrapati Shivaji railway station in Mumbai (Bombay) on November 26, at the outset of a nearly three-day terrorist siege in parts of the Indian city.

Sebastian D'souza—Mumbai Mirror/AP

who was overseeing the hunt for Taliban militants, died with two brigadier generals when their helicopter crashed in South Waziristan.

On the diplomatic front, India released more than 150 Pakistani prisoners, the Asian Development Bank transferred a substantial part of its $1.9 billion annual assistance package to bolster Pakistan's budgetary position, and in May Pakistan was readmitted to the Commonwealth of Nations after a six-month suspension. NWFP negotiators and pro-Taliban militants in the Swat valley signed a 15-point peace agreement in May, but in that same month a U.S.-directed drone attack on Damadola in the Bajaur tribal area killed more than 20 people. Fighting involving U.S.-led coalition forces in Afghanistan spilled over into Pakistan in mid-June. U.S. warplanes struck retreating guerrillas, and Islamabad charged the U.S. military with the deaths of 11 regional paramilitary members. A subsequent U.S. report that active and former officials in Pakistan's Inter-Services Intelligence (ISI) agency remained committed to the Taliban was denounced by Islamabad as a "smear campaign," but efforts in July to place the ISI under Ministry of Interior control fizzled under army pressure. Nevertheless, a shake-up in the ISI occurred in late September when Lieut. Gen. Ahmad Shujaa Pasha, director general of military operations, was named the new ISI head, and in November the ISI's political wing was officially disbanded.

With anti-American sentiment intensifying, top U.S. and Pakistani military leaders met secretly in August aboard a U.S. aircraft carrier near the Persian Gulf. A U.S. raid into South Waziristan in September, however, brought a stern rebuke from Islamabad, while U.S. Pres. George W. Bush's administration revealed that U.S. Special Forces had been authorized to operate across the Pakistan border. Islamabad declared that U.S. penetrations would be resisted. In September, U.S.-Pakistan military skirmishes punctuated talks between Zardari and Bush at the UN headquarters in New York City, and in November the new U.S. chief of central command, Gen. David Petraeus, met with Pakistani military and political leaders in Islamabad.

Denmark's Islamabad embassy was bombed in June, killing six people. Militants blocked the road between Kohat and Peshawar, and a rash of bombings followed extremist threats aimed at shop owners. The Kohat fighting intensified late in the year. To assist Pakistan's frontier forces in combating mounting acts of terrorism, a small contingent of U.S. counterinsurgent trainers took up their duties in late October. Militants were not subdued, however. Islamabad's Marriott Hotel was demolished when a truck bomb detonated, killing at least 54. In late November Pakistan-based terrorists, allegedly members of Lashkar-e-Taiba (LeT), struck multiple targets in Mumbai (Bombay), killing more than 170. (*See* Special Report on page 192.) The latter event forced Pakistani authorities to strike at LeT's charitable extension, Jamaat-ud-Dawa, sealing its offices and mosques and arresting its officers.

In June the National Assembly passed the new government's first budget. Pegged at 2.01 trillion rupees (about $30 billion) for 2008–09, it represented the country's largest budget bill ever. With Pakistan facing unparalleled economic distress, the country's inflation rate rose to about 25%, and cuts in food, fuel, electricity, and fertilizer supplies especially affected the poor. A major drop in GDP, declines in agriculture and manufacturing, double-digit inflation, ineffective fiscal and monetary policy, and diminished exports contributed to substantial failures in all economic sectors. In October Islamabad implored the IMF to make available between $3 billion and $6 billion in emergency funds. (LAWRENCE ZIRING)

PALAU

Area: 488 sq km (188 sq mi)
Population (2008 est.): 20,300
Capital: Melekeok (on Babelthuap)
Head of state and government: President Tommy Remengesau, Jr.

Palau's economy, already damaged by the world financial turmoil, was further injured in May 2008 when Far Eastern Air Transport (FAT) stopped flying to Palau from Taiwan, Palau's largest source of tourist income. China Airlines offset the damage to some extent by its decision to fly charter flights to Palau four times a week.

Anxiety about the fall in tourist revenue was increased by the gloom caused by rising local fuel prices. The increase in the world market price of oil—and the rise in electricity charges by the Palau Public Utilities Corp. to meet a potential budget shortfall of $700,000—saw the country facing what Sen. Santy Asanuma (chairperson of the Palau Resources, Commerce, Trade and Development Committee) described as a grave crisis. Pres. Tommy Remengesau met the challenge by recommending that the legislature initiate legislation to borrow $3 million from an existing Taiwan Infrastructure Fund. Palau also pursued possible oil and gas resources in northern Palau and in the area of Kayangel state.

In August public health officials declared a dengue fever epidemic. A national campaign to get rid of dengue mosquito breeding areas improved conditions somewhat by October.

In Palau's November 4 general elections, Johnson Toribiong claimed the presidency by a mere 216 votes over Elias Camsek Chin. Remengesau was unable to run because of term limits. Toribiong would take office in January 2009. (A.R.G. GRIFFITHS)

PANAMA

Area: 75,173 sq km (29,024 sq mi)
Population (2008 est.): 3,310,000
Capital: Panama City
Head of state and government: President Martin Torrijos

Politically, the year 2008 in Panama marked the beginning of the campaign cycle that would culminate with the May 2009 general elections. The country's two largest parties, the ruling Democratic Revolutionary Party (PRD) and the Arnulfista Party (PA), held primaries to select their standard-bearers in the presidential contest. The PRD chose a woman, Balbina Herrera, a former minister of housing and mayor of the populous district of San Miguelito. The PA picked Juan Carlos Varela, a businessman and political novice. A third major presidential candidate also emerged: wealthy businessman Ricardo Martinelli, leader of the Democratic Change party. Early polls pointed to a close contest between Herrera and Martinelli.

In July, Pres. Martín Torrijos issued a series of controversial executive decrees

aimed at reforming the police and security institutions. After the U.S. invasion of Panama in 1989, Panama abolished the military and created a series of civilian-led police and security agencies, but Torrijos argued that these had become incapable of meeting the security challenges facing the country in the 21st century. Among other changes, his decrees mandated the creation of a National Frontier Service to strengthen border security, the merging of the National Air Service and the National Maritime Service into a National Aeronaval Service, and the establishment of a National Intelligence and Security Service. As part of the move to strengthen the country's defenses, Panama also rejoined the Inter-American Defense Board. The new measures sparked significant protests from opposition political parties and civil-society organizations that had fought the military dictatorship of the 1980s; these groups claimed that the decrees would remilitarize Panama's security apparatus.

Panama's economy, benefiting from a continued boom in the construction sector, was expected to grow at an annual rate of 8.5% in 2008. The economy had experienced growth ranging from 7% to 9% in the previous three years. Most economists, however, expected the rate of growth to slow in 2009 as a result of the global financial crisis.

(ORLANDO J. PÉREZ)

PAPUA NEW GUINEA

Area: 462,840 sq km (178,704 sq mi)
Population (2008 est.): 6,474,000
Capital: Port Moresby
Chief of state: Queen Elizabeth II, represented by Governor-General Sir Paulias Matane
Head of government: Prime Minister Sir Michael Somare

Papua New Guinea (PNG) held celebrations in 2008 commemorating Prime Minister Sir Michael Somare's 40 years in politics, which had made him one of the longest-serving parliamentarians in the world. Despite pressure from opposition leaders, Somare, who had led the country intermittently since before independence in 1975, did not name a date for his retirement.

During the year the prime minister focused on such issues as reducing the carbon emissions derived from excessive logging. Somare sought out opportunities for PNG, which was home to one of the world's most significant tropical rainforests, to receive funds in return for not cutting down the forests. Australian Prime Minister Kevin Rudd visited Port Moresby in March and signed an agreement to help PNG reduce carbon emissions from deforestation. A proposed copper mine near the historic Kokoda Trail challenged the relationship between Australia and PNG. In addition to disturbing local landowners, who were seeking compensation, development of the area raised concerns about the significance of the track to Australians.

After an agreement between the PNG government and a consortium comprising ExxonMobil, Oilsearch, Santos, AGL, and Nippon Oil, a multibillion-dollar gas deal was launched with the intention of strengthening the PNG economy. During September, Somare opened what was expected to be PNG's largest liquid natural gas project. The LNG processing plant was scheduled to create 5,000 jobs in the construction phase and add 15% to the country's GDP.

(A.R.G. GRIFFITHS)

PARAGUAY

Area: 406,752 sq km (157,048 sq mi)
Population (2008 est.): 6,238,000
Capital: Asunción
Head of state and government: Presidents Nicanor Duarte Frutos and, from August 15, Fernando Lugo

Former Roman Catholic bishop Fernando Lugo (*see* BIOGRAPHIES) won a stunning victory in Paraguay's presidential election on April 20, 2008, putting an end to the Colorado Party's 61-year hold on power. Lugo defeated Blanca Ovelar, the first woman presidential candidate in Paraguayan history, by a popular vote margin of 41% to 31%. The outgoing president, Nicanor Duarte Frutos, tried to resign in late June to take a seat in the Senate, a maneuver that would guarantee him legal immunity from any subsequent investigations; after some turmoil, however, the Senate ruled that the move was unconstitutional. Lugo, who promised to redistribute land and attack entrenched patronage and corruption, was inaugurated on August 15 for a five-year term.

Miguel Rojo—AFP/Getty Images

Newly inaugurated Paraguayan Pres. Fernando Lugo makes a victory salute after taking the oath of office in Asunción on August 15.

Lugo faced massive challenges in a country in which Colorado Party functionaries still occupied nearly all posts in the judicial and administrative systems—and in which 1% of the population controlled more than three-fourths of the arable land, while 42% of the population lived in poverty. Between Lugo's election and his inauguration, peasant groups staged dozens of land invasions, particularly of soybean farms. The groups targeted soybean producers because of concerns over their use of toxic pesticides. By promising land relief, Lugo persuaded most peasant leaders to halt the invasions. Lugo's administration said it would redistribute some 8 million ha (20 million ac) allegedly seized by former dictator Alfredo Stroessner and handed out (1954–89) to his cronies.

In February Paraguay experienced its first outbreak of yellow fever in 34 years. The outbreak claimed at least nine lives and led to riots and massive movement across the country by people seeking vaccinations, which were not available. With the help of neighbouring countries, France, and the United Nations, Paraguay eventually imported more than three million doses of vaccine. The failure of Duarte's administration to be prepared for the outbreak became a major electoral issue.

In September an appeals court overturned the manslaughter convictions of Juan Pío Paiva and his son, Daniel Paiva, the owners of the Ycuá Bolaños shopping mall in Asunción where an August 2004 fire claimed at least 374 lives. Doors ordered locked to prevent looting had prevented many victims from escaping the shopping mall. A lower court had convicted the owners in February. In August an appeals court also cleared former general and presidential candidate Lino Oviedo of charges that he had planned the 1999 assassination of the country's vice president, Luis María Argaña.

(ROBERT ORTEGA)

PERU

Area: 1,285,198 sq km (496,218 sq mi)
Population (2008 est.): 28,534,000
Capital: Lima
Head of state and government: President Alan García

The year 2008 saw Peru's economy advance strongly. The country reached 9% GDP growth, with significant increases across the board in mining, agriculture, construction, manufacturing, and the entire service sector. Accompanying this growth were high public expenditures (along with increased tax revenues), strong consumer credit growth, and expanding domestic and international investment. Indeed, one notable sign of overall economic well-being emerged during the year when Peru's debt was moved up to investment grade status by major international brokerage houses such as Standard & Poor's and Fitch Ratings.

Despite these achievements, Pres. Alan García's approval ratings were at their lowest point since his inauguration in July 2006. They stood at just 19% overall in September, down from 35% in July 2007. Moreover, some deep and significant disparities existed in García's poll numbers. For example, while he received the approval of 24% of Lima's population, he registered an abysmal 7% in the southern highlands, which was Peru's poorest and most isolated region.

This extraordinary disconnect between robust macroeconomic indicators and popular perception had several causes and as many repercussions. First, while some parts of the country were booming (especially Lima but also the coast in general and the northern coast in particular), many residents of southern and highland Peru, where many of the country's indigenous peoples lived, continued to see themselves as left out. Government claims that poverty had declined significantly over the past few years fell on deaf ears. Work in the informal sector often provided only part-time employment, poor wages, and no benefits. Many Peruvians, especially in the cities, were also alarmed at the emergence of inflation that—while still relatively moderate—rekindled memories of the late 1980s and its 7,600% hyperinflation. Thus, Peru's recent economic good fortune remained as much a challenge as a good thing. Maintaining the country's impressive economic performance while distributing its benefits more equitably was a clear and necessary goal; whether it could be achieved, and how quickly, remained very much in question.

The general discontent felt in many parts of the country contributed to a large number of protests during the year. These included demands by workers in the southern region of Moquegua for the greater sharing of burgeoning mining royalties, numerous clashes between local communities and mining operations over environmental concerns, and a national strike by public-sector doctors over stalled wage increases. The inhabitants of Peru's central-southern coast around the towns of Pisco and Ica complained that reconstruction following the magnitude-8.0 earthquake that struck in August 2007 had proceeded too slowly. In addition, a variety of institutional shortcomings remained as challenges. For example, plans to decentralize Peru's unitary government and to devolve power to regional and local levels had been slowly and unevenly implemented and were plagued by claims of unpreparedness and corruption of local authorities.

A major scandal developed in October when high-ranking government officials were accused of partaking in kickback schemes involving oil-exploration contracts. As a result, García's entire cabinet resigned, and Yehude Simon, a regional governor who was not a member of García's American Popular Revolutionary Alliance, was named head of a new cabinet. The scandal revelations only damaged García's public image further.

On the international front, a maritime-boundary dispute with Chile continued to drag on with no resolution in sight, and work on the completion of a highway between Peru and Brazil was running behind schedule. More alarming, the UN Office on Drugs and Crime released a report in June confirming an increase in coca cultivation in Peru as well as in neighbouring Colombia and Bolivia. According to UN and Peruvian government estimates, plots of coca bushes covered some 51,000 ha (127,000 ac) in Peru, an increase of about a third since 1999.

On April 15 the Supreme Court upheld former president Alberto Fujimori's December 2007 conviction of having once authorized an illegal search. Fujimori's trial on a variety of other charges, including alleged human rights abuses, continued.

(HENRY A. DIETZ)

PHILIPPINES

Area: 300,000 sq km (115,831 sq mi)
Population (2008 est.): 90,227,000
Capital: Manila (some government offices and ministries are located in Quezon City and other Manila suburbs)
Head of state and government: President Gloria Macapagal Arroyo

An attempt to end decades of conflict in the southern Philippines collapsed in August 2008, and this led to intensified fighting between government forces and Muslim insurgents who sought to strengthen an autonomous Islamic state. In July the government of Philippines Pres. Gloria Macapagal Arroyo reached an ancestral domain agreement with the Moro Islamic Liberation Front (MILF). The agreement provided for an expanded homeland with greater autonomy for some four million Muslims in 700 towns and villages on the southern island of Mindanao. On August 4, however, officials from the Roman Catholic areas of Mindanao obtained a Supreme Court order temporarily blocking the formal signing of the agreement. The officials feared that the agreement would mean Muslim encroachment into their territory, and they argued that it would split the country. MILF guerrillas angrily reacted to the

Jay Directo—AFP/Getty Images

Christian and Muslim children in Quezon City join adults in October to call for an end to violence in the southern Philippines, where fighting between government forces and Muslim insurgents intensified during the year.

order by launching attacks on government forces and villages in Mindanao.

On August 21 the government announced that it had canceled the ancestral domain agreement. Intensified fighting in Mindanao caused nearly 100 deaths, and some 500,000 people fled their homes. A government offensive captured three MILF commanders blamed for the upsurge in fighting. On October 14 the Supreme Court ruled 8 to 7 that the agreement was unconstitutional. The MILF said that it would take its case to the UN as well as to the Organization of the Islamic Conference. Meanwhile, both the MILF and the government indicated that they would resume observing a cease-fire they had signed in 2003.

The head of Arroyo's security staff announced that a plot to assassinate the president and other officials and to bomb foreign embassies was uncovered in early February. The plot was blamed on the Islamic militant group Abu Sayyaf, which had been accused of having orchestrated many past bombings, kidnappings, and beheadings. The plot was disclosed shortly before protests against Arroyo were to be held in Manila and 14 other cities. Demonstration organizers charged that the government's report on the plot was simply intended to discourage and distract from the protests. Marking the anniversary of a popular uprising that ousted former president Ferdinand E. Marcos in 1986, the demonstrators demanded the ouster of Arroyo, who for several years had faced accusations of having been involved in corruption and of having improperly influenced vote counting in her presidential election victory in 2004.

After having achieved a 7.3% expansion in 2007—its fastest rate of growth in three decades—the Philippine economy suffered in 2008 from the worldwide financial crisis. Inflation soared by midyear to 11.4%, the highest rate in nine years, with a particularly worrisome surge in food prices. With the country's population growing at more than 2% annually, the government reported in March that the proportion of people living in poverty had risen from 30% in 2003 to 32.9% in 2006. Arroyo had promised to reduce poverty by 17–20% by 2010.

The interisland ferry *Princess of the Stars* capsized in a typhoon on June 1. (*See* DISASTERS.) An inquiry blamed the boat's captain for having failed to judge the storm danger correctly. Of more than 800 people aboard, only 60 survived. Because the vessel had been carrying five highly toxic pesticides as cargo, the government was forced to halt efforts to recover victims' bodies for fear that pesticides in the water could harm divers involved in the recovery effort. (HENRY S. BRADSHER)

POLAND

Area: 312,679 sq km (120,726 sq mi)
Population (2008 est.): 38,111,000
Capital: Warsaw
Chief of state: President Lech Kaczynski
Head of government: Prime Minister Donald Tusk

Throughout 2008 Poland's coalition government of the centre-right Civic Platform (PO) and rural-based Polish Peasants Party (PSL) enjoyed strong public support. Though it faced a divided opposition—the Law and Justice party (PiS) on the right and the Left and Democrats (LiD) on the centre-left—the ruling coalition lacked a sufficient majority to override a presidential veto, which became clear in August when the government's proposals to amend media law were staunched. Moreover, the government's unwillingness to pursue controversial reforms, resulting in a lack of visible achievements in its domestic policy, was often blamed on the presidential ambitions of Prime Minister Donald Tusk, the leader of the PO. Tusk's proposal to privatize the state-owned hospitals and his on-again, off-again promises of a cabinet reshuffle indicated, however, that he was trying to rectify his government's image problem.

Relations between the government and Pres. Lech Kaczynski (of the PiS) were tense from the beginning of Tusk's administration and sometimes bordered on hostility, such as Tusk's refusal to provide Kaczynski with a government airplane to fly him to the European Council meeting in Brussels in October. In January 2008 Kaczynski scorned the government's endorsement of Russia's bid to join the Organisation for Economic Co-operation and Development (OECD), and he both opposed withdrawal of Poland's military forces from Iraq and refused to sign the Lisbon Treaty on European Union (EU) organization. That these tensions went beyond foreign and security policy, in which the president's role is well defined constitutionally, into domestic matters signaled a political power struggle between the PiS and the PO. In 2008 there were also changes on the left of the political spectrum. Most notably, the Democratic Left Alliance (SLD), the largest centre-left opposition party, replaced its leader, Wojciech Olejniczak, with Grzegorz Napieralski, formerly the party's secretary-general.

From the beginning it was clear that the Tusk government's foreign policy, formulated by Minister of Foreign Affairs Radek Sikorski, would substantially differ from that of its predecessor. The foreign policy goals outlined by Sikorski in his speech to the parliament in May confirmed that the government would pursue closer cooperation with the EU (particularly with Germany) and attempt to develop a friendlier relationship with Russia by no longer opposing its negotiations with the EU on a new partnership. Sikorski also proposed a scheme for developing cooperation between the EU and Ukraine, Moldova, Georgia, Azerbaijan, Armenia, and Belarus.

The crisis in South Ossetia that in August climaxed in war between Georgia and Russia (see *Georgia*, above) inspired Kaczynski to take a strong anti-Russian stand. On August 12 he and the

Alik Keplicz/AP

Polish Prime Minister Donald Tusk (left) speaks with an army general in August at the proposed site, near the town of Redzikowo in northern Poland, for the construction of a U.S. missile defense base.

presidents of Estonia, Latvia, Lithuania, and Ukraine flew to Tbilisi to express strong support for Georgia. The Polish government also took steps to demonstrate support for the Georgian state, but its actions were much more pragmatic. Indeed, it was on Tusk's recommendation that the European Council met to discuss the Georgian crisis.

Also in August, after 18 months of tough negotiations and influenced strongly by the developments in Georgia, Poland signed an agreement with the U.S. to host 10 antiballistic interceptor missiles as part of the proposed U.S. global missile defense system. The agreement remained to be ratified by the Polish parliament and signed into law by the president; there was speculation, however, that the government might decide to delay the ratification process until after the U.S. presidential election in order to ensure that the agreement had the support of the incoming U.S. administration.

In 2008 Poland's economy continued to expand briskly, with GDP growing by 5.8% in the second quarter, slightly better than expected and only a little slower than in the first quarter. Consumer price inflation in August was 4.8%, unchanged from July. The unemployment rate in July was 9.4%, 2.8 percentage points lower than at the same time the previous year. In September the government announced that Poland would join the euro zone in 2011, earlier than expected. While it was recognized that the widening international financial crisis would likely slow Poland's economic growth in the last quarter of 2008 and in 2009, many experts believed that Poland was still a relatively safe haven in terms of economic development. (MICHAEL WYGANOWSKI)

PORTUGAL

Area: 92,090 sq km (35,556 sq mi)
Population (2008 est.): 10,649,000
Capital: Lisbon
Chief of state: President Aníbal Cavaco Silva
Head of government: Prime Minister José Sócrates

Politics in Portugal remained mostly subdued in 2008, with the Socialist Party's absolute majority in the parliament and squabbling within the main opposition Social Democratic Party (PSD) combining to facilitate the government's activities. The government continued its efforts to reduce the budget deficit while promoting growth. It was a difficult balance to achieve, however, and against the backdrop of the global financial crisis, Portuguese GDP growth stalled. While exports remained robust, they were outpaced by import growth (exacerbated by the sharp rise in fuel prices), and consumer confidence dwindled, setting the economy on track to grow less than 1% in 2008. Unemployment was essentially steady at about 7.5%, and spending cuts, combined with the weak economy, helped the budget shrink steadily, on track for a 2.2% gap for the year, well below the European Commission's 3% limit. Since Portugal's housing market had long been more stable than that of neighbouring Spain, there was little backlash from that segment, though rising interest rates over most of the year cut into consumer spending, further denting confidence. Inflation was a problem, running at just under 3% on an annualized basis, driven by the higher prices of fuel and food.

In an effort to cool inflation and boost exports, Prime Minister José Sócrates signed a series of trade agreements with Venezuela, which pledged to send crude oil to Portugal in exchange for finished goods. Galp Energia, Portugal's only oil refiner, saw its stock price soar after the Brazil-based consortium in which it held a 10% stake made a series of potentially huge crude oil discoveries in deep waters off the Brazilian coast. The Portuguese government also launched one of the world's first wave-powered generators in the rough waters off northern Portugal.

The overall economic woes meant that Sócrates's government saw its popularity fade, which political analysts said would likely make it more difficult for the Socialists to retain their parliamentary majority in the next national election, expected in late 2009. The opposition PSD was not able to make much headway, suffering a leadership battle midyear that saw former finance minister Manuela Ferreira Leite take the helm. Sócrates and his team meanwhile continued their focus on education and economic stimuli, neatly combining the two with the launch in September of a low-cost laptop computer, called the Magalhães (after the historic Portuguese maritime explorer Ferdinand Magellan). The computer was developed by a local company (JP Sá Couto) in conjunction with American chipmaker Intel and was produced entirely in Portugal. It was designed for primary-school students and would be exported to numerous countries, including Brazil, Venezuela, and Luxembourg.

The investigation into the 2007 disappearance of British toddler Madeleine McCann finally came to a controversial end as Portuguese authorities closed the case in August, more than a year after the girl went missing from a luxury resort in the southern Algarve region. The final police report cleared the parents of any culpability, reversing an earlier decision that had identified them as suspects. Another named suspect, a British citizen resident in the Algarve, was also cleared in the final report. Madeleine's parents were continuing their efforts to find her, using private investigators in Portugal and elsewhere. The case was just one factor in what many Portuguese considered to be rising crime levels in a country that prided itself on security and placid customs. Carjacking made headlines throughout the year, with one big hit netting the thieves a reported €1 million (about $1.6 million) worth of gems from a dealer who was transporting them to a trade fair. There were also a number of highly visible bank robberies, including a €2.5 million ($3.7 million) heist from an armoured currency-transport van and a bank holdup that turned into a televised drama as police snipers fired on the hostage takers, killing one. (ERIK T. BURNS)

QATAR

Area: 10,836 sq km (4,184 sq mi)
Population (2008 est.): 1,448,000
Capital: Doha
Head of state and government: Emir Sheikh Hamad ibn Khalifah al-Thani, assisted by Prime Minister Sheikh Hamad ibn Jasim ibn Jabr al-Thani

In 2008 Qatar played a leading role in brokering political disputes in other countries. In Lebanon, Qatari diplomats succeeded in ending the long-standing stalemate between Lebanon's Christian-led government and Hezbollah, the country's largest and most influential Shi'ite Muslim political party and militia group. In Yemen, where diplomatic efforts were ongoing, Qatar sought a cease-fire between an armed insurgency group in the northern part of the country and the government in Sanaa. The parties to the disputes in each of these cases acknowledged Qatar's goodwill, independence, and genuinely neutral stance as well as its willingness to extend financial assistance in implementing any agreement reached. Elsewhere, Qatar's quests for conflict resolution in the war-ravaged Darfur region of The Sudan, on the one hand, and between Eritrea and Ethiopia over a major boundary dispute, on the other, proved as elusive as had numerous efforts made by others.

Qatar's economy, which already boasted one of the world's highest per capita incomes, continued to soar as a result of increased hydrocarbon production and heightened revenues from energy exports. The country remained the world's largest producer of gas-to-liquids fuels and increasingly invested substantial surplus revenues in foreign financial institutions. In addition, in its annual Corruption Perceptions Index, the Berlin-based nongovernmental organization Transparency International ranked Qatar as the least-corrupt country in the Middle East.

Qatar's rapid economic expansion was not without its downsides. Of particular concern was a dramatic rise in inflation resulting from a combination of factors. Among the most prominent were a pronounced shortage of housing, significantly higher costs for imported skilled labour needed for new hydrocarbon and infrastructure projects, and the scarcity of construction materials, which contributed to the doubling of costs for some major development ventures. Planning authorities moved rapidly to introduce measures aimed at stemming the inflationary trends.

(JOHN DUKE ANTHONY)

A man inspects a golden vase during the opening day of the new Museum of Islamic Art in Doha, Qatar, on December 1.

Fadi Al-Assaad—Reuters/Landov

ROMANIA

Area: 238,391 sq km (92,043 sq mi)
Population (2008 est.): 21,508,000
Capital: Bucharest
Chief of state: President Traian Basescu
Head of government: Prime Ministers Calin Popescu-Tariceanu and, from December 22, Emil Boc

For much of 2008 an interlocking set of political and economic groups, often simply known as "the oligarchy," enjoyed growing influence in Romania. Parties that were alarmed by the desire of Pres. Traian Basescu to detach the justice system from political interference closed ranks in parliament to remove much of the influence that he had over domestic affairs. Parliamentary votes ensured that the 2003 constitution was reinterpreted so as to move away from a semipresidential system toward one in which parliamentary primacy was increasingly affirmed. The immunity from prosecution afforded to parliamentarians, supposedly curtailed in 2003 at the request of the EU, was restored in practice as successive votes were taken to block criminal investigation of leading political figures, including Adrian Nastase, the former prime minister (2000–04). In August the European Commission complained that the refusal of Romanian authorities to pursue high-level corruption was the main problem affecting the country's relations with the rest of the EU.

Though the EU had the power to impose sanctions on Romania for failing to bring its justice procedures into line with those of established EU members, it declined to do so. Prospects of a cleanup were set further back by the refusal in August of the justice minister to renew the mandate of Daniel Morar, the senior prosecutor whose efforts over the past three years to pursue high-level corruption had won strong praise from the EU. Nevertheless, many judges had acquitted, given derisory sentences, or postponed the cases of politicians who came before them on corruption charges.

In local elections held in June, the Social Democratic Party (PSD), the direct heir of the pre-1989 ruling communists, staged a comeback after having been written off as a serious force a few years earlier. The influence of provincial party bosses known as "the barons" contributed to the revival of the PSD.

In parliamentary elections held on November 30, no party gained an overall majority. Following prolonged talks, the two largest parties, the PSD and the Democratic Liberal Party (PDL), agreed on December 14 to form a coalition government under former prime minister Theodor Stolojan, a close ally of President Basescu. Stolojan, however, withdrew his name from consideration and Basescu appointed PDL leader Emil Boc.

The National Statistical Institute reported in September that in the second quarter Romania recorded a record 9.3% growth rate year-on-year; it was the highest pace in the 27-member EU. Much of the growth was derived from foreign investment in the property sector, however, and did not boost long-term regular employment. For the second year running, Romania was a net contributor to the EU budget despite its poverty. The €30 billion (about $40 bil-

lion) in funding that had been allocated to Romania by the EU upon the country's entry in 2007 had not been released because Romania had failed to line up enough infrastructure projects to make good use of the funds.

Following the occupation by Russian forces of parts of Georgia in August, President Basescu visited five countries in the Black Sea region, including Georgia. He emphasized that the principle of collective rights for minorities was disrupting international relations since it undermined state boundaries.

(TOM GALLAGHER)

RUSSIA

Area: 17,075,400 sq km (6,592,800 sq mi)
Population (2008 est.): 141,841,000
Capital: Moscow
Chief of state: Presidents Vladimir Putin and, from May 7, Dmitry Medvedev
Head of government: Prime Ministers Viktor Zubkov and, from May 8, Vladimir Putin

Domestic Politics. On March 2, 2008, Dmitry Medvedev (*see* BIOGRAPHIES) was elected Russia's president. He was the handpicked successor of outgoing president Vladimir Putin, who was, after two consecutive terms in office, obliged by the constitution to stand down. Putin's longtime aide and protégé, Medvedev had never before run for elected office, but Putin's endorsement ensured that he was elected in the first round of balloting. He garnered about 70% of the vote, though the fairness of the election was disputed. Europe's largest vote-monitoring body, the Organization for Security and Co-operation in Europe, canceled plans to observe the election, saying that the Russian authorities had placed unacceptable limitations on the size and duration of its mission. At the same time, there was little doubt that the majority of the Russian population supported Medvedev's candidacy. As soon as he was sworn in as president on May 7, he named Putin prime minister—a popular move.

Putin had been a hugely popular president, credited with rescuing Russia from the virtual economic disintegration of the 1990s and ensuring the country's stability and territorial integrity. High world energy prices had boosted Russia's economy and enabled its population to grow more prosperous. Above all, Putin had restored Russians' pride in their country and put Moscow back on the map as a power with which to be reckoned. On the other hand, Putin had also concentrated power in the Kremlin, muffled the political opposition, and tightened state control over the mass media. Corruption, a perennial problem, had grown during his presidency, as had state intervention in key areas of the economy.

There was much speculation about how the Putin-Medvedev tandem would work. In the past, power-sharing governments in Russia had not lasted long and had usually resulted in a ruthless struggle for political control. According to Russia's constitution, the prime minister was significantly less powerful than the president and was confined to running the economy. The president, by contrast, was head of state and commander in chief of the armed forces, with extensive powers to determine domestic and foreign policy. Moreover, the constitution empowered the president to dismiss the prime minister and government virtually at will.

Medvedev, aged 43, was the first Russian leader who had not held office in the Soviet system, and there were hopes among some that he might turn out to be a more liberal president than Putin had been. Initially, Medvedev made a series of high-profile statements that seemed to confirm that image. Campaigning for election in Krasnoyarsk in February, for example, Medvedev set out a liberal-sounding agenda that included calls to tackle corruption, reform the judiciary, and reduce the role of the state in the economy. Following the handover of power, however, it soon became clear that Putin retained the dominant role in the relationship and that Medvedev was playing the role of apprentice. Putin was not only leader of the United Russia party, which dominated the Duma (lower house of parliament), but was also Russia's most popular politician and remained the only person able to balance the competing factions within the elite. While Medvedev formally led on foreign policy—as the constitution required—events suggested that Putin was overseeing foreign and security policy as well as the economic decision making traditionally entrusted to the government. Indeed, the new foreign policy strategy that Medvedev approved in July explicitly created a new role for the government, giving it responsibility for the implementation of foreign policy. Entrusting the government with executing foreign policy, though not forbidden by the constitution, suggested that, at least for the time being, Medvedev would defer to Putin in the realm of foreign as well as domestic policy.

Once appointed prime minister, Putin lost no time in announcing his new government. While very few of these political appointees could be identified as Medvedev's confidants, Putin kept his inner circle intact, moving many of his closest associates from the Kremlin (headquarters of the presidency) to the White House (headquarters of the government). The main centre of decision making was accordingly seen as having moved from the former to the latter. On November 5, in his first state of the nation address, Medvedev called for extending the presidential term from four to six years. There was speculation that the move, which received parliamentary approval, might be intended to prepare the ground for Putin's eventual return to presidential office.

August saw the death and state funeral in Moscow of Nobel Prize-winning Russian writer and historian Aleksandr Solzhenitsyn. December 5 marked the death of the head of the Russian Orthodox Church, Patriarch Aleksey II of Moscow and All Russia. (*See* OBITUARIES.)

The Economy. Russia in 2008 recorded its 10th year of strong economic growth, with GDP projected to climb by about 7%—though a fall from the 8.1% growth recorded in 2007. At the start of the year, government leaders asserted that Russia would be immune from the financial crisis gripping other parts of the world. Russia had the advantage of a massive budget surplus and large financial and foreign-exchange reserves. In December, however, the deputy economy minister announced that Russia was in a recession and that economic growth would be lower than predicted. Putin as prime minister stressed continuity and said that his government would implement "Putin's Plan," which he had mapped out in a series of speeches over the preceding months. This scheme promised to modernize and diversify Russia's overly energy-dependent economy in an effort to turn it into one of the world's leading economies by 2020. By the autumn, however, it was clear that Russia would not escape the global financial crisis. The economy was already slowing down by midyear; a decline in manufacturing output was recorded in August; and oil and gas output also fell. Inflation, estimated at about 13% for 2008, was a source of concern. A crisis

Bela Szandelsky/AP

Georgian soldiers, blindfolded and guarded by Russian troops, are paraded atop an armoured personnel carrier in the Georgian city of Poti on August 19.

of confidence in financial markets provoked a rapid outflow of funds from the Russian stock market, forcing it to close temporarily in September and October. In part, this was attributable to the global financial crisis, but Russia suffered more than other emerging markets, owing to a decline in world oil prices and a heightened perception of political risk in Russia following Putin's public criticism in July of the Mechel Steel Co. and Russia's conflict with Georgia in August. (See *Foreign and Security Policy*, below.) Medvedev was left trying to reassure the business community that economic policies were not changing at a time when Russian business had lost billions of dollars from its market capitalization. In October the government set out a package of anti-crisis measures, which resembled those adopted in Western Europe and the U.S. Amounting to about $220 billion, or some 13% of GDP, this was a larger package relative to GDP than in any other Group of Eight country. The ruble was also repeatedly devalued late in the year.

Commentators described the government formed by Prime Minister Putin as effectively containing two "inner cabinets." One "cabinet," which was headed by First Deputy Prime Minister Igor Shuvalov (who was seen as a relative liberal), was responsible for overseeing external economic relations and foreign-trade negotiations on Russia's (still-delayed) entry to the World Trade Organization and developing small businesses (one of Medvedev's declared priorities). Also included among the relative liberals was Finance Minister Aleksey Kudrin. The other "cabinet" was headed by Putin himself and his close associate Deputy Prime Minister Igor Sechin and was seen as focussing on nurturing "national champion" companies, deemed by the leadership to be of strategic importance for national security, particularly in the energy sector. Conflict between these two camps bubbled under the surface. The arrest and detention of Deputy Finance Minister Sergey Storchak at year's end 2007 was widely interpreted as an attack by the Sechin camp on the Kudrin-Shuvalov camp; Storchak's release on bail in autumn 2008 was accordingly seen as a victory for the liberals.

In October, Russia, Iran, and Qatar announced plans to coordinate their natural gas industries in what some observers called a potential "gas OPEC." These three countries together controlled about 55% of the world's known gas reserves, but it remained to be seen how the new organization would develop in practice.

The year saw a continuation of a trend that began in 2007—that is, a sharp increase in the number of industrial protests by Russian workers. The strikes were led by "alternative" trade unions, organizations that were not affiliated with Russia's officially approved unions. This activity was significant; it came after a period of 15 years during which Russian workers had been quiescent. Pointing out that Russia's demographic crisis had begun to reduce the number of working-age males in the population, commentators suggested that the resultant shortage of skilled labour was for the first time making Russian workers conscious of their worth.

Foreign and Security Policy. Under Putin's leadership, Russia had become an assertive and self-confident player on the international stage. Tensions over Russia's demand for *droit de regard* in former Soviet territory culminated in August in five days of armed conflict with neighbouring Georgia. Moscow's relations with Tbilisi had been fraught ever since the collapse of the U.S.S.R., the flashpoint being Russia's support for Georgia's secessionist provinces, Abkhazia and South Ossetia. Tensions erupted when on August 7 the Georgian military launched a ground and air attack against the South Ossetian capital, Tskhinvali. Russia, which had peacekeepers stationed in the region, sent additional armed forces into South Ossetia and launched bombing raids against Georgia proper. The Russians went on to eject the Georgian forces from South Ossetia and occupy one-third of the territory of Georgia proper, halting not far short of Tbilisi itself. The conflict caused substantial loss of civilian life and displaced more than 100,000 people.

This was the first time that Russia had sent troops outside its territory since the U.S.S.R. occupied Afghanistan in 1979. Moscow protested that it had been compelled to act in order to protect the lives both of its peacekeepers and of those residents of South Ossetia who possessed Russian citizenship. Moscow accused Georgia of genocide and ethnic cleansing and said that it had evidence to back up its claims. After five days of fighting, the EU brokered a cease-fire on August 12, though each side subsequently accused the other of having breached the terms of the accord. The international community condemned the actions of both Georgia and Russia. The EU—Russia's largest trading partner—responded by temporarily suspending talks with Russia on a new Partnership and Cooperation Agreement (PCA), the activities of the NATO-Russia Council were also temporarily suspended. Although Medvedev announced on August 26 Russia's formal recognition of both South Ossetia and Abkhazia as independent states, Russia failed to persuade any other country—with the sole exception of Nicaragua—to recognize the breakaway provinces. Moscow also signed friendship treaties with Abkhazia and South Ossetia that included pledges of military assistance as well as diplomatic and economic cooperation. In October, following the conflict, Moscow withdrew most of its

forces, though Russian troops remained in Abkhazia and South Ossetia and in two regions of Georgia proper. On November 18 French Foreign Minister Bernard Kouchner stated that while Russia had implemented 90% of what it had pledged in EU-brokered agreements between Moscow and Tbilisi, it had not yet withdrawn its troops from 10% of the territory of South Ossetia and from part of Abkhazia. The situation remained unchanged at year's end.

Commentators interpreted the conflict as a proxy war waged by Russia to warn NATO not to grant the Membership Action Plans being sought not only by Georgia but also by Ukraine—even more sensitive from Moscow's point of view. The Georgian government accused Moscow of having aspirations to annex the two regions. Russia denied any imperial ambitions, however, and complained that NATO enlargement was intended to isolate and encircle Russia by potentially hostile states. At the end of August, following the Georgian conflict, Medvedev announced five foreign-policy priorities that would, he said, guide Russia's policy. First, Russia recognized the fundamental principles of international law. Second, the world should be multipolar; domination by any one state or bloc of states represented a threat to global stability. Third, Russia was not seeking confrontation and had no intention of isolating itself from the rest of the world. Fourth, Russia claimed the right to protect the lives and dignity of its citizens and Russia's business interests, "wherever they may be," and would respond whenever those interests were threatened. Finally, Russia, "just like other countries in the world," had "regions where it has privileged interests."

In speeches in Berlin in June and Évian-les-Bains, France, in October, Medvedev outlined Russia's plans for a "new European security architecture" stretching from Vancouver to Vladivostok. Saying that existing international institutions did not meet the needs of the moment, Medvedev called for a pact that would include "a clear affirmation of the inadmissibility of the use of force—or the threat of force—in international relations." Such a treaty would, Medvedev maintained, affirm the principle of the territorial integrity of independent countries and prevent "the development of military alliances to threaten the security of other members of the treaty." Commentators interpreted this as a reference to NATO enlargement.

Moscow continued to object to U.S. plans to deploy a missile defense system in Poland and a radar station in the Czech Republic, describing the installations as intended to weaken Russia's military capability. In his state of the nation address on November 5, Medvedev announced that if the U.S. went ahead with the planned antimissile shield, Moscow would respond by deploying short-range missiles in Russia's Kaliningrad region, situated between Poland and Lithuania. He also said that Russia would electronically jam the U.S. antimissile system.

In September Medvedev announced far-reaching plans to rearm and modernize Russia's armed forces. The Georgian conflict had served as a reminder that the Russian military lacked modern equipment and was weighed down by a top-heavy military bureaucracy. Moscow announced that by 2012 the number of personnel in uniform would fall from the current 1.13 million to 1 million. The officer corps would be reduced from 400,000 to 150,000; the posts of hundreds of generals and colonels would be cut, while the number of junior officers would increase, bringing the Russian military more closely into line with the way in which the armed forces were structured in other countries.

In October Russia ended a decades-long border dispute with China by handing over a stretch of island territory along the Amur River. Skirmishes over the territory in the 1960s caused a bitter rift between Moscow and Beijing. The ending of the dispute symbolized the warming of relations between the two countries and, in particular, their desire to establish closer economic ties.

In other news, in May Russia won the Eurovision Song Contest for the first time. Dima Bilan's performance of the rhythm-and-blues ballad "Believe" secured the prize.

(ELIZABETH TEAGUE)

RWANDA

Area: 26,379 sq km (10,185 sq mi)
Population (2008 est.): 10,009,000
Capital: Kigali
Head of state and government: President Maj. Gen. Paul Kagame, assisted by Prime Minister Bernard Makuza

Rwanda made strides toward building political unity and reconstructing its economy in 2008. Pres. Paul Kagame took every opportunity to drive home the message of "one Rwanda, one people, one future." A record 98.5% of the electorate participated in the September 15–18 general election, in which the Rwandan Patriotic Front-led coalition won a landslide victory, claiming 42 of the 53 directly contested seats in the 80-member Chamber of Deputies. A 2003 law mandated that the remaining 27 seats be indirectly elected and that, of these seats, 24 were to go to women and 3 to youth and the disabled. Women secured 45 parliamentary seats in all, which meant that the election produced the world's first national legislative body with a female majority. International observers agreed that the election was fair and well-organized.

Significant progress was made in realizing a series of ambitious economic reforms. Government goals aimed to transform the landlocked country, which lacked oil and minerals, into a trade and technology centre. The EU, the Clinton-Hunter Development Initiative, and various international agencies sponsored poverty-reduction and development programs in Rwanda. Other advances included the establishment of a securities exchange in Kigali and a cell-phone assembly plant, the first of its kind in Africa.

As economic and political conditions improved, the local gacacas ("traditional courts"), which had been convened in 2002 to help alleviate the backlog of cases involving Rwanda's 1994 genocide, worked toward concluding the genocide trials by year's end. By the beginning of 2008, some 1,000,000 people had gone before these courts, of whom 800,000 had been tried. On December 18 the International Criminal Tribunal for Rwanda (ICTR) issued its first convictions for the organization of the genocide. Former army colonel Théoneste Bagosora was sentenced to life imprisonment for having masterminded the killings. Two codefendants, former military commanders Anatole Nsengiyumva and Aloys Ntabukuze, also received life sentences. Altogether the ICTR had convicted 34 persons and acquitted 6; still awaiting trial were 9 detainees. Meanwhile, the UN extended the mandate of the ICTR to Dec. 31, 2009.

In February, U.S. Pres. George W. Bush made Rwanda his third stop on his six-day Africa tour. In an emotional

Jim Watson—AFP/Getty Images

U.S. Pres. George W. Bush relaxes with members of the entertainment committee after the February inauguration of the new U.S. embassy in Kigali, Rwanda.

address, Bush compared the violence taking place in the Darfur region of The Sudan to the 1994 genocide. He promised $12 million in military assistance to train an additional 2,400 Rwandan peacekeeping troops to augment the already-existing force of 7,000 in Darfur. Bush also signed a bilateral investment treaty, pledged to help fight AIDS in Rwanda, and announced the return of an active Peace Corps program to the country. (LARAY DENZER)

SAINT KITTS AND NEVIS

Area: 269 sq km (104 sq mi)
Population (2008 est.): 51,300
Capital: Basseterre
Chief of state: Queen Elizabeth II, represented by Governor-General Sir Cuthbert Montraville Sebastian
Head of government: Prime Minister Denzil Douglas

Like most other Caribbean territories that were not hydrocarbon producers, Saint Kitts and Nevis was actively pursuing nontraditional energy sources, and in January 2008 a company called West Indies Power launched a drilling program in Nevis to access geothermal energy. The company expected to drill five wells, which were forecast to provide enough steam to produce the 50 MW of power that Nevis needed.

Prime Minister Denzil Douglas insisted in January that Saint Kitts and Nevis had no intention of severing diplomatic relations with Taiwan in favour of those with China. A new embassy was opened in Taipei the same month. In 2008 Saint Kitts and Nevis was one of the few Caribbean states that continued to recognize Taiwan in preference to China.

In April the government described as "outrageous and unjustifiable" the call by the U.S.-based organization People for the Ethical Treatment of Animals (PETA) for tourists to boycott the country. PETA claimed that the local Ross University School of Veterinary Medicine "deliberately" mutilated animals as part of the teaching process, but the government insisted that the school violated no laws governing the treatment of animals.

In September, Saint Kitts and Nevis celebrated the 25th anniversary of its independence from the U.K. That same month, the government issued a statement that it remained determined to carry out court-ordered sentences of death by hanging. The first execution took place on December 19. (DAVID RENWICK)

SAINT LUCIA

Area: 617 sq km (238 sq mi)
Population (2008 est.): 171,000
Capital: Castries
Chief of state: Queen Elizabeth II, represented by Governor-General Dame Pearlette Louisy
Head of government: Prime Minister Stephenson King

The government of Saint Lucia announced in January 2008 that it was holding discussions with American oil company Hess Corp. to add a refinery to its long-standing oil-transshipment terminal in the country. (In July 2007 the 30-year-old license for the latter had been extended for 50 years.)

Commerce Minister Guy Mayers announced in March that the government had accepted a Cuban proposal that Saint Lucia become the hub for the transit of Cuban-made goods to the eastern Caribbean. Transportation between the two countries would be upgraded, and Air Cubana would convert some of its older aircraft to cargo planes for airlifting the mostly light goods involved.

In July the World Bank approved an additional $3 million to help lessen Saint Lucia's vulnerability to natural disasters by means of improved disaster preparedness and mitigation planning. The next month, Saint Lucia decided not to participate in Operation Airbridge, a U.K.-funded drug-eradication and interdiction program, on the grounds that it would put "severe pressure" on the country's prison and justice system. Mayers, who had taken over as home affairs national security minister in a June cabinet reshuffle, argued that any successful campaign to intercept drug traffickers could increase the already-overburdened prison population by about 25%. (DAVID RENWICK)

SAINT VINCENT AND THE GRENADINES

Area: 389 sq km (150 sq mi)
Population (2008 est.): 106,000
Capital: Kingstown
Chief of state: Queen Elizabeth II, represented by Governor-General Sir Frederick Ballantyne
Head of government: Prime Minister Ralph Gonsalves

A Saint Vincent and the Grenadines High Court judge in March 2008 upheld the decision of the director of public prosecutions (DPP) not to proceed with rape and indecent assault charges against Prime Minister Ralph Gonsalves. Attorneys representing a 36-year-old policewoman said that they would appeal the ruling. In April another sexual-assault charge against Gonsalves, this one by a Vincentian

woman living in Canada, was also dropped by the DPP.

The government defended its decision in May to increase gasoline and other transportation fuel prices because the current level of subsidy ($600,000 a month) was "clearly unsustainable." The prime minister in May condemned those critics who, he said, wanted to portray Venezuelan Pres. Hugo Chávez as a "monster." Gonsalves made the comment shortly after the arrival from Venezuela of millions of dollars worth of construction equipment for the new $200 million international airport in Saint Vincent and the Grenadines. Those "demonizing" Chávez, Gonsalves added, were not helping Saint Vincent and the Grenadines with the project. Gonsalves announced in July that another benefactor, Taiwan, would also help fund the airport. (DAVID RENWICK)

SAMOA

Area: 2,831 sq km (1,093 sq mi)
Population (2008 est.): 180,000
Capital: Apia
Chief of state: *O le Ao o le Malo* (Head of State) Tuiatua Tupua Tamasese Efi
Head of government: Prime Minister Tuila'epa Sa'ilele Malielegaoi

Samoa's economic growth slowed to 3% in 2008 as the country confronted higher fuel and food prices. Food security again became a national issue, with politicians urging Samoans to increase production of traditional staples to counter growing dependence on imported foodstuffs. Banks were encouraged to lend to the primary sector to increase local food production.

Samoa's Human Rights Protection Party government, secure with an ever-larger majority in the Legislative Assembly and a disorganized opposition, passed legislation to change the side of the road on which vehicles drive, beginning in September 2009. Prime Minister Tuila'epa Sa'ilele Malielegaoi argued that the change to driving on the left side of the road would bring Samoa's traffic laws into alignment with those in Australia and New Zealand and would allow expatriate Samoans to purchase cheaper right-hand drive vehicles in those countries for relatives in Samoa.

Opponents of the switch, which would lead to the gradual replacement of the nation's vehicle fleet and would cost hundreds of millions of dollars, contended that it was too expensive and would lead to confusion and to an increase in road accidents and deaths. By late July public opposition to this move had spawned a new broad-based political faction, the People's Party, but it was unlikely to have significant political impact until the next national elections, to be held in 2011. (CLUNY MACPHERSON)

SAN MARINO

Area: 61.2 sq km (23.6 sq mi)
Population (2008 est.): 31,000
Capital: San Marino
Heads of state and government: The republic is governed by two *capitani reggenti,* or coregents, appointed every six months by a popularly elected Great and General Council.

There was mixed news in 2008 about San Marino's full compliance with stringent legislation on money laundering. During recent years San Marino had sought to apply European Union standards of transparency and equivalent United Nations requirements. The country also adhered to the relevant Council of Europe conventions, with good results. A report in May, however, by the European Committee on Crime Problems, was not entirely favourable in its assessment.

The financial markets' good bill of health was matched by continued economic growth. GDP increased by more than 6% in one year, an extraordinary result, considering the sluggish economy of European countries in general. San Marino's robust economic performance translated into high levels of remuneration and solid employment rates, with fewer than 300 workers reported unemployed. This excellent short-term performance was accompanied by concerns regarding the future of pensions in a country with a high percentage of elderly residents. To ensure long-term sustainability, government authorities envisioned reforms that would provide more room for private retirement funds.

The ruling coalition collapsed in June, and a snap election for the 60-seat Grand and General Council was held on November 9. The Pact for San Marino—a coalition of former opposition parties, including the new progressive party Arengo and Freedom—won 54.22% of the vote and 35 seats. (GREGORY O. SMITH)

SÃO TOMÉ AND PRÍNCIPE

Area: 1,001 sq km (386 sq mi)
Population (2008 est.): 160,000
Capital: São Tomé
Chief of state: President Fradique de Menezes
Head of government: Prime Ministers Tomé Vera Cruz, Patrice Trovoada from February 14, and, from June 22, Joaquim Rafael Branco

New hope for political stability arose in São Tomé and Príncipe in February 2008 when the opposition Independent Democratic Action party joined the governing coalition and its secretary-general, Patrice Trovoada, became the new prime minister. Only three months later, however, the new coalition government lost a parliamentary vote of confidence after Trovoada was accused of corruption. Portugal, the country's main donor, responded by postponing its debt pardon, which the IMF had approved in 2007, and its finance minister canceled a visit to the archipelago. In December a corruption trial involving former prime minister Maria das Neves, among others, was adjourned.

Since his reelection in 2006, Pres. Fradique de Menezes had tried to secure more powers for his office; in 2008 he called for the legislative elections scheduled for 2010 to be brought forward. The armed forces, business community, trade unions, and other groups responded that an early election would be costly and could pose a risk to political stability. Bowing to pressure, Menezes asked the leader of the former ruling party, the Movement for the Liberation of São Tomé and Príncipe–Social Democratic Party, to form a new government. One of Prime Minister Rafael Branco's first acts after taking office was to sign onto a submarine cable project with Portugal Telecom. (CHRISTOPHER SAUNDERS)

SAUDI ARABIA

Area: 2,149,690 sq km (830,000 sq mi)
Population (2008 est.): 24,780,000
Capital: Riyadh
Head of state and government: King Abdullah

Saudi Arabia's King Abdullah made international headlines in July 2008 when he convened a three-day interfaith conference in Madrid that was attended by more than 200 religious and political leaders from around the world. The conference, which marked the first time that a Saudi ruler had invited Jewish clerics to participate in a religious meeting, was aimed at developing mutual understanding and tolerance between the followers of different faiths. The conference, however, did not sit well with some local clerics in Saudi Arabia, who regarded the meeting as an attempt to equate Islam with other religions. The Saudi king attended a second interfaith meeting in November in New York City. At the beginning of June, nearly two dozen official Saudi clerics made headlines of their own when they issued a statement that strongly condemned Shi'ite Muslims and alleged that Hezbollah's true intent was to wage war not on Israel but rather on Sunni Muslims. Although the statement was broadcast in the Saudi media, it was not signed by Saudi Arabia's grand mufti. In November Saudi authorities banned two books of the late Sayyid Qutb, a prominent figure in the religio-political organization Muslim Brotherhood, and removed his works from school libraries.

Relations between Riyadh and Washington, D.C., witnessed a degree of friction during the year. U.S. Pres. George W. Bush visited the country in January and made a return trip in May; on both occasions he urged Saudi Arabia—as well as other OPEC states—to increase oil production in order to help bring high oil prices down. The Saudis, however, dismissed the U.S. position that crude oil supplies were responsible for the surge in oil prices, instead arguing that supply was meeting demand and that the high prices thus stemmed from reasons other than market fundamentals. Saudi Arabia did agree in May to raise oil production an additional 300,000 bbl per day but maintained that the move was in response to customer demand and not to the request by President Bush. In any case, this issue receded as oil prices plummeted later in the year. In mid-August there was relief in Riyadh after a U.S. federal appeals court upheld a lower court's decision to throw out a lawsuit brought by families of victims of the Sept. 11, 2001, terrorist attacks; the lawsuit had attempted to hold the Saudi government responsible for the attacks.

On the economic front, Saudi Arabia continued to enjoy ample revenues from the sale of crude oil. A joint-exploration venture between Royal Dutch Shell and the state-owned oil company Saudi Aramco in the vast Rub' al-Khali desert reportedly yielded a new natural gas discovery in August, although some industry sources cast doubt on the significance of the find. Also in August, Riyadh announced that nonresident foreign investors would be allowed to buy shares of domestic stocks through licensed Saudi intermediaries; this move was perceived as a major step toward opening up the Saudi stock market completely. On the negative side, there were reports of widening income inequality between the various classes that made up the Saudi population. Although inflation ran at 10% during the year, the government increased wages by only 5%. (MAHMOUD HADDAD)

King Abdullah of Saudi Arabia walks beside King Juan Carlos of Spain upon arriving in Madrid on July 15 for a three-day interfaith conference.

Reuters/Landov

SENEGAL

Area: 197,021 sq km (77,070 sq mi)
Population (2008 est.): 12,688,000
Capital: Dakar
Chief of state: President Abdoulaye Wade, assisted by Prime Minister Cheikh Hadjibou Soumaré

Despite the assassination in 2007 of Samsidine Dino Némo Aïdara—Senegalese Pres. Abdoulaye Wade's peace envoy in Casamance—government officials in 2008 insisted that the peace process in that troubled region would not be stopped. Hard-liners of the separatist Movement of Democratic Forces of Casamance (MFDC) launched a raid in early May on villagers who were attempting to bring in the cashew harvest. The rebels chopped off the ears of at least 16 villagers. The army began new operations near the Guinea-Bissau border. On May 20 the MFDC ambushed a patrol in Djibidione, killing two soldiers; an unknown number of MFDC adherents also died.

Poor rains and escalating global food prices resulted in high levels of malnutrition, particularly in the northeast. President Wade attacked the Food and Agriculture Organization policy of retaining 20% of the private donations that were destined for African countries

Three men whose left ears were cut off by rebels in Senegal's troubled region of Casamance wait for medical attention in a hospital emergency room on May 7.

Georges Gobet—AFP/Getty Images

facing a food crisis. He threatened to sue the FAO for having failed in its role of preventing famine. Approximately two million Senegalese were facing food shortages.

On July 29 the National Assembly voted to extend presidential terms from five to seven years, effective from 2012. Opposition parties severely criticized the move; the extension would not affect President Wade, however, who was due to stand down that year.

(NANCY ELLEN LAWLER)

SERBIA

Area: 77,498 sq km (29,922 sq mi) (excluding Kosovo)
Population (2008 est.): 7,352,000
Capital: Belgrade
Chief of state: President Boris Tadic
Head of government: Prime Ministers Vojislav Kostunica and, from July 7, Mirko Cvetkovic

International relations dominated the news in Serbia for much of 2008. On February 17 the southern province of Kosovo formally declared its independence from Serbia. (See *Kosovo*, above.) The United Nations in October approved Serbia's request that the International Court of Justice rule on the legality of Kosovo's independence. By year's end 53 countries had recognized Kosovo. Meanwhile, Serbia supported Serbs in northern Kosovo who challenged the new Kosovar government.

At the same time, Serbia made increased efforts toward European integration. The Serbian parliament ratified the Stability and Association Agreement, a required step toward consideration for European Union membership. The country also cooperated with the International Criminal Tribunal for the Former Yugoslavia (ICTY); in July Serbian authorities arrested Radovan Karadzic, the former leader of the Bosnian Serb Republic whom the ICTY had indicted in 1995 for war crimes. Prime Minister Mirko Cvetkovic noted that Serbia had extradited 44 out of 46 suspected war criminals sought by the ICTY and pledged to apprehend Bosnian Serb Gen. Ratko Mladic and Goran Hadzic, former leader of Croatia's Krajina Serbs. A report by the EU, however, noted that Serbia still needed to reform its judicial system, to combat widespread corruption, and to take stronger action against money laundering, drug abuse, and human trafficking. International monitors also criticized the country's lack of comprehensive antidiscrimination laws. There was a rising tide of attacks on Serbia's minorities in the Vojvodina and Sandzak regions. Moreover, according to the government, Serbia held 97,000 officially registered refugees—a record number for Europe—with an additional 500,000 people "facing hardships linked to refugee status."

Pres. Boris Tadic, leader of the pro-EU Democratic Party (DS), was reelected in February with 50.5% of the vote in the second round of polling. Tadic defeated Serbian Radical Party candidate Tomislav Nikolic, who, after being ousted by party leaders in September, went on to establish the Progressive Party. May parliamentary elections were won by the DS-led bloc For a European Serbia, which in July established a broader coalition with the Socialist Party of Serbia and several national minority parties (led by the country's Hungarians, Bosniacs, Croats, and Albanians) to form a pro-European government headed by Cvetkovic.

Observers expressed optimism that Tadic and the new coalition government would continue to push forward economic stimulus plans, which would aid the country's progress toward membership in the EU. Several economists called Serbia a "Balkan tiger" because it had its third consecutive year of growth of more than 6%. Monthly salaries and wages between January and October 2008 were 18.96% higher (4.63% higher in real terms) than they had been during the same period in 2007. Nevertheless, unemployment remained high during the year, at around 14%.

The most significant contributors to growth continued to be transportation, retail trade, and the financial, construction, and food processing industries. In August, Serbia requested €4.14 billion (about $6.29 billion) in international loans for the development of a

Suspected war criminal Radovan Karadzic, the former leader of the Bosnian Serb Republic, is shown (left) while still in office in 1996, (centre) as a fugitive in an undated photo, and (right) while making his initial appearance before the International Criminal Tribunal for the Former Yugoslavia on July 31.

Healthy Life Magazine/AP

modern rail network. The project would extend the construction of a large motorway and rail network linking Serbia with Croatia, Hungary, Romania, and Bulgaria. Serbia also approved the sale of 51% of its major oil company, NIS, to the Russian energy giant Gazprom and agreed to host a portion of Russia's planned South Stream natural gas pipeline. Serbia's Zastava automobile manufacturer assembled its last Yugo in November, and Italy's Fiat began production in the country.

Commerce with EU countries made up more than half of Serbia's foreign trade. The privatization of state-owned companies, which were seen as financially unstable, impeded foreign trade and investment, however. The trade deficit rose 29.2% between January and November. (MILAN ANDREJEVICH)

SEYCHELLES

Area: 455 sq km (176 sq mi)
Population (2008 est.): 85,500
Capital: Victoria
Head of state and government: President James Michel

The Seychellois economy continued on its downward slump in 2008, a trend that had been exacerbated during the year by a spike in oil and commodity prices and the global food crisis. (*See* Special Report on page 182.) Amid growing concern over the economy's poor performance, the Seychelles government entered into a debt-restructuring program with the aim of alleviating the $800 million debt burden, which accounted for 175% of the nation's GDP and was one of the highest in the world. Pres. James Michel represented the group of Small Island Developing States before the UN General Assembly in September; he appealed to the Assembly to reprioritize global environmental and trade agreements in order to reverse the developmental stumbling blocks many small island nations faced.

In late January, after having served more than 30 years on the bench, Vivekanand Alleear resigned his post as chief justice of the Supreme Court. Alleear was appointed to the island nation's highest judicial position in 1994. President Michel confirmed the appointment of Judge Andrew Ranjan Perera as chief justice on August 5 upon the recommendation of the Constitutional Appointments Authority, the body responsible for proposing candidates for the vacant position. In other news, a spate of piracies off the Somalian coast beginning in January forced some 50 commercial and passenger ships to seek refuge in the Seychelles. (MARY EBELING)

SIERRA LEONE

Area: 71,740 sq km (27,699 sq mi)
Population (2008 est.): 5,969,000
Capital: Freetown
Head of state and government: President Ernest Bai Koroma

The economic situation in Sierra Leone remained grim in 2008. More than 70% of the country's population lived below the poverty line; the UN ranked the country as the second least developed in the world; and an estimated two-thirds of its youth were unemployed. The country had the world's highest rate of child and maternal mortality: one-quarter of the children died before their fifth birthday, and a woman's risk of dying during pregnancy or childbirth was one in eight.

Nevertheless, there were signs of progress. Despite isolated outbreaks of civil unrest, the political situation achieved sufficient stability for a reduction in the UN peacekeeping presence from 17,000 soldiers to fewer than 300. Orderly local government elections took place on July 5. Altogether 475 councillors were elected in 394 wards, with the ruling All People's Congress making a strong showing. Women's participation increased significantly; the percentage of women councillors rose from 11% to almost 19%. The new ward councils were confronted with the challenge of delivering badly needed services and equitable representation to constituencies still coping with a ruined infrastructure, massive displacement of people, and an entrenched traditional chieftaincy system. They also faced the uphill task of reforming outmoded colonial laws inherited from the British.

Corruption remained an intractable problem. The country slipped eight places from 2007's placement in Transparency International's annually published Corruption Perception Index, dropping to the unenviable position of 158 (out of 180). To address this, the legislature in May empowered an independent anticorruption commission to investigate corruption cases and develop policy. Pres. Ernest Bai Koroma, who had won the 2007 election on an anticorruption platform, set an example for public officials by becoming the first Sierra Leonean head of state to declare his assets to the new commission. He also suspended Transport Minister Ibrahim Kemoh Sesay in August in connection with a drug investigation in which the minister's brother had been arrested. The investigation, which involved the seizure of some 700 kg (1,540 lb) of cocaine, with an estimated value of $54 million, followed warnings from both the U.S. and the UN of collaboration in Sierra Leone between police and drug traffickers. Meanwhile, the Special Court for Sierra Leone asked the U.K. for help in locating an estimated $650 million believed to have been looted by former Liberian president Charles Taylor, who was being tried at The Hague on charges that included the funding of rebels in Sierra Leone while he was in office.

(LARAY DENZER)

SINGAPORE

Area: 707 sq km (273 sq mi)
Population (2008 est.): 4,839,000
Head of state: President S.R. Nathan
Head of government: Prime Minister Lee Hsien Loong

In Singapore 2008 would be remembered as a year with more than its regular share of memorable events. In June the city-state recorded its highest population level ever, at nearly 4.84 million. In August citizens rejoiced when three Singaporean table tennis players won the women's team silver medal at the Beijing Olympic Games. They were Singapore's first Olympic medalists since 1960. In another first, Prime Minister Lee Hsien Loong delayed by 24 hours the telecast of his annual state of the nation address rather than compete for viewers with the televised final

match. The next month the island republic became the site of auto racing's first Formula 1 Grand Prix night race.

On a more controversial note, February saw the escape of Jemaah Islamiyah terrorist Mas Selamat Kastari from the Whitley Road Detention Centre. It was the first time that anyone had escaped from the centre, which housed those detained under the Internal Security Act. A national uproar ensued, and there were calls for the resignation of the home affairs minister and for a detailed accounting of the event. A commission of inquiry was set up and reported its findings to Parliament in April.

Equally controversial was the Ministry of Health's introduction of a law, likely to be passed in 2009, to allow the monetary "reimbursement" of kidney transplant donors. The compensation would cover the donor's costs but would not be enough to induce donations.

Inflation surged in the first half of the year to a peak of almost 7%, a 25-year high. As the prices of basic foodstuffs such as rice and cooking oil escalated sharply, some hoarding began to take place. By the later part of the year, however, recession had replaced inflation as the biggest worry. Singapore became the first country in Southeast Asia to record a technical recession (defined as two fiscal quarters of contraction) in 2008; its extremely open and trade-dependent economy made it vulnerable to economic slumps in the United States and Europe. The government responded with characteristic swiftness and on November 21 announced a S$2.3 billion (about U.S.$1.5 billion) package to help save jobs and ease access to credit for companies. The measures were also characteristically hard-headed; grants for affected workers would be conditional on the workers' enrollment in courses to learn new skills. Even then the grants would be awarded on a discretionary, case-by-case basis. (CHUA LEE HOONG)

Spanish race car driver Fernando Alonso speeds past the Old Court House in Singapore on September 28 en route to winning the first Formula 1 Grand Prix race ever held at night.

Wong Maye-E/AP

SLOVAKIA

Area: 49,034 sq km (18,932 sq mi)
Population (2008 est.): 5,401,000
Capital: Bratislava
Chief of state: President Ivan Gasparovic
Head of government: Prime Minister Robert Fico

The most important development for Slovakia in 2008 was the approval of the country's entry into the euro zone as of Jan. 1, 2009. Despite skepticism over Slovak inflation prospects, European Union authorities backed the move mid-year, and the final conversion rate was set at 30.126 koruna per euro, a much stronger rate than was originally expected. Although many Slovaks also feared that euro adoption could negatively affect inflation, the accession was a source of pride. Slovakia would be the second EU state in the former communist bloc—after Slovenia—to be admitted to the euro zone.

In February, Prime Minister Robert Fico received yet another boost from abroad when the Party of European Socialists (PES) readmitted his party, Smer ("Direction"). The PES, an umbrella group for left-wing parties within the EU, had suspended Smer's membership after the 2006 elections, when Fico formed a coalition government with two parties—the Slovak National Party (SNS) and the People's Party–Movement for a Democratic Slovakia (LS-HZDS)—that were seen as outside the European mainstream. According to the PES, the decision to restore Smer's membership was based on Fico's demonstrated social-democratic orientation and commitment to minority rights. Hungary, however, continued to see the SNS's presence in the Slovak cabinet as a threat to Slovakia's ethnic Hungarians, and bilateral tensions flared in late 2008.

From a political standpoint, Slovakia was quite stable in 2008; the three ruling parties continued to register strong public support, while the opposition struggled to find its voice. The government was not without scandal, though; three ministers were replaced, and calls were made for the resignation of several others. Still, the opposition had few tools to use against the ruling coalition, particularly since the economy continued to perform relatively well, benefiting from reform measures taken during the 2002–06 term.

One issue of particular concern was a controversial press bill that the opposition believed would limit pluralism. The opposition parties vowed to block the ratification of the EU's Lisbon Treaty as long as the government insisted on the passage of the press bill. After several months of wrangling, however, the opposition's tactics failed; the parliament backed both documents in April, and one of the three opposition parties ended up voting in favour of the treaty.

In the first months after the international financial crisis struck, the Slovak economy held up well; several foreign investors ramped up production, and falling unemployment and rising wages drove household demand. Nevertheless, leading companies warned that the business environment was deteriorating under Fico. (SHARON FISHER)

SLOVENIA

Area: 20,273 sq km (7,827 sq mi)
Population (2008 est.): 2,029,000
Capital: Ljubljana
Chief of state: President Danilo Turk
Head of government: Prime Ministers Janez Jansa and, from November 21, Borut Pahor

Slovenia presided over the Council of the European Union (EU) during the first half of 2008; it was the first post-communist country to hold the EU presidency. During its tenure Slovenia led efforts to ratify the Lisbon Treaty, which would streamline the workings of the EU; to renew the Lisbon Strategy, an EU economic development plan; and to establish the Ljubljana Process, which would accelerate cooperation between European research institutions. Slovenia cochaired several EU summits during its presidency, including one with the United States on June 10 in Brdo pri Kranju. The meeting addressed climate change, trade, terrorism, and the diversification of energy sources.

Relations with neighbouring states were generally positive. On March 5 the Slovenian parliament recognized the independence of Kosovo. Slovenia's border disputes with Croatia remained unresolved, however.

The centre-left Social Democrats (SD) narrowly won the September 21 parliamentary elections, edging out Prime Minister Janez Jansa's Slovenian Democratic Party (SDS) by a slim 30.45% to 29.26%. The centre-right government had been weakened by the economic downturn and an inflation rate of 6%, as well as by reports from the Finnish Broadcasting Company that Jansa and other officials had taken bribes before approving the purchase of armoured vehicles from Finnish defense contractor Patria Oyj in 2006. (The Jansa government rejected the allegations, and the reports were under investigation in Finland and Slovenia.) The SD eventually formed a four-party coalition government, and SD leader Borut Pahor was named prime minister.

The global financial crisis dominated economic news, with the Slovenian stock-exchange index SBI 20 plunging about 67% during the year. In June the Vienna Stock Exchange acquired an 81% stake in the Ljubljana Stock Exchange. Agricultural production suffered as severe summer storms damaged an estimated 20% of farmland across Slovenia.

The year saw several developments in the realm of higher education. The Euro-Mediterranean University, an international network of universities, was founded in Portoroz on June 9. On September 11 the Slovenian Bishops' Conference inaugurated the Catholic Institute, expected to evolve into Slovenia's first Roman Catholic university. The New University, a private institution based in Nova Gorica and Brdo pri Kranju, was established on September 29.

In other news, at the Summer Olympics in Beijing, Primoz Kozmus earned a gold medal in the men's hammer throw competition. It was Slovenia's first Olympic gold in a track-and-field event. (JOSEPH VALENCIC)

SOLOMON ISLANDS

Area: 28,370 sq km (10,954 sq mi)
Population (2008 est.): 517,000
Capital: Honiara
Chief of state: Queen Elizabeth II, represented by Governor-General Sir Nathaniel Waena
Head of government: Prime Minister Derek Sikua

Solomon Islands Prime Minister Derek Sikua's new government enjoyed rare stability in 2008, with 38 of the 48 MPs agreeing to support his development program and to refrain from no-confidence votes. In an indication of growing support for both his broad-based political program and his personal leadership style, Sikua's government easily defeated its first no-confidence motion in August.

The Regional Assistance Mission to Solomon Islands (RAMSI) continued to guarantee the country's security. RAMSI also provided technical assistance to rebuild the Solomons' governance structures, civil service, and economy, all of which were proceeding well. Relations between Australia, a major aid donor, and the Solomon Islands government improved in 2008 as new governments assumed power in both countries. Structural-adjustment policies promoted by aid donors were beginning to create difficulties, as the new schemes would require a greater degree of fiscal discipline on the part of government agencies that were unaccustomed to such restraint.

In early September former prime minister Sir Allan Kemakeza's two-month jail sentence, handed down in late 2007 for crimes committed in 2002 while he was prime minister, was increased to six months by Chief Justice Sir Albert Palmer. Kemakeza had been convicted on charges that included "demanding with menace, intimidation and larceny" in regard to authorizing militants to attack and seize vehicles owned by an Honiara law firm, and Palmer's ruling was in response to the prosecution's appeal that the original sentence was inadequate. Kemakeza also was stripped of his current position as minister for forestry, environment, and conservation and was deprived of his seat in Parliament.
(CLUNY MACPHERSON)

SOMALIA

Area: 637,657 sq km (246,201 sq mi), including the 176,000-sq-km (68,000-sq-mi) area of the unilaterally declared (in 1991) and unrecognized Republic of Somaliland
Population (2008 est.): 8,956,000 (including roroughly 3,700,000 in Somaliland); at the beginning of the year, more than 450,000 refugees were in neighbouring countries, Europe, or the United States
Capital: Mogadishu; Hargeysa is the capital of Somaliland
Head of state and government: Somalia's transitional government comprised Presidents Abdullahi Yusuf Ahmed and, from December 29, Sheikh Aden Madobe (acting), assisted by Prime Minister Nur Hassan Hussein

Though news about Somalia had largely disappeared from the headlines in 2008, the country remained wracked by violence and anarchy. In 2007 Somalia had become the focus of international attention when war broke out between the country's Transitional Federal Government (TFG) and the Islamic Courts Union (ICU), a fundamentalist Islamic movement that had seized control of much of the country. The ICU was poised to topple the TFG, but the Ethiopian army, with support from the United States, intervened and routed the ICU's militias. Ethiopian troops remained in the country, while remnants of the ICU joined forces with local clans and other armed groups to mount an insurgency. An African Union peacekeeping force, composed of 2,600 troops from Uganda and Burundi, continued to operate in Somalia, but that force had been unable to stop the fighting and was limited to providing VIP escorts and guarding the presidential residence, airport, and seaport in Mogadishu, the country's capital.

Off the coast of Somalia in October, pirates and their hostages wait on the deck of a captive Ukrainian cargo ship following a request by the U.S. Navy to check on the hostages' health.

Jason R. Zalasky, HO—U.S. Navy/AP

The fighting produced a massive humanitarian disaster. Most of the violence was concentrated in Mogadishu, where mortar fire, roadside bombs, and armed ambushes became a daily occurrence and there were occasional suicide bombings. An estimated 20,000 residents fled the city monthly, and as many as one person in eight in the southern and central regions of the country was a refugee. In March 2008 the International Committee for the Red Cross reported that many of the refugee families were surviving on less than one meal a day. Food prices in Somalia were soaring, partly owing to the emerging global food crisis and partly because the country, which was heavily dependent on agriculture, was in the midst of a severe three-year drought. International and Somali aid workers suffered increasing attacks from combatants on all sides. Somalia was one of the most dangerous humanitarian operations in the world.

Somalia had been without a functioning government since the collapse in 1991 of Mohammed Siad Barre's dictatorship, and prospects for restoring law and order in the country remained bleak. In August 2008 the TFG and representatives of the insurgency signed the Djibouti Agreement, a UN-brokered peace treaty calling for a cessation of hostilities, withdrawal of Ethiopian forces, and implementation of a UN peacekeeping force. Factions on both sides strongly opposed the agreement, and in September the UN Security Council voted against sending peacekeepers to Somalia. Although an October accord sought to resuscitate prospects for peace, it was hampered by weak language and strong opposition among some insurgency factions. As part of an internal power struggle, Pres. Abdullahi Yusuf Ahmed in December attempted to replace Prime Minister Nur Hassan Hussein. The TFG parliament sided with Nur, however, and on December 29 Yusuf resigned and was replaced as acting president by Sheikh Aden Madobe, speaker of the parliament.

The United States initially supported the Ethiopian occupation out of fear that Somalia might become a haven for terrorists. That strategy apparently backfired as the ongoing violence led to rising radicalism and anti-Western sentiment among a populace that increasingly blamed Ethiopia and its U.S. backers for the continuing strife. All of these developments gained little attention in the international press, which instead focused its coverage of Somalia primarily on an increase of piracy off the Somalian coast, which resulted in the hijacking of several international shipping vessels. (EBEN KAPLAN)

SOUTH AFRICA

Area: 1,220,813 sq km (471,359 sq mi)
Population (2008 est.): 48,783,000
Capitals (de facto): Pretoria (executive); Bloemfontein (judicial); Cape Town (legislative)
Head of state and government: Presidents Thabo Mbeki, Ivy Matsepe-Casaburri (acting) on September 25, and, from September 25, Kgalema Motlanthe

Domestic Affairs. South Africa struggled with "two centres of power" in the country in 2008, following the election of Jacob Zuma (*see* BIOGRAPHIES) as president of the African National Congress (ANC) to replace South African Pres. Thabo Mbeki at the ANC's 2007 conference in Polokwane. The situation was brought to a dramatic end in September 2008, however, when President Mbeki was forced by a decision of the ANC national executive committee (NEC) to resign.

In July Kgalema Motlanthe, the deputy president of the ANC, was appointed to the cabinet. The move was widely seen as preparing for the transition in 2009 from an Mbeki to a Zuma presidency and establishing a new candidate for president should Zuma be unable to assume the position because of his legal difficulties.

In September the Natal High Court, while not pronouncing on the merits of the case against Zuma on charges of corruption and fraud, decided that the prosecution had acted unconstitutionally in not consulting Zuma before recharging him and also significantly upheld Zuma's claims that there had been political interference from the presidency in the prosecuting process. Zuma supporters took this as a mandate for the closure of the corruption case against Zuma and were incensed when the national prosecuting authority declared its intention to appeal. Hence the NEC decision. Mbeki stepped down from the presidency, and on September 25, Motlanthe was elected by Parliament to act as head of a caretaker government until the elections, scheduled for 2009.

A majority of Zuma supporters had been elected in January to the 28-member national working committee of the ANC. In July the premiers of the Western and Eastern Cape, Mbeki supporters, were replaced by Zuma supporters. Several members of Mbeki's cabinet resigned with him in September and were not reappointed by Motlanthe. Mbeki also appealed the decision of the Natal High Court, on the grounds that it had been made without giving him an opportunity to state his case. Former defense minister Mosiuoa ("Terror") Lekota and former Gauteng province premier Mbhazima Shilowa formed a breakaway party from the ANC, the Congress of the People, in November. Lekota was elected party leader in December.

Prior to consideration of Zuma's case by the Natal court, the atmosphere around it had become highly charged,

Sunphiwe Nkwali/AP

An anti-immigrant mob, armed with hand-carved weapons, runs riot in a squatter settlement south of Johannesburg on May 18.

with attacks by Zuma supporters on the judiciary and the ANC Youth League president declaring that "we are prepared to kill for Zuma." Post-Polokwane ANC policy decisions generally reflected the views of the Zuma camp, including that the Tripartite alliance (which included the Congress of South African Trade Unions [COSATU]) and the South African Communist Party (SACP) rather than the ANC should be the "strategic centre" of decision making and emphasizing a more interventionist state. It remained unclear, however, whether SACP-COSATU economic policies—such as abandoning inflation targeting, allowing Parliament to amend money bills, abandoning budget surpluses, removing the value-added tax (VAT) on basic foods, limiting the role of the treasury to financial management rather than broader planning, and imposing a moratorium on privatization and outsourcing—would prevail.

In January the country was afflicted with severe power outages, which forced the cessation of underground work at all mines for five days. The country's main power supplier, Eskom, which had run out of reserve capacity because government policies in the 1990s had prevented construction of new power stations, continued its planned "load shedding" (cutting demand by shutting off power). The government called for a 10% national cutback in the use of electricity, and there was talk of rationing its use, but in early May Eskom suddenly abandoned load shedding.

In his state of the nation speech in February, Mbeki apologized for the power outages and promised to focus on building the country's infrastructure. He also set a target of providing digital broadcasting for half the population by the end of the year and pledged to make improvements in poverty eradication. Though Mbeki used the phrase "business unusual," opposition parties said that the thrust of the speech was business as usual.

Disputes between supporters of Zuma and those of Mbeki affected the key institutions of the new South African democracy: the police force, the National Prosecuting Authority, the South African Broadcasting Corp., and the judiciary. Early in January the commissioner of police, Jackie Selebi, was arrested on corruption charges. He unsuccessfully attempted to preempt this by asking the court to set aside the warrant. Selebi, who was granted an extended leave of absence, also resigned as head of Interpol. This action produced renewed questioning of the removal by Mbeki in 2007 of National Prosecuting Authority head Vusi Pikoli, who claimed that he was dismissed to prevent the arrest of Selebi. During the year Frene Ginwala, former speaker of the House, conducted an investigation into whether Pikoli was fit to hold office. The state accused him of having obtained plea bargains from criminals, which constituted a threat to national security, and of having suffered a breakdown of relations with the justice minister.

In October the Scorpions, a specialized crime-busting unit attached to the National Prosecuting Authority, was dissolved. The ANC claimed that the unit was largely staffed by former apartheid security police. The Scorpions, which were merged into the police force, had come under criticism for the handling of corruption investigations of Zuma and Selebi.

In May a spree of violence broke out in Johannesburg and other South African cities, where immigrants (mainly from Zimbabwe) were beaten, stabbed, shot, or burned alive by mobs. The ANC was deeply embarrassed by the outbreak, especially since many apartheid victims had sought shelter in neighbouring countries during that period of South Africa's history.

Meanwhile, Nelson Mandela, who ushered in democracy in South Africa, celebrated his 90th birthday on July 18. A rock concert in celebration was held in London on June 27, together with numerous other events.

Economy. South Africa's GDP growth in the second quarter of 2008 was 4.9%. This was a huge improvement over the first quarter's 2.1%, which resulted from Eskom's load shedding, but it represented a decline from 2007 (5.1%). In the third quarter growth fell to 0.2%. Manufacturing fell by 0.1%, while the unemployment rate remained steady at about 23% through September. In October Finance Minister Trevor Manuel predicted that South Africa's GDP growth, which had averaged about 5% annually since 2003, would drop to only 3.7% in 2008 and closer to 3% in 2009.

The midyear spike in world oil prices drove up the price of gasoline by 42.7% in the 12 months to July. This—combined with the hike in food prices (17% in the 12 months to May) and electricity (27.5% January to July)—pushed inflation to 10.1% in March, 11.6% in June, and 13.6% in August. The national current account deficit surged to 8.9% in the first quarter before retreating to 7.3% in the second. In November Motlanthe headed the South African delegation that attended the emergency Group of 20 summit in Washington, D.C., to discuss the global financial crisis that began in September.

Foreign Relations. President Mbeki attempted to mediate between Zimbabwean Pres. Robert Mugabe and the opposition in the establishment of a national government. Mbeki came under attack at home and abroad, however, for his apparent bias toward Mugabe. In April South African dockworkers refused to unload arms bound for Zimbabwe from a Chinese ship.

(MARTIN LEGASSICK)

SPAIN

Area: 505,990 sq km (195,364 sq mi)
Population (2008 est.): 45,661,000
Capital: Madrid
Chief of state: King Juan Carlos I
Head of government: Prime Minister José Luis Rodríguez Zapatero

Mohammed Zaatari/AP

Spanish Minister of Defense Carme Chacón visits Spain's UN peacekeeping troops in Lebanon on April 28, two weeks after she became the first woman to head Spain's armed forces.

Almost exactly four years after the terrorist attacks on Madrid that helped to bring the Socialist Workers' Party to power in 2004, Spanish Prime Minister José Luis Rodríguez Zapatero won a second term in the general elections held on March 9, 2008. The Socialists claimed 43.6% of the vote and 169 of the 350 seats in the Congress of Deputies. Many commentators attributed their convincing win to negative as much as positive voting. While many voters were convinced by the Socialists' good record on the economy and the promotion of civic and social rights, as well as by Zapatero's consensual style of political leadership, others voted above all against the conservative Popular Party (PP) and its very aggressive form of opposition. Nonetheless, the PP and its leader, Mariano Rajoy, could take some solace from the increase in the party's share of the vote to 40.1%, up from 37.6% in 2004, and in the number of its parliamentary seats from 148 to 153.

In light of the election results, Zapatero forswore the option of negotiating stable parliamentary alliances with the regional nationalist parties and the United Left, choosing instead to form a minority government dependent on ad hoc agreements with individual parties to legislate. While continuity was the predominant note in policy terms, one exception was a tougher line on immigration. This was exemplified by the introduction of a scheme designed to encourage unemployed migrants to return to their countries of origin—a policy shift that immigrant organizations branded as mere pandering to voters' concerns about unemployment.

Electoral defeat brought even more significant changes in the PP. Almost overnight, Rajoy affirmed his commitment to the "reformist centre" and exhibited a newfound willingness to engage in bipartisan policies. Despite vociferous opposition from far-right-wing members of the party and their allies in the media, Rajoy was reelected leader of the PP at a national congress in June, when he took advantage of the occasion to oust those figures most closely associated with the party's hard-line past.

The new, less-confrontational tone of Spanish political life soon brought tangible results. In September, after a nearly two-year deadlock, the two main parties finally reached an agreement on the renewal of the judiciary's governing body. Even more significant, the Socialists and the PP also found common ground in the fight against the Basque separatist organization Euskadi Ta Askatasuna (ETA). The return to a cross-party antiterrorist policy was made possible not just by the PP's tactical shift but also by the Socialists' heightened resolve to defeat rather than negotiate with ETA following the end of the organization's 14-month cease-fire in June 2007. In December 2007, 47 people were sentenced to up to 20 years in prison in the largest-ever trial of ETA suspects. Two months later two political parties associated with ETA were suspended (followed later by their illegalization) and thereby prevented from standing in the March general elections. French police detained the alleged top leader of ETA in May, the organization's alleged military chief in November, and, just weeks later, the man reported to have succeeded as military chief. The arrests confirmed the benefits of closer cooperation between French and Spanish authorities that was facilitated by a meeting between Zapatero and French Pres. Nicolas Sarkozy at the beginning of 2008.

For the first time in years, however, the economy replaced terrorism as the main concern among Spaniards. This was hardly surprising, given the speed and depth of the slump, which saw GDP growth rates of 0.3% in the first quarter and 0.1% in the second give way to negative GDP growth (–0.2%) in the third quarter. By the end of the year, after another quarter of negative GDP growth and with unemployment running at nearly 13%, Spain was officially in a recession. The European Commission predicted year-on-year growth of just 1.3% for the Spanish economy in 2008 and –0.2% in 2009. Unlike in many other countries, the epicentre of Spain's crisis was not in the financial sector—which was spared in part by close regulation by the central bank—but in construction. With the collapse of the real-estate bubble, the sector was expected to shrink by more than 5% over the course of the year, forcing many construction companies and developers into receivership and putting hundreds of thousands of employees out of work. Virtually the only good news on the economic front was a sharp fall in inflation toward the

end of the year from 4.5% in September to an estimated 2.4% in November.

Sports provided some much-needed cause for celebration. The summer saw Spain's surprise association football (soccer) triumph in Euro 2008 as well as tennis ace Rafael Nadal's triumphs at the French Open, Wimbledon, and the Olympic Games in Beijing. Nadal attained the world number one tennis ranking in August. (JUSTIN BYRNE)

SRI LANKA

Area: 65,610 sq km (25,332 sq mi)
Population (2008 est.): 19,394,000
Capitals: Colombo (executive and judicial); Sri Jayawardenepura Kotte (legislative)
Head of state and government: President Mahinda Rajapakse, assisted by Prime Minister Ratnasiri Wickremanayake

Sri Lanka's civil war, which began in 1983 and had claimed more than 70,000 lives and caused untold suffering, intensified in 2008, making the 2002 cease-fire agreement between the government and the rebel Liberation Tigers of Tamil Eelam (LTTE) a dead letter. The government launched a renewed offensive and captured extensive areas of formerly rebel-controlled territory in the north and northeast of the country. The LTTE fought back fiercely by executing yet another wave of suicide bombings throughout Sri Lanka and by carrying out attacks on government naval forces. By late in the year, the government was claiming (to widespread acclaim in the Sinhalese south) that final military victory was near, while skeptics contended that only a political settlement could provide a lasting solution. Settlement involving substantial devolution of power to the regions seemed unlikely. Military setbacks not only weakened the position of the LTTE but made it even less likely that the organization would soften its long-standing demand for complete independence.

Pres. Mahinda Rajapakse strengthened his grip on Sri Lankan politics during the year. His United People's Freedom Alliance (UPFA) won three provincial elections, whereas the opposition United National Party (UNP) appeared to be in disarray. Although the UPFA did not command a majority in Parliament, it continued to receive support from its Marxist ally, the People's Liberation Front (JVP).

Although Sri Lanka had maintained reasonably high rates of economic growth throughout the civil war, the rate was much lower than what could have been expected to be achieved in the absence of conflict. Economic growth in 2008 was anticipated to exceed 6%. Exports of garments were flat, but tea production enjoyed an unexpectedly good year, and remittances were up from Sri Lankans working abroad. As a result of large government deficits and rising world prices for petroleum as well as rice and other food, inflation rose past 20%. There remained a large balance-of-payments deficit and a low rate of private investment, and the rupee was under pressure. In an effort to win the loyalty of residents in areas recently freed from LTTE control, development of the Eastern province was advocated. (DONALD SNODGRASS)

Internally displaced ethnic Tamils in the LTTE-held town of Kilinochchi protest the imminent departure of international aid agencies on September 12, four days after the Sri Lanka government ordered the agencies to leave all rebel-held territories.

AP

SUDAN, THE

Area: 2,505,810 sq km (967,499 sq mi)
Population (2008 est.): 39,445,000, including more than 200,000 refugees in Chad
Capital: Khartoum
Head of state and government: President and Prime Minister Lieut. Gen. Omar Hassan Ahmad al-Bashir

Just prior to the beginning of 2008, the UN formally assumed the peacekeeping role in The Sudan's western province of Darfur in conjunction with the African Union force already present in the region. (*See* Sidebar.) The new force, UNAMID, was intended to be heavily reinforced, but owing to the reluctance of UN member states to supply personnel and equipment, its numbers had reached only about 12,400 by the end of the year, inadequate for the mission's purpose. Moreover, the Sudanese government restricted the movements of the new force. Raids by government aircraft and militia ground forces on suspected rebel bases—as well as on camps for displaced persons and even on the peacekeeping troops themselves—continued throughout the year. Pres. Idriss Déby of Chad, The Sudan's western neighbour, also accused the Sudanese government of supporting Chadian rebels who in early February laid siege to Chad's capital city, N'Djamena.

The tables were briefly turned in May when members of a Darfur rebel group, the Justice and Equality Movement, staged a daring raid on the town of Omdurman, on the outskirts of Khartoum. Sudanese Pres. Omar al-Bashir (*see* BIOGRAPHIES) accused Chad of supporting the attack and severed diplomatic relations with his neighbour, though they were restored later in the year. The following month the International Criminal Court (ICC) declared the Sudanese government responsible for the situation in Darfur, and on July 14 the ICC's chief prosecutor recommended that an arrest warrant be issued for Bashir for crimes against humanity in the war-torn province. There was a huge protest demonstration in Khartoum in response to the recommendation, and when the issue was raised in the UN General Assembly in September, virtually all African countries supported

Combating the Crisis in Darfur

In 2008, five years after conflict broke out in the Darfur region of The Sudan, the prospect seemed dim for a political settlement to end the war that had killed as many as 300,000 people. In early 2003, soon after local rebel groups took up arms against the Khartoum-based regime of Sudanese Pres. Omar al-Bashir (*see* BIOGRAPHIES), long-standing tensions in Darfur erupted into what the U.S. government later described as the first genocide of the 21st century. The rebels felt marginalized by their government, saw that other rebels in southern Sudan were likely to be granted major economic and political concessions as their own civil war against Khartoum ran down, and realized that they themselves were being left out in the literal and figurative desert with no hope of similar concessions or improved conditions. An oil-fueled economic boom was producing skyscrapers in Khartoum, while Darfur continued to exist largely without roads, hospitals, or a sufficient education system and was suffering through a brutal drought.

Following a few initial conventional battles with new rebel groups in Darfur, the Khartoum regime switched tactics and began to fight a hate-fueled counterinsurgency war in Darfur by funding, arming, and unleashing proxy militias known as Janjaweed—made up of fighters from nomadic groups who identified themselves as "Arab"—on villages whose people identified themselves as "African." This strategy depended on exploiting this self-proclaimed racial divide in Darfur, and it worked, despite the fact that both "Arab" and "African" Darfurians were predominantly Muslim, spoke Arabic, and shared the same skin tone. The result was an undisciplined paramilitary campaign that targeted men, women, and children.

In addition to the hundreds of thousands killed since the beginning of the campaign, approximately 2.5 million more were forced from their homes and into the Sahara. Horrific stories of mass rape, murder, and unspeakable atrocities became commonplace. Survivors gathered in camps for internally displaced persons throughout Darfur and in refugee camps across the border in eastern Chad and in the Central African Republic. (*See* MAP on page 468.)

For its part, the international community reacted to different aspects of the crisis with varying degrees of success. The biggest bright spot was the Herculean effort put forth by governmental and nongovernmental aid agencies, providing food, medicine, shelter, and basic services to the millions of Darfurians in need. More than 13,000 international and Sudanese aid workers built the world's largest humanitarian life support system in Darfur, saving countless lives that otherwise would have been lost to starvation and disease.

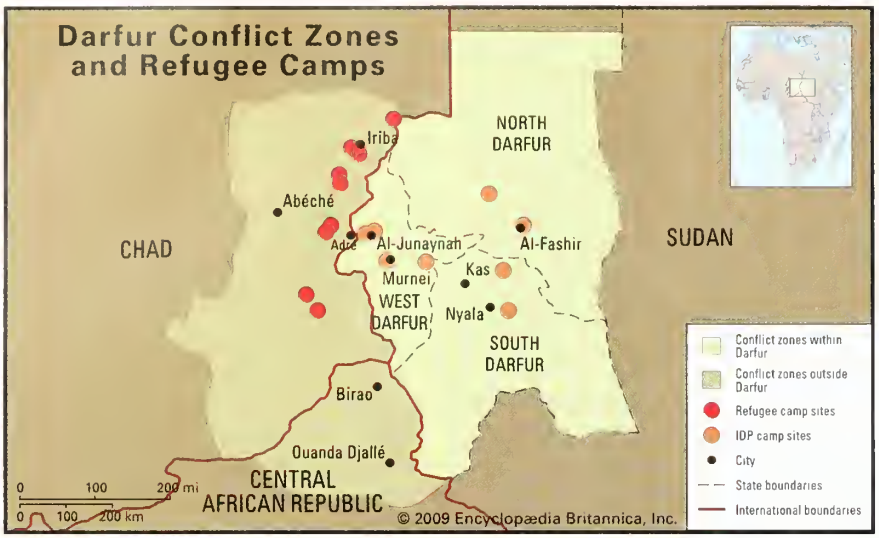
Less successful were international efforts to reduce the threat of physical violence to Darfuri civilians and to achieve a lasting political solution to end the conflict. To achieve the former, the African Union (AU) in 2004 deployed a 7,400-strong peacekeeping force, the African Union Mission in The Sudan (AMIS). When AMIS went into Darfur, the rest of the international community stood by and watched; once troops had been deployed, they helped protect women from rape, but it soon became clear that AMIS lacked the manpower, equipment, funding, and mandate to truly protect civilians and help restore order to an area as large as Darfur (roughly the size of France). On Aug. 31, 2006, the UN Security Council authorized the generation and deployment of a large peacekeeping force with Resolution 1706.

The Sudanese government, however, rejected Resolution 1706, effectively putting the UN between a rock and a hard place: in the entire history of the UN, no peacekeeping mission had ever failed to deploy once authorized by the Security Council. On the other hand, only one mission—the "police action" better known as the Korean War—had ever been deployed over the objection of a sovereign host government. A compromise was sought to bridge the impasse, and the result was a joint peacekeeping force known as the hybrid United Nations/African Union Mission in Darfur (UNAMID), authorized by the Security Council on July 31, 2007. While initial command and control elements of UNAMID began augmenting AMIS in the fall of 2007, UNAMID did not formally take over for AMIS and assume responsibility for peacekeeping in Darfur until Dec. 31, 2007. President Bashir initially agreed in writing to accept the new force, but reports soon began to emerge of efforts by the Sudanese government to obstruct the deployment of UNAMID troops and to limit their movements in the province. Also posing an impediment to progress in the region was the fact that the vast majority of the proposed 26,000 UNAMID peacekeepers and police were not yet on the ground, with the force's troop and military personnel level reaching 12,374 by the close of 2008.

Efforts to arrive at a lasting political solution have arguably fared worse. Several cease-fires were adopted, celebrated, promptly violated, and thus rendered moot. More frustrating still were the nearly 20 months of peace talks that took place in Abuja, Nigeria, culminating on May 5, 2006, in the partial signing of the Darfur Peace Agreement, or DPA. The Sudanese government and only one of what were then just three rebel factions signed the agreement, and with the exception of a few initial concessions to the one rebel signer, almost none of the agreement was implemented. After the signing and subsequent collapse of the DPA, the original three rebel factions split into more than a dozen. The international community, operating through a combined UN-AU effort, regrouped, pooled their efforts, and organized new peace talks that began in Surt, Libya, on Oct. 27, 2007, but these stalled after representatives of several leading rebel factions refused to participate in the talks. A similar effort in late 2008 to resume peace talks in Doha, Qatar, has thus far yielded no tangible results. Meanwhile, as the international community moved forward, albeit slowly, on fully deploying UNAMID, the violence in Darfur continued, including attacks by rebels and, in some instances, government forces on UNAMID peacekeepers, government and Janjaweed attacks on villages thought to support rebels, and interrebel fighting. As always, Darfuri civilians have been caught in the middle, with the humanitarian life-support system that sustains them growing ever more fragile and the memories of their former, peaceful lives growing ever more faint.

(ALEX MEIXNER)

Encyclopædia Britannica, Inc.



This map shows the extent of the Darfur conflict within The Sudan and neighbouring countries, as well as the locations of camp sites for refugees and internally displaced persons (IDPs).

Bashir's effort to halt the proposed indictment against him. Nevertheless, the ICC persisted with its investigations, and in December the chief prosecutor urged all members of the UN Security Council to be prepared to act in unison in reponse to a possible early decision by the ICC judges to call for arrests. In the meantime, Bashir undertook a peacemaking mission in Darfur, although antirebel attacks continued, and in August a powerful incursion by government troops in northern Darfur was launched to prepare the way for oil exploration by Chinese prospectors.

While international attention was largely focused on Darfur, events in the border region between northern and southern Sudan proved an equally serious threat to the country's stability. In particular, armed northern nomads began to prevent southerners displaced during the civil war from returning to their homes in the border area. This was interpreted as a northern plot to distort a census scheduled for April in order to enhance the north's claims to the oil-rich border region and especially to Unity state. On the south's insistence, the census was postponed, but in May the border town of Abyei was devastated by an attack by a brigade of troops loyal to the northern National Congress Party. A few days later the residents of Abyei reassembled to assert their loyalty to the south. Meetings between representatives of both northern and southern Sudan to find a solution to the conflict proved unavailing.

(KENNETH INGHAM)

SURINAME

Area: 163,820 sq km (63,251 sq mi)
Population (2008 est.): 516,000
Capital: Paramaribo
Head of state and government: President Ronald Venetiaan, assisted by Prime Minister Ram Sardjoe

Although GDP growth figures were lowered during the final quarter of 2008, Suriname enjoyed a modestly successful year in both political and economic terms. Pres. Ronald Venetiaan, an experienced political navigator, managed to keep his querulous seven-party coalition intact. Tensions were eased following the decisions by two former leaders of the country—dictator and accused murderer Dési Bouterse and the infamously inept president Jules Wijdenbosch—to withdraw from the presidential campaign, opening the door for the opposition parties to coalesce into a new coalition, the National Democratic Platform. Bouterse's trial was again delayed.

The external debt ratio was the third lowest in the Caribbean area. Production from onshore oil fields reached the level of domestic consumption. Agriculture, with the exception of the troubled rice industry, performed well. Investment in the key mining sector was mixed. BHP Billiton, the world's largest mining company, withdrew its major plan to develop bauxite extraction from western Suriname. This might be offset, however, by a potential new investment by the Canadian-based enterprise IAMGOLD Corp. Despite the work of a competent justice minister, long-entrenched narcotics-empowered organized crime and illegal gold mining maintained their grip on the underground economy.

In the realm of foreign affairs, friction persisted with neighbouring Guyana over a long-standing border dispute regarding the Courantyne River. The level of tension had been reduced significantly, however, following the settlement in 2007 of a more contentious maritime zone dispute with Guyana.

(JOHN W. GRAHAM)

SWAZILAND

Area: 17,364 sq km (6,704 sq mi)
Population (2008 est.): 1,018,000
Capitals: Mbabane (administrative and judicial); Lozitha and Ludzidzini (royal); Lobamba (legislative)
Chief of state: King Mswati III, assisted by Prime Ministers Absalom Themba Dlamini, Bheki Dlamini (acting) from September 18, and, from October 23, Barnabas Sibusiso Dlamini

Poverty, hunger, unemployment, the HIV/AIDS epidemic, and political uncertainty remained the major challenges in Swaziland in 2008. Progressive political groups continued to demand a transition to a multiparty democracy but were disregarded by the government. The cost of living was high, and energy and food prices increased over the previous year. In June, King Mswati III summoned the Swazi people to a national meeting in Ludzidzini to discuss possible solutions to the economic challenges. The nation's poverty, exacerbated by extravagant spending by the king and his wives, was also the subject of several protests in August and early September prior to lavish government-held celebrations of the king's 40th birthday and the 40th anniversary of the country's independence.

Parliamentary elections—the first to be held under the 2006 constitution—took place on September 19. They re-

Siphiwe Sibeko—Reuters/Landov

King Mswati III reviews his honour guard at the beginning of a ceremony on September 6 marking his 40th birthday and the 40th anniversary of Swaziland's independence.

portedly met international standards, but official observers cast doubt on the credibility of the results because of the country's restrictions on political activity. In other news, Prime Minister Barnabas Sibusiso Dlamini announced on November 14 that the Suppression of Terrorism Act of 2008 would be enforced to uproot terrorist elements in the country.

Swaziland's per capita GPD was $2,903. The 2008–09 budget projected a deficit of 1.4% of GDP and indicated that inflation would rise beyond 12% in 2008. Almost 70% of the population was living below the poverty line. The rate of HIV/AIDS infection was reported to be 26% among Swazi adults aged 15–49 and 19% overall.

(NHLANHLA DLAMINI)

SWEDEN

Area: 450,295 sq km (173,860 sq mi)
Population (2008 est.): 9,214,000
Capital: Stockholm
Chief of state: King Carl XVI Gustaf
Head of government: Prime Minister Fredrik Reinfeldt

In 2008 Sweden began the year with a period of high and sustained economic growth but later experienced a marked slowdown in line with the global economic and financial downturn. The decline could be seen over the whole economy, with a sharply lower stock market, falling housing prices, diminishing pension funds, rising unemployment, and a weakening currency. In the period 2004–07 GDP on average had grown more than 3% annually—well above the European average—but Finance Minister Anders Borg cut the growth forecasts to a meagre 1% for 2008. Predictions pointed toward even lower future growth, with the central bank assuming zero growth for 2009.

The tougher times ahead could also be perceived in the rising number of Swedes who lost their jobs during the autumn. It came as a shock for the entire country when automobile manufacturer Volvo (a subsidiary of the American Ford group) in October notified 3,300 blue- and white-collar workers that their jobs were being eliminated. Unemployment in Sweden reached 6%, and forecasters such as the trade union confederation (LO) expected the figure to rise to 7–8% in the coming years.

The global financial crisis forced the Swedish government in October to present a rescue package for the banking system amounting to no less than 1.5 trillion kronor (about $200 billion). The package was designed to guarantee bank borrowing and to create a government fund to take direct stakes in the banks. Some of the banks, including Swedbank and SEB, were singled out as potential recipients of state aid because of their large exposure to loans in the Baltic states, where credit losses were expected to mount. All four major Swedish banks showed surprisingly good profits in their reports for the first nine months of 2008, however, and it was unclear how much—if any—public money would be spent in the end.

Housing prices fell 10–20% in 2008, depending on location and price, and further declines were widely expected. The Swedish stock market plunged some 40%, a historically high figure on top of the 7% slide in 2007. These developments made millions of Swedes feel the economic pain, as more than 50% of Swedish households owned their homes, and 75% of the population owned shares either directly or through mutual funds. Almost all pension schemes—state-sponsored and private—would also be affected by the financial downturn.

The centre-right coalition government under Prime Minister Fredrik Reinfeldt continued to fall in the polls, receiving 15–20% less support than its political opposition—the Swedish Social Democratic Party (SAP), with its allies in the Green Party (MP) and the Left Party (VP). According to one poll published in the autumn, more than 60% of the electorate anticipated a new government in the next election, due in 2010. SAP leader Mona Sahlin declared a willingness to form a coalition government with the MP and to include the VP if they could agree on economic policies. This was the first time in more than 50 years that a social democratic leader had favoured the idea of a coalition government.

The government tried to rally its supporters, launching a public relations campaign that highlighted its legislative program and showing a desire to fortify the four-party coalition. The government pursued its reforms of the tax system, cutting both income and corporate taxes. Reinfeldt, who had been criticized for being too absent from the public forum, spent most of his time focusing on the domestic political arena. The government's handling of the financial crisis won it public approval, and the gap in the polls narrowed to about 5% at the end of the year. Reinfeldt was expected to be more visible in European politics in the second half of 2009 after Sweden assumed the rotating presidency of the EU.

(MARTIN HAAG)

SWITZERLAND

Area: 41,284 sq km (15,940 sq mi)
Population (2008 est.): 7,617,000
Capital: Bern
Head of state and government: President Pascal Couchepin

The legendary stability of the Swiss banking system was shaken in 2008 when the government had to intervene in October with a package of nearly $60 billion to rescue the country's biggest

bank, UBS AG. Both UBS and the second largest bank, Credit Suisse, were hard hit by bad loans originating in the United States. UBS Chairman Marcel Ospel resigned in April after the bank reported a first-quarter net loss of 12 billion Swiss francs (about $12 billion). The other 300-odd banks in Switzerland were less affected, thanks to strong deposits. With a high rate of gross national savings—more than one-third of GDP—non-EU-member Switzerland looked set to weather the global economic turmoil better than many European neighbours.

The government defended banking-secrecy laws against EU attempts to uncover the identity of tax evaders who had stashed their money in Swiss accounts, but Bern continued to hand over "ill-gotten gains" from dictators and other corrupt foreign officials, including $74 million paid to the Mexican government from bank accounts linked to the brother of former Mexican president Carlos Salinas de Gortari.

Switzerland's consensus style of governance became more harmonious after the December 2007 ouster of Christoph Blocher of the right-wing Swiss People's Party (SVP) from the ruling four-party coalition. The SVP—which won the most votes in the 2007 general election—was left without a seat in the seven-member cabinet until December, when a close Blocher ally was narrowly elected. The SVP agitated from the sidelines, backing referenda, such as one to ban the construction of minarets from Islamic prayer houses. Voters in June rejected proposals by the SVP to make it harder for foreigners to gain citizenship. A November referendum backed government proposals for a permanent program to distribute controlled quantities of heroin at approved centres to 1,300 addicts who had failed other therapies. The heroin scheme started as an experiment in 1994 and had helped rehabilitate addicts and cut crime, as addicts no longer needed to steal to finance their habit.

Finance Minister Hans-Rudolf Merz, who was due to take over the rotating presidency in 2009, suffered a serious heart attack in September. Defense Minister Samuel Schmid announced his resignation, ostensibly on health grounds. He came under pressure after he lost his power base by leaving the SVP. The parliament rejected Schmid's proposals for an armaments package, and he was accused of having covered up allegations of sexual harassment against armed forces chief Roland Nef, who resigned in July. The head of the Swiss air force also quit after five airmen drowned during a team-building exercise in June.

A Swiss energy company and Iran's state-owned National Iranian Gas Export Co. in March signed a multibillion-dollar deal for the provision of natural gas. This prompted protests from the World Jewish Congress that Iran might use the funds to buy weapons for use against Israel. The U.S. also voiced concern, but the Swiss government replied that it was a neutral country with an independent foreign policy.

Libya halted oil shipments and withdrew its money from Swiss banks in fury at the July arrest of Muammar al-Qaddafi's son at a luxury Geneva hotel on allegations that he had beaten two servants. Hannibal al-Qaddafi returned home after his release on bail, but the incident fueled a diplomatic crisis.

In February four Impressionist paintings (by Monet, van Gogh, Cézanne, and Degas), with a value of about 180 million Swiss francs (some $163 million), were stolen from a Zürich art gallery. The Monet and van Gogh paintings were recovered. (CLARE KAPP)

SYRIA

Area: 185,180 sq km (71,498 sq mi)
Population (2008 est.): 19,514,000 (excluding 1,400,000 Iraqi refugees)
Capital: Damascus
Head of state and government: President Bashar al-Assad, assisted by Prime Minister Muhammad Naji al-Otari

As 2008 opened, Syria's security services arrested prominent dissidents and critics of the Ba'th Party-led regime. Among the detainees were the leaders of the Damascus Declaration for Democratic National Change, including the former parliamentarian Riad Seif and a number of Kurdish and Assyrian activists. One influential Kurdish figure, 'Usman Sulaiman, died in the hospital shortly after being released from detention in mid-February. On March 20 a crowd celebrating the Kurdish new year in Al-Qamishli skirmished with police, and three deaths resulted. Reports of unrest among Islamist and Kurdish inmates at Saidnaya prison outside the capital surfaced in early April. Three months later violence erupted at the facility, and two dozen prisoners were killed when guards stormed the cell blocks.

A car bombing in Damascus on February 12 killed 'Imad Mughniyyah, a key commander in the military wing of the Lebanese Islamist organization Hezbollah. One of Syria's most powerful military officers, Gen. Muhammad Sulaiman, was mysteriously assassinated on August 1. General Sulaiman's ties to both Pres. Bashar al-Assad and Hezbollah, his purported rivalry with Gen. 'Asif Shawkat, and intimations of an aborted coup d'état precipitated a variety of rumours surrounding his death. Equally puzzling was a September 27 car bomb that killed more than a dozen people at the crossroads leading to the mausoleum of Sayyidah Zainab south of the capital. Because the explosion took place outside the headquarters of one of the security services, some speculated that it represented an attack on a senior commander at the site. Others linked the bombing to the Shi'ite pilgrims who frequented the district, particularly from Iran. Government officials contended that Islamist militants based in Tripoli, Leb., had supplied the vehicle in which the bomb was placed, and large numbers of troops were subsequently deployed along the Lebanese border.

At the end of March, Syria hosted the first Arab summit meeting to convene in the country in six decades. Rising friction with Saudi Arabia set the stage for the proceedings. Saudi officials blamed Syria for the assassination of former Lebanese prime minister Rafiq al-Hariri and suspected that Damascus was allowing Saudi fighters to cross the border into Iraq. Tensions escalated when the foreign ministers of Syria, Iran, Oman, and Qatar held confidential talks three weeks before the meeting amid reports that President Assad planned to invite Pres. Mahmud Ahmadinejad of Iran to join the summit. In the end the king of Saudi Arabia stayed home, as did the king of Jordan and the presidents of Egypt and Yemen. Iran's foreign minister attended as an observer.

President Assad traveled to India in mid-June. A month later he met with French Pres. Nicolas Sarkozy in Paris and promised to set up a Syrian embassy in Beirut and to help defuse the ongoing crisis over Iran's nuclear research program. In mid-September a Syrian ambassador was appointed to Iraq for the first time in more than two decades. (FRED H. LAWSON)

TAIWAN

Area: 36,190 sq km (13,973 sq mi)
Population (2008 est.): 22,996,000
Capital: Taipei
Chief of state: Presidents Chen Shui-bian and, from May 20, Ma Ying-jeou
Head of government: Presidents of the Executive Yuan (Premiers) Chang Chun-hsiung and, from May 20, Liu Chao-shiuan

Chiang Ying-ying/AP

Some 100,000 supporters of Taiwanese independence rally in Taipei in late October to protest a visit by a senior envoy from China, one of many signs of closer cooperation between China and Taiwan.

In January 2008 the Kuomintang (KMT), or Nationalist Party, and its allies won 86 seats in Taiwan's first legislative elections after a constitutional amendment reduced the number of seats from 225 to 113 and introduced single-seat districts. Adapting to the new electoral scheme, the KMT largely reabsorbed the New Party and the People First Party, both of which had split off from the KMT in the 1990s. In contrast, the Democratic Progressive Party (DPP) failed to integrate with its erstwhile ally, the Taiwan Solidarity Union (TSU). The TSU attempted to reposition itself as a centre-left party, abandoning its previous hard-line defense of Taiwanese independence. This, however, confused and alienated its base so thoroughly that the TSU failed to win a single seat. As a result, Taiwan's minor parties were effectively eliminated, and Taiwan was decisively pushed to a two-party political system.

The results of the legislative elections foreshadowed the outcome of Taiwan's fourth direct presidential election, held on March 22. The KMT's Ma Ying-jeou (*see* BIOGRAPHIES) easily defeated the DPP's Frank Hsieh by running on a platform that promised to fix Taiwan's stagnant economy by improving relations with China. Ma's reputation for personal integrity also contrasted sharply with that of the highly unpopular incumbent president, Chen Shui-bian, who had spent much of his last two years in office as a lame duck. Chen, who resigned the DPP chairmanship at the beginning of the year, quit the party in August after money-laundering allegations against him emerged. He was eventually detained and jailed in November on an array of charges, including money laundering, fraud, and embezzlement of public funds.

After taking office, Ma moved quickly to mend relations with China. By June an agreement had been reached that allowed regular weekend charter flights across the Taiwan Strait. Increasing Chinese tourism in Taiwan in an effort to help kick-start the island's economy was one of Ma's major campaign promises. Further agreements on the expansion of direct flights and trade between Taiwan and China were later signed in November.

Fears mounted that Ma's rapid rapprochement with China was undermining Taiwanese sovereignty. Pro-independence groups launched major street demonstrations in late August and again in late October—the latter to protest the first visit to Taiwan by high-ranking Chinese envoy Chen Yunlin. Nevertheless, Ma moved to reverse efforts by his predecessor to build a distinct sense of Taiwanese identity. In August the new administration changed the official name of the national postal service from Taiwan Post back to its original name, Chunghwa ("Chinese") Post. In addition, Chiang Kai-shek Memorial Hall in central Taipei was reopened, and the official system of romanization was switched from a system developed in Taiwan to Hanyu pinyin, the standard used in China. Opponents of these policies referred to them as part of the "resinification" of Taiwan. In early December, Ma rejected the idea of a third visit to Taiwan by the Dalai Lama, saying that the timing was inappropriate.

Aside from improving relations with China, the new administration also declared a unilateral truce in the decades-long struggle between Taipei and Beijing over diplomatic recognition of Taiwan by other countries. In return for not seeking new diplomatic allies, Taipei hoped that Beijing would allow the island republic to maintain as allies the 19 countries that already recognized it. Moreover, Taipei abandoned its annual bid for admission to the UN after 15 successive failures and instead sought participation as an observer in UN special agencies. This attempt, however, was unsuccesful. In early October the U.S. announced $6.4 billion in arms sales to Taiwan. In response, China strongly denounced the proposed sale as interference in Chinese internal affairs.

The first months of the new administration were marked by rapidly rising consumer prices. By the end of October, Taiwan's consumer price index had risen 2.39%, easing slightly as international oil prices declined. At the same time, unemployment rose to 4.37%, and adjusted real average earnings fell by 3.1%. Investors fared even worse. In October, as the financial crisis in the U.S. deepened and had a heavy impact on other economies, Taiwan's main stock index fell to less than 4,400 from the nearly 9,000 when Ma took office in May.. (MICHAEL R. FAHEY)

TAJIKISTAN

Area: 143,100 sq km (55,300 sq mi)
Population (2008 est.): 6,839,000
Capital: Dushanbe
Chief of state: President Imomalii Rakhmon
Head of government: Prime Minister Akil Akilov

In January–February 2008 Tajikistan experienced the most severe winter weather in 44 years. Pres. Imomalii Rakhmon estimated that the damage to the country's less-than-robust economy was at least $1 billion. The economic growth rate declined by half, as most of the country's industries were forced to close owing to lack of power. Though the country's agricultural sector was not as severely affected as was initially feared, the price of bread and cooking oil doubled, and most other food prices rose by 50%. The number of deaths that could be attributed to the cold was not made public; infant deaths were widely believed to have numbered in the hundreds, though this was disputed by the Ministry of Health. Many families, especially in rural areas, were forced to choose between food and fuel, especially as the price for fuel kept mounting.

Tajikistan's political opposition accused the government of incompetence in handling the crisis, but popular unhappiness did not spill over into political action. The number of labour migrants, believed to exceed one-seventh of the population, reportedly increased. An IMF team confirmed in March that the amount of remittances from migrants had increased as family members working abroad sought to offset the rising price of food. President Rakhmon appealed to the Russian leadership to raise from 600,000 to 800,000 the official quota for the number of Tajiks allowed to work in Russia. In September Rakhmon told the UN General Assembly that the world food crisis posed as great a threat as terrorism, adding that in Tajikistan the crisis was affecting two-thirds of families; he also appealed to donor countries for help.

Owing to an equally severe summer drought, the country's water supply was insufficient to meet the needs of much of the Central Asian region, which depended on Tajikistan's resource. This led to international tensions, ranging from angry disputes between Tajik and Kyrgyz villagers to pressure exerted by Uzbekistan on potential investors in large-scale Tajik hydropower projects. Uzbekistan, which feared that Tajikistan would control the region's water, urged investors to stop funding the projects.

Tajikistan's reputation with the international donor community was not improved by the announcement in March that the IMF had discovered that the Tajik National Bank falsified reports about the country's financial resources; as a result, Tajikistan was required to return $47 million in improperly acquired loans. Tajik financial officials denied that the country's reputation had suffered, because a number of capacity-building projects financed by major donors went ahead as planned.

(BESS BROWN)

TANZANIA

Area: 945,090 sq km (364,901 sq mi)
Population (2008 est.): 40,213,000
De facto capital: Dar es Salaam; only the legislature meets in Dodoma, the longtime planned capital
Chief of state and head of government: President Jakaya Kikwete, assisted by Prime Ministers Edward Lowassa and, from February 9, Mizengo Pinda

Change at the highest level of government and allegations of corruption characterized political life in Tanzania in 2008. In January Pres. Jakaya Kikwete was elected chairman of the African Union and almost immediately played a significant role in helping to negotiate the settlement of a dispute over election results in Kenya. He had been elected president of Tanzania to battle corruption and began the year by dismissing the governor of the Bank of Tanzania over a scandal involving payment irregularities. In February President Kikwete accepted the resignations of his longtime political associate Prime Minister Edward Lowassa and two other cabinet ministers who, according to the report of a commission of inquiry, had been implicated in a case involving political influence peddling in the awarding of a contract to an American electricity company. Moreover, in spite of being paid thousands of dollars, that company had never fulfilled its obligations. Constitutionally, the resignation of the prime minister required the dissolution of the cabinet, and on February 8 a new cabinet was appointed, with Mizengo Pinda as prime minister.

The issue of corruption was not allowed to drop at that point, however. A number of MPs demanded that several other officials be investigated, and in July the government agreed under pressure from the opposition that the parliament should debate the report of another presidential commission, this time concerning mining.

A brief visit by U.S. Pres. George W. Bush in mid-February was preceded by a demonstration in Dar es Salaam by some 2,000 Muslims denouncing U.S. foreign policy. Nevertheless, Bush's dealings with President Kikwete proved cordial, with the U.S. president announcing a compact between the Millennium Challenge Corporation and Tanzania that over five years would make available almost $700 million to improve transportation, energy supplies, and access to clean water.

Balance of trade figures for 2007 had been favourable, with a significant rise in the value of exports; however, the cost of living rose markedly in 2008 because of an increase in food and fuel prices. It was welcome news early in the year, therefore, when the Tanzanian National Microfinance Bank, in partnership with the Alliance for a Green Revolution, launched a $6.1 million scheme to train poor farmers and ease access to fertilizers and seed.

The awareness of endemic corruption in official circles and of the divisive potential of oil and natural gas exploitation forced the governments of both mainland Tanzania and Zanzibar to give serious consideration to methods by which they might share equitably the profits from the offshore exploration. The announcement in October of the intention to extend still further the drilling for gas in Mnazi Bay promised even richer returns. The whole subject was further complicated by the continuing problems surrounding the political status of Zanzibar. In April the opposition Civic United Front (CUF) MPs staged a walkout when they concluded that the ruling Revolutionary Party of Tanzania (CCM) was reneging on an agreement that called for a power-sharing government in Zanzibar. In July, Prime Minister Pinda gave impetus to the dispute by stating explicitly that Zanzibar was not a sovereign country.

(KENNETH INGHAM)

THAILAND

Area: 513,120 sq km (198,117 sq mi)
Population (2008 est.): 64,316,000
Capital: Bangkok
Chief of state: King Bhumibol Adulyadej
Head of government: Prime Ministers Surayud Chulanont, Samak Sundaravej from January 29, Somchai Wongsawat from September 9 (acting to September 18), Chaovarat Chanweerakul (acting) from December 2, and, from December 15, Abhisit Vejjajiva

The word *turmoil* characterized Thailand in 2008. Samak Sundaravej (*see* BIOGRAPHIES) took office as prime minister in January, one month after his People Power Party (PPP) won a near majority in the country's parliamentary elections. Regarded by many critics as a proxy for deposed prime minister Thaksin Shinawatra, Samak faced a legitimacy problem from the start. His position became particularly delicate when in February Thaksin unexpectedly returned to Thailand from his 17-month exile to face corruption charges. Arrested upon his arrival at the airport in Bangkok, Thaksin was soon granted bail.

The tension burst into public view when the opposition People's Alliance for Democracy (PAD), led by media tycoon Sondhi Limthongkul and former Bangkok governor Chamlong Srimuang, organized a mass protest in May against Samak's prospective move to amend the 2007 constitution, which the military junta had put into place to prevent Thaksin's return to power. Samak faced another barrage of criticism in June when his government endorsed Cambodia's bid to have the Temple of Preah Vihear—a source of long-standing land disputes between the two countries—listed as a UNESCO World Heritage site. In addition, Samak faced a defamation charge filed by a former deputy Bangkok governor. Against this backdrop, the PAD stepped up its calls for Samak's resignation and, beginning in late August, occupied the Government House, where the offices of the prime minister and his cabinet were located. Samak and his government were forced to relocate to the old Don Muang International Airport.

Christophe Archambault—AFP/Getty Images

During an interview at the Government House in Bangkok on December 26, Thai Prime Minister Abhisit Vejjajiva urges exiled former prime minister Thaksin Shinawatra not to incite unrest in the kingdom.

Samak's fall from power came in early September, when the Constitutional Court found him guilty of having illegally accepted payment for appearing on a television cooking show and ordered him to step down. Although initially planning to renominate Samak to the post, the PPP eventually chose Somchai Wongsawat, a former civil servant and deputy PPP leader, as Samak's successor. Somchai, however, was a totally unacceptable choice to the opposition because he was Thaksin's brother-in-law. An ensuing clash between PAD protesters and government security forces resulted in an unconfirmed number of casualties in October.

In late July, Thailand's Supreme Court granted Thaksin and his wife permission to attend the opening ceremony of the Olympic Games in Beijing on condition that they returned to Thailand to stand trial on charges related to a land-purchase scandal. They failed to return, instead fleeing once again to England. On October 21 the Supreme Court gave Thaksin a two-year prison sentence. Though in exile, Thaksin remained the alleged main financier for the PPP. While many Thais, especially in the country's urban areas, were opposed to the PPP, over the course of the year they became increasingly disillusioned with the crude tactics adopted by the PAD. Meanwhile, the Thai army, led by Gen. Anupong Paochinda, remained on the sidelines.

The Constitutional Court ruled on December 2 that vote buying had taken place, disbanded the PPP and two allied parties, and banned Somchai from political activity for five years. On December 15 the parliament elected as prime minister Abhisit Vejjajiva of the small opposition Democrat Party. At year's end protesters disrupted the scheduled opening of parliament.

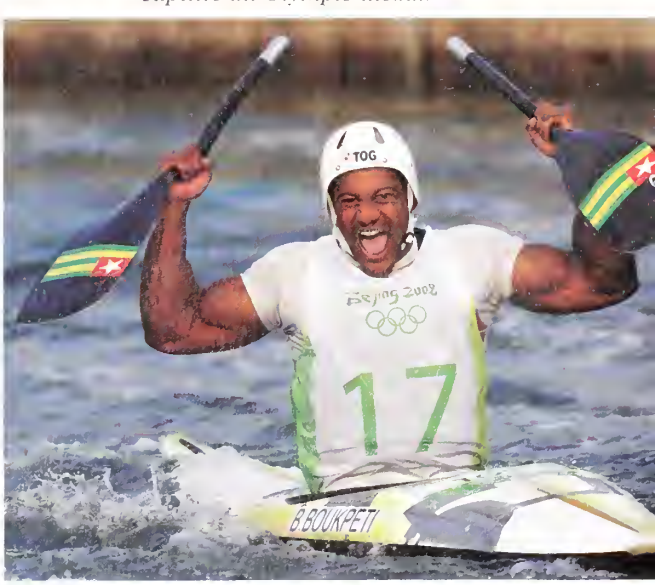
(YOSHINORI NISHIZAKI)

TOGO

Area: 56,785 sq km (21,925 sq mi)
Population (2008 est.): 6,762,000
Capital: Lomé
Chief of state: President Faure Gnassingbé, assisted by Prime Ministers Komlan Mally and, from September 8, Gilbert Houngbo

Togo returned to favour among international donors in 2008. The African Development Bank, France, Germany, the EU, UNICEF, and the World Bank granted substantial sums for economic

Benjamin Boukpeti of Togo breaks his paddle in celebration of his bronze-medal-winning performance in the men's kayak slalom event at the 2008 Olympic Games in Beijing; Boukpeti was the first athlete from Togo ever to capture an Olympic medal.



Tim Wimborne—Reuters/Landov

and social projects. On October 4, the European commissioner for development and humanitarian aid, Louis Michel, congratulated the government for the progress it had made over the previous three years, calling Togo an example for the rest of Africa.

On April 15 Pres. Faure Gnassingbé took the first steps to establish a truth and reconciliation commission that was to investigate the political violence of recent years, in particular that surrounding the 2005 presidential election. On September 26 the UN reported that nearly 23,000 people had responded to a survey on how best to design the commission.

On August 6, UN and African Union representatives remarked on the human rights improvements Togo had made over the previous few years but observed that much more needed to be done. Togolese rights activists still faced major obstacles in bringing abuses to light.

Torrential rains in July and August caused massive floods that displaced thousands of people and destroyed a number of bridges, virtually cutting Lomé off from the rest of Togo. After an outbreak of avian flu on September 9, authorities took swift action to cull an estimated 17,000 poultry. In other news, Benjamin Boukpeti won Togo's first-ever Olympic medal at the Beijing Olympic Games; he took the bronze in the men's kayak slalom.

(NANCY ELLEN LAWLER)

TONGA

Area: 750 sq km (290 sq mi)
Population (2008 est.): 103,000
Capital: Nuku'alofa
Chief of state: King Siaosi (George) Tupou V
Head of government: Prime Minister of Privy Council Feleti Sevele

The rebuilding of Tonga's capital, Nuku'alofa, destroyed in November 2006 during antigovernment riots, continued in early 2008 with funds and assistance from Tonga's aid partners. In the federal election on April 24—the last ballot to be held before reforms were to be instituted to the political system in advance of the 2010 elections—pro-democracy candidates won all nine of the people's seats in the Legislative Assembly. The appearance of a return to normalcy belied continuing strains between the pro-democracy movement and the royal family, whose appointees dominated the Assembly. Tensions were fueled by ongoing investigations into the activities of pro-democracy legislators and their supporters (during the riots) and their pending sedition trials.

Political tensions waned ahead of the August 1 coronation of King Siaosi (George) Tupou V, who had succeeded to the throne on his father's death in 2006. Members of the royal families of the U.K., Denmark, Monaco, Japan, and Thailand visited Tonga for the $3 million event, which featured a military parade, formal balls, a fireworks display, an international rugby match, a series of feasts, and a sacred kava festival. Tensions ebbed during the coronation when the king pledged to surrender many of his royal powers, to accept a reduced role in the state, and to divest himself of business interests that he had acquired when state trading operations were privatized and that had been a source of contention for some years.

(CLUNY MACPHERSON)

TRINIDAD AND TOBAGO

Area: 5,155 sq km (1,990 sq mi)
Population (2008 est.): 1,305,000
Capital: Port of Spain
Chief of state: President George Maxwell Richards
Head of government: Prime Minister Patrick Manning

Trinidad and Tobago's success in discovering offshore natural gas was again evident in January 2008 when Petro-Canada announced that its Cassra-1 well (located in Block 22 north of Tobago) had identified 600 billion–1.3 trillion cu ft of new reserves. Further analysis would provide a more detailed estimate of the reserves in the four-well Block 22 project.

Prime Minister Patrick Manning in February insisted that the government would not introduce a formal state of emergency to deal with the increasing—largely drug-related—murder rate, as had been recommended by several

King Siaosi (George) Tupou V of Tonga (right) participates in a traditional coronation ceremony—known as the tauuafa kava—on July 30 in Nuku'alofa; his official coronation took place two days later.

Torsten Blackwood—AFP/Getty Images

nongovernmental organizations. Manning argued that the circumstances "did not warrant" such drastic action.

The Trinidad and Tobago-based RBTT bank, one of the leading financial institutions in the Caribbean, was acquired by the Royal Bank of Canada for U.S.$2.2 billion in March. More than 98% of RBTT's shareholders voted in favour of the sale, but there was some opposition from nonshareholders to what many regarded as a national and regional asset's falling into foreign hands. The government reported in April that it planned to vigorously pursue the goal of making Port of Spain an international financial centre along the lines of Singapore, Dublin, and Dubai, U.A.E., rather than a tax haven like many other offshore Caribbean banking centres.

Trinidad and Tobago took the lead in August in inspiring a joint declaration involving itself and three other Caribbean Community and Common Market (Caricom) countries—Grenada, Saint Lucia, and Saint Vincent and the Grenadines. The quartet agreed to work toward complete economic union, independent of the rest of Caricom, by 2011 and to establish a form of political union by 2013. (DAVID RENWICK)

TUNISIA

Area: 163,610 sq km (63,170 sq mi)
Population (2008 est.): 10,325,000
Capital: Tunis
Chief of state: President Gen. Zine al-Abidine Ben Ali
Head of government: Prime Minister Mohamed Ghannouchi

Tunisia's electoral law was altered in July 2008 to allow party leaders of at least two years' standing to run for president without having to make a formal request. The legislation also permitted presidential candidates to run for office whose parties did not have representation in the parliament; previously a candidate's party had to have a parliamentary presence. The change threatened to disqualify Nejib Chebbi, who in 2006 had stepped down as leader of the opposition Progressive Democratic Assembly (RDP)—which at the time had no parliamentary seats—in order to stand as an individual candidate.

Aliou Sissoko—AFP/Getty Images

Andrea Kloiber and Wolfgang Ebner, the two Austrian tourists who had been kidnapped by an Islamic militant group in Southern Tunisia, pose for pictures in Bamako, Mali, on November 1 following their release from captivity.

Pres. Zine al-Abidine Ben Ali, meanwhile, announced at the congress of the dominant Democratic Constitutional Assembly (RCD) that he would be the RCD presidential candidate in October 2009. The party congress had approved his five-year program and called for him to stand. On the 20th anniversary of his accession to power in November 2007, President Ben Ali had recounted his accomplishments, reporting that 99% of children aged six were in school, the average income had risen, and life expectancy had increased to exceed 74 years.

Economic growth in 2008 was expected to be 3.7%, with a budget deficit of 3.8% of GDP, because of the global economic downturn. The European Union provided 82% of Tunisia's imports and absorbed 74% of its exports. Increased imported energy and food costs took year-on-year inflation to 4.5% in October. The value of energy imports doubled in the first half of the year, and Tunisia was expected to import more than 600,000 tons of soft wheat. As a result, the trade deficit rose by 7.2% to $4.25 billion. Increased domestic prices caused riots in Redayef in June and in nearby Gafsa, where unemployment reached 30% in June.

Security continued to be a concern, although less acute than elsewhere in North Africa. Of the 30 individuals arrested on charges of having threatened attacks on foreign embassies after clashes with security forces in December 2006 and January 2007, 2 were sentenced to death, but one sentence was commuted upon appeal in February 2008; the other 28 received lengthy prison sentences. Fourteen members of the Soldiers of Assad Ibn al-Fourat had been killed in the clashes with police.

In late February 2008, two Austrian tourists traveling in southern Tunisia were kidnapped by an Islamic militant group as a protest against Western support of Israel. They were taken to Mali, where their captors first demanded the release of prisoners held in Tunisia and Algeria but later demanded a ransom. The tourists eventually were freed in November. (GEORGE JOFFÉ)

TURKEY

Area: 783,562 sq km (302,535 sq mi)
Population (2008 est.): 71,002,000
Capital: Ankara
Chief of state: President Abdullah Gul
Head of government: Prime Minister Recep Tayyip Erdogan

In the first quarter of 2008, Turkey's ruling conservative Justice and Development Party (AKP), led by Prime Minister Recep Tayyip Erdogan, was threatened with closure, less than a year after it had won a second term in office with an increased majority in the parliament. On March 31 the Constitutional Court agreed to hear a petition by Turkey's chief prosecutor, who alleged that the AKP had become a "focus of activity against the secular order" and asked that the party be closed down and that 71 of its leading members be banned from politics for five years. Although the court accepted the charge on July 30, it failed to muster the majority needed for a ban; as a result, the AKP was given a lesser penalty—a 50% cut in state funding. Erdogan remained

in office but with limited freedom of action. (*See* Special Report on page 190.)

The nationalist wing of the secularist opposition had in the meantime come under attack with an investigation into an alleged plot to overthrow the government. The investigation was prompted by the discovery in Istanbul in June 2007 of a store of army-issue grenades in the home of a retired officer. This triggered several waves of arrests of nationalists during 2008, with a number of high-ranking military officers among those detained. Civilian detainees included Dogu Perincek, the leader of the small nationalist Workers' Party (IP), and the managers of a nationalist TV channel. On July 25 the Istanbul criminal court agreed to initiate proceedings. The first hearing took place on October 20, and charges were brought against 86 defendants.

The high command stayed out of the legal battle. On August 28 the chief of the general staff (who functions as commander in chief), Gen. Yasar Buyukanit, retired and was replaced by the commander of the land forces, Gen. Ilker Basbug. The military continued to fight the Kurdish nationalist separatists of the Kurdistan Workers' Party (PKK), who persistently attacked security personnel and engaged in other terrorist activities. The Turkish air force repeatedly bombed PKK bases in northern Iraq, and the army launched an incursion into the area in February and claimed to have killed some 250 militants, with the loss of 24 soldiers. Attacks by the PKK continued, with 15 soldiers killed at a border post on October 3. A bomb exploded in a suburb of Istanbul on July 27, killing 17 civilians. The Constitutional Court, meanwhile, continued to examine the charge that the Democratic Society Party (DTP), which was represented in the parliament and controlled local government in some of the most important towns in southeastern Turkey, was the political front organization of the PKK and should be closed down.

Domestic preoccupations did not prevent the Erdogan government from pursuing an active foreign policy. Following the outbreak of hostilities between Russia and Georgia in August, Turkey proposed the conclusion of a stability and cooperation pact for the Caucasus. Many high-level visits were undertaken to promote this initiative, the most notable being that paid by Pres. Abdullah Gul to Yerevan, Arm., on September 6, when Turkey had no diplomatic relations with that country. The frontier between Turkey and Armenia remained closed pending the resolution of the Nagorno-Karabakh conflict between Armenia and Azerbaijan.

Turkey continued its efforts to mediate between Israel and Syria, with Syrian Pres. Bashar al-Assad holding talks in Turkey on August 5. Later that month Iranian Pres. Mahmoud Ahmadinejad paid a working visit to Istanbul, where he met President Gul. Turkey welcomed the resumption of talks between the presidents of the internationally recognized (Greek) Cyprus and of the Turkish Republic of Northern Cyprus (TRNC), which Turkey alone recognized.

Economic growth fell from 6.7% year-on-year in the first quarter to 1.9% in the second quarter of 2008. The rise in oil prices was largely responsible for the foreign trade deficit's widening to $63 billion by the end of October. With net tourism revenue amounting to some $15 billion by the end of September, and with continued foreign direct investment, the country withstood the first shock of the world financial crisis; by year's end, however, the index of the Istanbul Stock Exchange had been halved, from 55,538 at the end of 2007 to 26,864. Meanwhile, consumer prices had risen by 11% year-on-year by the end of November. (ANDREW MANGO)

At a protest held in Ankara on November 2, during the global financial meltdown, banners denounce both the U.S. and Turkey's ruling Justice and Development Party.

Burhan Ozbilici/AP

TURKMENISTAN

Area: 488,100 sq km (188,500 sq mi)
Population (2008 est.): 5,180,000
Capital: Ashgabat
Head of state and government: President Gurbanguly Berdymukhammedov

The process of reform in Turkmenistan proceeded unevenly in 2008. While some features of the rigid regime imposed by former president Saparmurat Niyazov were relaxed or removed, others remained in place. Turkmenistan's isolation from the international community gradually weakened, and travel abroad for many Turkmen—if they could afford it—became easier. The influence of the security services on everyday life, however, continued to be overwhelming. In late April Niyazov's successor, Pres. Gurbanguly Berdymukhammedov, asserted that Turkmenistan was completely rebuilding its society, but details of the process remained scarce.

One reform that proved to be unpopular was the introduction in February of free gasoline (water, electricity, and natural gas were already supplied free of cost under Niyazov). Whereas car owners were entitled to a certain amount of free fuel per month, they paid a steep price if additional fuel was needed.

Some of the more visible indications of Niyazov's rule were gradually dismantled. Statues and portraits of the former leader disappeared; months and days of the week that had been renamed for Niyazov had their former designations restored; and the population was given some access to the Internet through a network of Internet cafes; many Web sites, however, remained banned. One of two In-

AP

Delegates to Turkmenistan's Khalk Maslahaty (People's Council), a 2,500-member superparliament, meet in Ashgabat on September 26 to approve a new constitution.

ternet cafes in the northern city of Dashoguz was closed in June because a customer had accessed a banned site. President Berdymukhammedov took a step that even Niyazov had not attempted—he ordered the dismantling of satellite dishes on the grounds that they marred the appearance of a town. This move triggered opposition, in at least some places, by local authorities themselves.

Religious groups, particularly though not exclusively minority confessions, continued to experience severe harassment by the security services. Some groups were forbidden to worship together even though they were legally registered with the authorities.

By the end of Niyazov's rule, his compendium of Turkmen history and traditional values, the *Ruhnama,* had dominated education in Turkmenistan at all levels. During 2008 this dominance was gradually eroded, but the Turkmen opposition in exile complained that no new textbooks were available to replace it; as a result, educational reform was partial at best.

Turkmenistan's huge natural gas resources continued to dominate worldwide interest in the country. Russia's energy giant Gazprom promised in July to buy increasing amounts of Turkmen gas at world market prices, while the U.S. urged Turkmenistan to diversify its gas-export routes, and a gas pipeline to China was under construction. In addition, high-level American visitors to Ashgabat lobbied Berdymukhammedov on behalf of American firms interested in participating in the development of Turkmenistan's natural gas reserves.

(BESS BROWN)

TUVALU

Area: 25.6 sq km (9.9 sq mi)
Population (2008 est.): 9,700
Capital: Government offices in Vaiaku, Fongafale islet, of Funafuti Atoll
Chief of state: Queen Elizabeth II, represented by Governor-General Filoimea Telito
Head of government: Prime Minister Apisai Ielemia

Tuvalu faced continuing threats in 2008 from rising sea levels, which were beginning to contaminate its freshwater aquifers, and from surges and unusually high tides (often called king tides), which were causing accelerated coastal degradation. The country had earlier asked Australia and New Zealand to consider taking in Tuvaluans when the low-lying islands eventually become uninhabitable, and talks with both countries continued. Some 100 Tuvaluans had settled successfully in nearby Niue, and there was dialogue on the possibility of settling more Tuvaluan refugees in Niue, which had a declining population.

In April Tuvalu became the 11th signatory to ratify the Pacific Island Countries Trade Agreement. A new twice-weekly air service from Funafuti to Fiji opened the possibility of expanding tourism, but Tuvalu was likely to derive more income from seasonal workers who worked as temporary labour in horticulture and viticulture industries in New Zealand. Although Tuvalu was not included in the parallel Australian scheme to commence later in the year, Prime Minister Apisai Ielemia and Australian Prime Minister Kevin Rudd met in July and agreed to work toward a Pacific Partnership that would provide a better-coordinated approach to Tuvalu's short-term development. In August Tuvalu sent a team of three to the Beijing Olympics, a weightlifter and two track and field athletes, including the country's first woman Olympian.

(CLUNY MACPHERSON)

UGANDA

Area: 241,551 sq km (93,263 sq mi)
Population (2008 est.): 29,166,000
Capital: Kampala
Head of state and government: President Yoweri Museveni, assisted by Prime Minister Apolo Nsibambi

January 2008 witnessed streams of Kenyans—refugees from the killings that followed the disputed 2007 presidential election—pour across Uganda's southeastern border. The violence in Kenya ruptured transportation links from the port of Mombasa, prompting the Ugandan government to seek an alternative source of petroleum in Tanzania. The influx of homeless people imposed an additional burden on Ugandan aid agencies, which were already heavily committed to supplying food to thousands of people in the northeastern districts of Karamoja, Teso, and Lango affected by floods followed by prolonged drought.

In the northwest any prospect of an end to the civil war waged by the Lord's Resistance Army (LRA) appeared as elusive as ever. Discussions between representatives of the government and the LRA recommenced on January 31 in Juba, Sudan, but soon afterward an LRA spokesman said that its leader,

Joseph Kony, would sign no final agreement until the charges of war crimes and crimes against humanity brought against him by the International Criminal Court (ICC) had been withdrawn. Nevertheless, it was reported that Kony was prepared to sign an agreement on April 10. Again the signing did not take place, and in an attempt to allay Kony's fear of prosecution by the ICC or, failing that, execution by President Museveni, the Ugandan judiciary created its own war crimes tribunal as part of the High Court to try the leading LRA commanders. This did not prove sufficient inducement to Kony, and another promised deadline, this time in July, also passed without an agreement's having been signed. So too did another date at the end of November.

Another unresolved problem concerned the controversial bill to amend the 1998 Land Act that the government introduced in Parliament in February. Ostensibly aimed at protecting tenants from unfair eviction in any part of the country, the land act (amendment) bill caused confusion in all quarters and in particular led to a growing dispute between the central government and the government of the traditional Buganda kingdom, in south-central Uganda. Fears that the objective of the bill was to enable senior officials to acquire land for their own purposes appeared to have been confirmed when it was revealed that land that belonged to a hospital and was intended to be developed for medical purposes had been irregularly sold to government officials and that the Uganda Land Commission had taken no action to prevent the sale.

Pres. Yoweri Museveni's insistence that he was not and could not be a dictator was challenged in January when the Uganda Joint Christian Council (UJCC) criticized a proposal by the governing party, the National Resistance Movement (NRM), that would prevent its own members from challenging motions brought before Parliament by the NRM. The NRM replied that the UJCC was not a member of the NRM and therefore had no grounds for complaint. This issue coincided with a ruling by the police that the opposition Democratic Party could not hold a meeting in Kampala because it had not given seven days' prior notice of the event. In May, after a number of clashes with an extremely vocal independent press, the government began to draft amendments to laws aimed at controlling inconvenient criticism.

(KENNETH INGHAM)

Mykhailo Markiv—Pool/AP

Ukrainian Pres. Viktor Yushchenko (centre) and his daughters place candles during a service in Kiev on November 22 to commemorate the 75th anniversary of the Holodomor, the 1932–33 famine in which millions of Ukrainians died.

UKRAINE

Area: 603,628 sq km (233,062 sq mi)
Population (2008 est.): 46,222,000
Capital: Kiev
Chief of state: President Viktor Yushchenko
Head of government: Prime Minister Yuliya Tymoshenko

The year 2008 in Ukraine was marked by fractious disputes between parliamentary leaders and Pres. Viktor Yushchenko. In September the parliamentary alliance between the president's Our Ukraine–People's Self-Defense bloc and the prime minister's eponymous Yuliya Tymoshenko Bloc collapsed. The ostensible reason was the divided response to the war that broke out in Georgia in August. Whereas Yushchenko condemned Russia's presence in Georgia and reportedly authorized military aid to Georgian Pres. Mikhail Saakashvili, Yuliya Tymoshenko (*see* BIOGRAPHIES) took a neutral position and met with Russian Pres. Dmitry Medvedev in Moscow on October 3. A second reason concerned efforts by Tymoshenko and rival political leader Viktor Yanukovych of the Regions Party to reduce the power of the president via a constitutional amendment. The impasse was resolved in early December by the formation of a new parliamentary coalition that included members of Yushchenko's and Tymoshenko's blocs, as well as delegates supporting Speaker Volodymyr Lytvyn.

At the NATO summit in Bucharest in early April, membership for Ukraine was supported by U.S. Pres. George W. Bush but opposed by Germany, France, and the United Kingdom. Moreover, Russia warned that Ukrainian entry into NATO would seriously strain relations between the two countries. A second summit in Brussels in December resolved to delay further any talk of Ukrainian membership.

Apart from the NATO question, relations between Ukraine and Russia grew increasingly tense. The Russian natural-gas monopoly Gazprom demanded that Ukraine repay debts totaling $2 billion for gas imports. After talks between the countries failed, Russia cut off gas supplies to Ukraine on Jan. 1, 2009. In November Medvedev declined an invitation from Yushchenko to attend commemorations of the 75th anniversary of the Holodomor, the 1932–33 famine in which several million Ukrainians died. Russia rejected Ukraine's characterization of the famine as a genocide carried out by Soviet authorities.

As 2008 drew to a close, the worldwide financial crisis had a devastating impact on Ukraine. In November the economy shrank by more than 14%. The metallurgical industry, which had accounted for almost 30% of GDP, suffered a 50% drop in production that month. In December it was estimated

that Ukraine's GDP had increased by just over 2% during the year—a marked slowdown. Unemployment was on the rise, and on December 23, trade unionists demonstrated in Kiev to protest wage cuts and increasing food prices.

At year's end inflation stood at 22%. Ukraine's central bank had stepped in to try to halt a dramatic decline in the value of the national currency, the hryvnya, whose exchange rate had fallen from around 5 to 7.88 hryvnyas per $1 by late December. The bank spent well over a quarter of its total currency reserves of $37 billion to try to buoy the hryvnya. Much of the initial tranche of a $16.5 billion loan from the International Monetary Fund also was used toward stabilizing the currency. Tymoshenko maintained that members of the president's inner circle, including gas tycoon Dmytro Firtash, had speculated against the hryvnya; she also demanded the resignation of the head of the central bank, Volodymyr Stelmakh, on similar grounds. (DAVID R. MARPLES)

UNITED ARAB EMIRATES

Area: 83,600 sq km (32,280 sq mi)
Population (2008 est.): 4,660,000, of whom about 900,000 are citizens
Capital: Abu Dhabi
Chief of state: President Sheikh Khalifah ibn Zayid Al Nahyan
Head of government: Prime Minister Sheikh Muhammad ibn Rashid al-Maktum

In response to the global recession and declining oil prices, economic growth for the United Arab Emirates (U.A.E.) slowed to an estimated 6.6% in 2008. The stock market declined, but panic was averted by an injection of $6.8 billion into local banks. The U.A.E. economic minister acknowledged that 2009 would be a "testing year" for the local economy, which was based largely on oil and tourism revenue.

Economic turmoil notwithstanding, the U.A.E. invested heavily in its infrastructure and signed a deal with France to develop civilian nuclear technology. The $7 billion loan to Iraq was forgiven in its entirety in an effort to build international confidence in the Iraqi government. The Emirati envoy to the UN pledged an "unlimited financial contribution" to ease the suffering of the Palestinians.

The U.A.E. released its first human rights report to the UN Human Rights Council. The report described the U.A.E. as "proud" of its record but identified areas in need of improvement, including women's rights, human trafficking, and workers' rights. The U.A.E. had been criticized for the harsh working conditions experienced by immigrant labourers, who engaged in mass protests in 2008. More than 3,000 Indian immigrant labourers were detained after the protests. Fair Trials International issued a highly publicized report warning tourists about the U.A.E. drug policy that resulted in multiyear sentences for several tourists who were found with traces of contraband on their persons. (RUMEE AHMED)

UNITED KINGDOM

Area: 243,073 sq km (93,851 sq mi)
Population (2008 est.): 61,446,000
Capital: London
Chief of state: Queen Elizabeth II
Head of government: Prime Minister Gordon Brown

Domestic Affairs. The U.K.'s Labour Government, led by Prime Minister Gordon Brown, began and ended 2008 narrowly behind the Conservatives in the opinion polls. In the summer months, however, Labour's support—and Brown's personal ratings—slumped so low that some of the party's MPs started calling openly for his resignation. Brown's widely praised response to the global financial crisis in the latter months of the year earned him a reprieve as his party's fortunes recovered.

In the spring the government suffered from two linked problems. The first was the sharp decline in consumer confidence as house prices fell and general inflation rose. The second was the implementation of a policy, announced a year earlier, to scrap the 10% starting rate of income tax and reduce the standard rate from 22% to 20%. Although this change left most people better off, low-paid workers saw their tax payments increase—at precisely the time when food and energy prices were rising sharply.

Labour suffered at the nationwide local elections held on May 1. The party lost ground throughout England and Wales, including the biggest prize of all: mayor of London. Ken Livingstone was defeated after eight years as the capital's first elected mayor, to be replaced by the Conservative candidate, Boris Johnson (*see* BIOGRAPHIES).

Following threats of rebellion by Labour MPs, Alistair Darling, the chancellor of the Exchequer, announced on May 13 that he would increase tax allowances for every taxpayer earning up to £40,000 (about $60,000) a year. This move, which amounted to a total tax cut of £2.7 billion (about $5.28 billion) annually, did nothing to revive the government's fortunes. Just nine days later, Labour lost to the Conservatives a previously safe parliamentary seat in northwestern England, Crewe and Nantwich. On July 24 Labour lost what had been an even safer seat, Glasgow East, which was won by the Scottish National Party.

These losses confirmed opinion poll findings, which showed that Labour's support across Britain had fallen to just 25%. In the following weeks there were widespread reports of Labour MPs agitating for a change of party leader and prime minister. The most prominent MP to call for Brown to quit was Charles Clarke, who had previously served as home secretary and party chairman.

When Labour members met for the party's annual conference in Manchester in late September, morale was low. Brown lifted the mood with an exceptionally effective speech, the most memorable line of which was, "This is no time for a novice." The statement was ostensibly directed at David Cameron, the Conservatives' young leader, but it was also seen as a warning to Brown's own foreign secretary, 43-year-old David Miliband, who was widely regarded as having ambitions to succeed Brown. A conference "bounce" lifted Labour's support to about 30%, which was considered poor but not disastrous and not unusual for a governing party in midterm. Labour held its support through the financial crisis of the following weeks. This recovery was confirmed by a by-election in Glenrothes, Scot., on November 6, when Labour held the seat and actually increased its vote.

Brown also displayed a boldness that many thought had deserted him when he recalled Peter Mandelson to his cabinet on October 3. Mandelson had twice served in former prime minister Tony Blair's cabinets in the 1997–2001 Parliament but had subsequently left

Gareth Fuller—PA Wire/AP

British Prime Minister Gordon Brown (right) and Business Secretary Peter Mandelson field questions on the global financial crisis at a meeting with business leaders in Sittingbourne, Kent, on October 21.

British politics to serve as the European Union's trade commissioner. In the simmering conflict over the years between the Blair and Brown "tribes" within the Labour Party, Mandelson was one of the most fervent Blairites. His rapprochement with Brown signaled an end to that conflict, for the time being at least. Mandelson was succeeded as EU commissioner by Baroness Ashton, the leader of the House of Lords. At year's end the Conservatives held a narrow but steady 5–7% lead over Labour.

One of the government's major policy decisions of 2008 came in January when Business Secretary John Hutton announced support for a new generation of nuclear power stations. Hutton said that nuclear power would play an important role in the mix of low-carbon energy sources that would be needed to serve the U.K.'s long-term strategy of reducing carbon emissions. He insisted, however, that these new plants would have to be financed entirely by the private sector, as there would be no government subsidy. In October, Ed Miliband (David's younger brother), who had been appointed energy secretary in the same reshuffle that saw Mandelson return to government, announced that Britain would apply a new target, to cut carbon emissions by 80% by 2050 (the previous target had been a 60% reduction).

One major piece of government legislation was defeated in Parliament during the year. Home Secretary Jacqui Smith wanted the police to have the right, subject to defined safeguards, to hold people suspected of terrorist offenses for up to 42 days without having to file formal charges—an increase of 14 days over the existing limit. The House of Commons voted narrowly to support her, but on October 13 the House of Lords voted 309–118 against the new extension. Smith promptly announced that she was withdrawing the proposal, though she would continue to push the counterterrorism bill of which it was a part, and the government might in future resubmit the 42-day limit in separate legislation.

Scotland's first full year of Scottish National Party rule saw the announcement of a significant new tax policy. On September 3 First Minister Alex Salmond (*see* BIOGRAPHIES) announced the abolition of the council tax (a local property tax) in Scotland and its replacement by a local income tax. He said that this would remove 85,000 Scots from poverty. Critics, however, said that the economy would be harmed if Scotland had a higher overall rate of income tax than the rest of the U.K.

More widely, Salmond argued consistently for Scotland to have greater control over its own economy. Under the devolution arrangements agreed to a decade earlier, Scotland's Parliament could vary the country's overall budget within very narrow limits. Brown (himself an MP for a Scottish constituency) acknowledged in a speech on September 5 that there was a case for greater economic freedom for Scotland. He asked for this issue to be explored by an independent commission, headed by Sir Kenneth Calman, that had been established in 2007.

Economic Affairs. In common with most other major countries, the United Kingdom's economy suffered from the global financial crisis in 2008. GDP, which had risen in each quarter for 16 years, started falling in the second half of the year. By year's end, unemployment was up by 0.7% to 6.0% from a year earlier, house prices had fallen by almost 20% from their 2007 peak, and the main index of share prices was down 31%. A number of well-known companies went out of business late in the year, especially in the retail sector and most notably Woolworths, whose 800 general stores had for decades formed the heart of many high streets.

On February 17 the government announced that it would nationalize the troubled Northern Rock bank. This proved to be no more than an overture to a symphony of problems that affected banks and their customers. As house prices fell and worries about bad debts grew, mortgage lenders started taking a far tougher stance toward home buyers. Almost overnight it became impossible to borrow the full price of a home; demands for down payments of 20% or more became common. This dented the housing market still further, and the fall in prices accelerated. Even more serious for the wider economy, banks almost completely stopped lending to each other; the wholesale market in loans virtually dried up.

On July 21 the Halifax Bank of Scotland (HBOS) sought to improve its capital base by issuing £4 billion (about $8 billion) in new shares, but investors bought only 8% of the new stock, and underwriters had to pay for the rest. The new money provided HBOS with only a few weeks' respite. On September 17 a deal was announced to sell HBOS to another major bank, Lloyds TSB. The deal, which was brokered by Brown and Darling in order to prevent HBOS's total collapse, priced the company at £12 billion (about $21.5 billion), less than one-fifth of its value a year earlier. On September 29 the government nationalized another bank, Bradford and Bingley, taking over control of its mortgages and selling its branches and savings operation to the Spanish banking group Santander.

On October 8 Brown and Darling went even farther and announced that the government would be willing to spend up to £50 billion (about $87 billion) to buy preference shares in Britain's banks, to help them rebuild their capital base, and would provide £200 billion (about $350 billion) in short-term loans to revive interbank lending and £250 billion (about $437 billion) to guarantee bank debts. This plan, which was

much bolder than had been expected, was widely admired in, and its principles were copied by, other countries. By year's end, however, it was unclear how well, or how quickly, the plan would work. In particular, having been criticized for lending too much too readily barely a year earlier, banks now faced the opposite criticism—lending too little and not doing enough to support healthy businesses and creditworthy home buyers.

If the government was credited with acting boldly over the credit crisis, it faced criticism from some quarters for its wider management of the economy. In his budget speech on March 12, Darling predicted that government borrowing in the following 12 months would rise to £43 billion (about $86 billion), or 3% of GDP. As the year wore on, it became clear that this forecast, like his prediction of continued economic growth, was overly optimistic. One consequence was that the government broke one of its own "golden rules," which sought to limit the U.K.'s public debt to 40% of GDP. On November 24 Darling delivered to Parliament his annual prebudget report, in which he forecast that the economy would contract by up to 1.25% in 2009, that government borrowing would climb to £78 billion (about $116.5 billion) in 2008–09 and £118 billion (about $176 billion) in 2009–10, and that the U.K.'s public debt would rise to more than 57% of GDP by 2014.

Meanwhile, the Bank of England (BOE) had to navigate a careful course between supporting Britain's fragile economy and preventing high inflation. The hike in global energy and food prices caused Britain's consumer price index to rise to 5.2% in the 12 months to September, far above the 2% target set by the government. The rise in inflation during the summer made it hard for the BOE to reduce interest rates as fast as many people wanted. Even so, the BOE's benchmark rate did fall from 5.5% at the start of the year to 5.25% in February and 5% in April. The next reduction did not take place until October, when the rate was cut by another half percentage point as part of a round of reductions coordinated with other central banks around the world. Then, on November 6, the BOE lowered rates by another 1.5%, to 3%—the largest reduction in more than a quarter of a century. This was followed by a reduction in December to 2%, the lowest rate since 1951, as the BOE predicted that inflation would fall rapidly to well below the 2% target during 2009. One other consequence of the interest-rate reductions was that the value of sterling fell sharply. In the final three months of 2008, the pound depreciated by about 20% against both the U.S. dollar (ending up at £1 = $1.46) and the euro (£1 = €1.05).

Foreign Affairs. The U.K. maintained 4,000 troops in southern Iraq to train and advise Iraq's police and armed forces. Plans to reduce the number to 2,500 were deferred in April. The U.K. also retained around 8,000 troops in Afghanistan throughout the year, mainly in Helmand and Kandahar provinces and the capital, Kabul. By June 2008 the number of fatalities among British troops (including those caused by accidents and "friendly fire") had reached 100 since 2001.

Prince Harry mans a machine gun at an observation post in Helmand province in southern Afghanistan in February.

John Stillwell—PA Wire/AP

In February news leaked that Prince Harry, the younger son of Prince Charles, had been serving in Afghanistan since the previous December as a forward air controller in Helmand province, guiding fighter jets toward suspected Taliban targets. Once this information became public, Harry was withdrawn back to the U.K.

On June 19 the bill approving the Lisbon Treaty on the future of the European Union received royal assent and passed into law. Opponents of the treaty argued that the bill should have been withdrawn following the treaty's rejection by the Irish people in a referendum a week earlier. (As EU treaties required unanimity, one country's rejection was enough to block it.) U.K. ministers responded that the treaty was in Britain's interests and that Parliament should therefore approve it—which it did with large majorities in both the House of Commons and the House of Lords.

Northern Ireland. On March 4 Ian Paisley announced that he would step down in May as Northern Ireland's first minister and leader of the Democratic Unionist Party (DUP). Paisley, who turned 82 in April, had led the DUP since its founding in 1971. His successor, Peter Robinson (*see* BIOGRAPHIES), was quickly mired in controversy following disagreement in the Northern Ireland Assembly and Review Committee over the devolution of police and justice powers to the province. This had been due to take place in May, but the DUP said that it should be postponed, as there was not yet sufficient public confidence in the proposed arrangements.

Martin McGuinness, leader of Sinn Fein and deputy first minister, said that this decision breached the 2006 agreement that restored the Northern Ireland Assembly and Executive and refused to take part in Executive meetings for the time being. As the devolution system required cross-party agreement, this meant that the Executive was suspended. In contrast to past disputes between Sinn Fein and the DUP, the two parties' leaders refrained from public abuse. The deadlock persisted, however, and no major decisions could be taken regarding the province's future.

In September 2008 the International Monitoring Council (IMC) declared that the Army Council of the Provisional Irish Republican Army (IRA) was "no longer operational." The council had directed the IRA's terrorist campaign against British rule for three decades until the Good Friday Agreement in 1998.

(PETER KELLNER)

UNITED STATES

Area: 9,522,055 sq km (3,676,486 sq mi), including 204,083 sq km of inland water and 156,049 sq km of the Great Lakes that lie within U.S. boundaries but excluding 109,362 sq km of coastal water
Population (2008 est.): 305,146,000
Capital: Washington, D.C.
Head of state and government: President George W. Bush

With the long-developing subprime-mortgage crisis as the proximate cause, the United States led the world into a historic economic recession in late 2008. The downturn was marked by the collapse of financial firms, a dramatic decline in equity prices, and a subsequent falloff in lending and economic activity. By September the malaise had spread to developed economies in Europe, Asia, and elsewhere, prompting Western governments to undertake extraordinary rescue measures, often by nationalizing private banks. The U.S. government abandoned traditional free-market boundaries as it struggled to fashion an effective response, providing billions in assistance to save some firms, lowering interest rates, injecting capital to encourage lending, and taking an unprecedented equity position in private companies. By year's end the heroic measures had stabilized the economy at least temporarily, but the U.S. was clearly deeply mired in a global economic slump of uncertain duration.

The economic turmoil occurred against the backdrop of a national election, and the Republican administration's controversial response to the crisis, accompanied by a public demand for policy change, helped Democrats take full control in Washington. The deteriorating economy and an overextended military also helped to ensure that the U.S. enjoyed few diplomatic successes during the year. In the ongoing war on terrorism, one bright spot for the administration was the continued firming up of the security situation in Iraq and the completion of a road map for ending U.S. combat operations there. The progress in Iraq, however, was at least partially offset by deteriorating conditions in Afghanistan that would require an increased Western troop presence.

Economic Crisis. Waning confidence in the value of securitized home mortgages and derivatives finally caught up with the U.S. economy during the year, prompting a disastrous chain reaction that eventually infected financial markets worldwide. The mortgages were packaged together and sold in bundles, backed by intricate and highly leveraged financial contracts, in a scheme designed to mitigate risk. The instruments, designed by Wall Street lawyers outside government regulatory oversight, were complicated and lacked transparency. When cracks appeared, instead of spreading and minimizing risk, the system acted to amplify unease and created a domino effect that spread across the financial system, from housing to mortgage lending, to investment banks, to securities firms, and beyond.

In January, amid gloomy news of plummeting home sales and the first annual decline in home prices in at least four decades, equity prices plummeted rapidly. In response, Congress approved an economic stimulus package that provided a $600 cash rebate for most persons filing income-tax returns. The measure put $168 billion quickly into the economy but served only to delay more serious consequences. Institutions exposed to securitized mortgages and associated instruments saw their positions continue to deteriorate. In March, Bear Stearns, a venerable New York City investment bank, neared collapse and was sold in a fire sale backed by $30 billion in Federal Reserve funds. In July, Indymac Bancorp, the largest thrift institution in the Los Angeles area, was placed in receivership.

On July 30, Pres. George W. Bush signed a bill designed to shore up mortgage lenders by guaranteeing up to $300 billion in new fixed-rate mortgages. The measure was ineffectual, however, and on September 7 the federal government essentially nationalized both Fannie Mae and Freddie Mac, which together owned or guaranteed half of the country's $12 trillion mortgage market. Instead of providing reassurance, the move only heightened investor worries about the economy and financial markets.

In mid-September the dam broke. Merrill Lynch, the country's largest brokerage house, was sold to Bank of America under duress. Investment bank Lehman Brothers filed for bankruptcy, and federal regulators said that the firm owned so many toxic assets that a bailout attempt would be futile. A major money-market mutual fund, Reserve Primary, said that losses threatened its solvency; the Federal Reserve (Fed) offered $105 billion to shore up money funds, and the U.S. Treasury offered temporary insurance to money-fund investors. The Fed also pumped $85 billion into insurance giant AIG, which had provided backing for mortgage instruments, with the government taking a major equity position in return. Washington Mutual, the country's largest thrift institution, was seized as insolvent and sold for a fraction of its former value. By this time the contagion had spread to Europe and Asia, throwing the developed world economy into turmoil. (*See* Special Report on page 170.)

U.S. Treasury Secretary Henry Paulson proposed a $700 billion rescue bill—initially written on only three pages—that was eventually approved by Congress on October 3. The Troubled Asset Relief Program (TARP) allowed federal authorities to purchase assets of failing banks and eased rules requiring

New York City hedge-fund operator Bernard Madoff, accused of having defrauded investors of up to $50 billion in a giant Ponzi scheme, leaves the federal courthouse in Manhattan on December 17 after being released on bond and ordered to be placed under house arrest.

Daniel Barry—Bloomberg News/Landov

strict valuation of distressed securities. The week of October 6–10, however, proved to be the worst one on Wall Street in at least 75 years, with the Dow Jones Industrial Average (DJIA) down 18%. Under pressure to prevent a complete financial collapse, during October the Fed pumped more than $2.5 trillion in emergency loans to banks and nonfinancial firms, lowering interest rates and working with European central banks to contain the damage.

In November, as confidence continued to erode, Paulson abandoned plans to buy troubled assets under TARP and instead launched a plan to recapitalize financial firms, mostly by purchasing preferred shares of banks. The Fed also pledged another $800 billion to shore up distressed mortgages, provided $45 billion in assistance to Citigroup, and vowed further cuts to already-low interest rates. Those actions, in addition to similar moves by European and Asian governments, appeared to stabilize investor confidence. The stock market hit bottom for the year on November 20, with the DJIA settling at just over half of its record level of a year earlier. Even so, all indicators were showing that the underlying U.S. economy—technically in recession since the previous December—would continue to suffer from the crisis for months to come.

Other distressed U.S. industries began petitioning Washington for assistance. After Congress refused a request from Detroit automakers for a $14 billion package, in December the Bush administration awarded up to $17.4 billion in loans to General Motors and Chrysler. That effectively postponed the automakers' plight until 2009 and handed the problem over to a new administration. Aides to President-elect Barack Obama (*see* BIOGRAPHIES) publicly contemplated another federal stimulus package of $850 billion or more, including money for government infrastructure projects, as an early 2009 priority.

The wild economic year devastated the country's balance sheet. The federal deficit for the fiscal year that ended September 30 almost tripled, to $454.8 billion, and analysts predicted that it would top $1 trillion in 2009. Investors lost an estimated $7.3 trillion in value from the decline in the 5,000 largest stocks alone. Overall, the year produced a 13% drop in the median home resale price, and an estimated 1 in 10 homeowners was in financial distress. Unemployment started the year at a modest 5% but stood at 7.2% in December and was climbing. The accelerating recession at least temporarily erased fears over rising inflation, with the consumer price index up little more than 1% in 2008. At midyear, as international demand peaked, oil touched $147 a barrel, producing gasoline prices of more than $4 per gallon and widespread distress in American households. By year's end demand was down, crude was under $40 per barrel, and gasoline had dropped to around $1.60 a gallon.

The economy took a final blow in December with the arrest of Bernard Madoff, a major New York City hedge-fund operator. Madoff was accused of having run a giant Ponzi scheme, bilking his investors of up to $50 billion in what could be the largest financial scandal in history.

War on Terrorism. Five years after leading the invasion that toppled Saddam Hussein, the U.S. negotiated with the new Iraqi democratic government for an eventual end to allied combat operations. The agreement capped a year of declining violence and increased government control in Iraq and represented a dramatic turnaround for U.S. policy, which had seemed destined for a humiliating defeat only two years earlier. It also cleared the way for redeployment of U.S. troops elsewhere, particularly into resurgent terrorist areas of Afghanistan. Outgoing president Bush hailed the Iraqi developments as a major step forward for democracy and credited the 2007 U.S. military surge, but his year-end visit to Iraq ironically was marred by dramatic political protest.

Under U.S. pressure the Iraqi parliament took several steps to accommodate Iraq's Sunni minority and achieve ethnic reconciliation. In March the Shi'ite-dominated government deployed 30,000 Iraqi troops, accompanied by U.S. air support, into Basra in a successful thrust to depose the Mahdi Army, a radical Shi'ite militia that had long controlled the port city. Iraqi troops later entered and occupied Sadr City, a renegade Shi'ite section of Baghdad, without significant resistance.

As violence ebbed markedly during the year, the Iraqi government took over increasing responsibility for its domestic security. In September Anbar province, once the cradle of the Sunni insurgency against the central government, was turned over to full Iraqi control. The following month Iraq assumed responsibility for some 100,000 (mostly Sunni) fighters; these Awakening Council forces had previously been paid and supervised by the U.S. military.

Al Behrman/AP

As U.S. unemployment figures surge above 7% in December, job seekers in Cincinnati, Ohio, use computers at an employment centre to look for work.

At year's end Iraq and the U.S. signed a status-of-forces agreement that called for the removal of allied troops from Iraqi cities by mid-2009 and complete withdrawal of U.S. combat troops by the end of 2011. The agreement also gave Iraqi civilian authorities criminal jurisdiction over off-duty U.S. troops who committed infractions while away from their bases. Incoming U.S. president Obama had campaigned for earlier withdrawal of U.S. forces within 16 months—or by May 2010. Obama later signaled, however, that he would listen to military advice and remain flexible on his timetable.

By year's end allied forces were withdrawing from Iraq, and the U.S. military presence was diminishing toward presurge levels of 135,000. According to the Associated Press, U.S. troop deaths in 2008 stood at 314, down from more than 900 in 2007. (A total of 4,221 U.S. soldiers had died in the conflict since it began in 2003.) Some Middle East experts suggested that the security improvements were largely the result of internal Iraqi political reconciliation. In a final visit to Baghdad on December 14, however, President Bush declared that his administration's policies deserved credit and called the surge "one of the greatest successes in the history of the United States military."

APTN/AP

A series of images shows Iraqi journalist Muntadar al-Zeidi throwing a shoe in protest at U.S. Pres. George W. Bush at a press conference in Baghdad on December 14; Iraqi Pres. Nuri al-Maliki appears with Bush at the lectern; the journalist was temporarily jailed after the highly publicized incident.

At a press conference that same day with Iraqi Pres. Nuri al-Maliki, in a highly publicized incident, an Iraqi journalist threw two shoes at Bush as a sign of disrespect. Bush ducked the shoes; the journalist was temporarily jailed; and critics noted that such political protest would have been inconceivable in Saddam's Iraq.

The military progress in Iraq was offset by renewed violence in Afghanistan as Sunni-dominated militant groups, including the Taliban and al-Qaeda, penetrated and challenged NATO forces in more than half of the country. In tacit recognition of the threat, U.S. Army Gen. David Petraeus, architect of the Iraq surge strategy, was elevated in October to head the U.S. Central Command, effectively taking control of allied military strategy in the war on terrorism, including the aggression in Afghanistan.

The Bush administration's legal strategy toward suspected terrorists suffered setbacks during 2008. In June the U.S. Supreme Court ruled, in a 5–4 decision, that even enemy combatants held outside the U.S.—at the U.S. detention facility at Guantánamo Bay, Cuba—had a right to a review of their cases in U.S. civilian courts. The ruling declared unconstitutional parts of two laws approved by Congress after 9/11 that were designed to allow indefinite detention of suspects and their eventual trial by military commissions. It further complicated dozens of pending combatant cases that were already burdened with charges of torture, withholding of evidence, and violations of international law by the U.S. military.

Two war crimes trials were concluded during the year, the first in the U.S. since World War II. Salim Hamdan, a former driver for Osama bin Laden, was convicted in August on reduced charges of having provided "material support for terrorism." He received a modest sentence of five and a half years and was released at year's end. A second defendant, Ali Hamza al-Bahlul, a Yemeni accused of having produced propaganda for al-Qaeda, including videos, was convicted by a military commission at Guantánamo Bay in October and given a life sentence. Neither Bahlul nor his attorney participated in his defense.

In U.S. civilian courts, federal prosecutors won convictions in two antiterrorism criminal cases. In November, after a previous trial ended in a hung jury, the Holy Land Foundation and five former organizers were found guilty in Dallas of having funneled $12 million to the terrorist group Hamas. One observer alleged that the Muslim foundation's practice of supplying cash payments to Palestinian terrorists' families was the moral equivalent of car bombing. In December five foreign-born Muslims were convicted in New Jersey on charges that included having planned to kill U.S. soldiers at Ft. Dix. Defense attorneys claimed that the men were only talking and had planned no real violence, but prosecutors said that the convictions proved the effectiveness of the U.S. post-9/11 strategy of infiltrating violence-prone groups.

Domestic Policy. As lawmakers awaited a new administration following the historic win of Obama in the presidential contest, election-year political considerations dramatically slowed the U.S. legislative process. (*See* Special Report on page 176.) Despite record farm and food prices, Congress approved a $289 billion farm bill renewal that expanded agriculture subsidies and food-assistance programs. Congress also postponed a scheduled 10.6% reduction in physician reimbursements for Medicare, paying for the measure by trimming payments to insurance companies that provided supplemental health care programs. Bush vetoed both measures, but his vetoes were overridden both times. Two bills augmenting veterans' benefits—for housing, health care, life insurance, and family allowances—were signed into law. Another law dramatically expanded G.I. Bill education awards, essentially providing a full college education to veterans who had at least three years of service and allowing benefits to be transferred to family members.

Preparing to leave office, the Bush administration at year's end proposed several dozen regulatory changes. Among them were provisions for expanding federal land eligible for shale oil development, increasing allowable on-road hours for truck drivers, allowing health care workers to refuse to participate in procedures that violated their moral or religious beliefs, permitting the possession of licensed firearms in national parks, reducing access to Medicaid vision and dental benefits, eliminating factors such as greenhouse conditions in Endangered Species Act reviews, and slowing federal protection for workers exposed to toxic chemicals. Obama transition officials promised to review the entire list in 2009.

Foreign Policy. U.S. relations with a resurgent and energy-rich Russia deteriorated further in 2008. Effects of heightened tensions could be seen worldwide as the two countries sparred over missile defense, Latin America, Iraq, Iran, and Russia's invasion of a province of Georgia. In one example, Russia almost single-handedly blocked U.S. efforts to ratchet up UN sanction pressure on Iran over its refusal to allow nuclear inspections. By year's end some commentators were saying that U.S.-Russia relations were at their lowest ebb since the end of the Cold War nearly two decades earlier.

In April, under U.S. prodding, NATO agreed that it would eventually accept Georgia, Russia's southern neighbour, as a member—even though Russia opposed NATO's eastward expansion and viewed it as a security threat. Four months later, Russian troops invaded two rebellious Georgian provinces, South Ossetia and Abkhazia, and recognized them as independent states. NATO stepped up its military presence in the region, with U.S. warships delivering relief efforts to Georgia via the Black Sea. In what was widely viewed as a response, Russia dispatched a military flotilla to Venezuela in November in a show of support for Pres. Hugo Chávez, a critic of the U.S., and at year's end Moscow also staged a rare Russian navy visit to Cuba.

With Chávez and Cuba's Raúl Castro in the lead, Latin American leaders formed a South American union (Unasur) and took other steps aimed at reducing U.S. influence in the region. A group of 33 countries staged a summit meeting in Brazil in December, pledging internal cooperation and welcoming Cuba after having failed to invite U.S. representatives.

A U.S. sailor takes a rest from loading humanitarian aid packages onto the deck of the USS McFaul, *anchored in the harbour of the port city of Batumi in western Georgia on August 24.*

Bela Szandelszky/AP

Efforts to prevent nuclear weapons proliferation suffered setbacks during the year. No progress was made in stopping nuclear development in either Iran or North Korea or in numerous Middle Eastern countries that were nervous about a potential threat from Iran; a number of Middle Eastern countries had initiated steps toward starting their own nuclear programs. Iran, continuing to insist that its nuclear development was solely for civilian energy purposes, persisted in stonewalling international watchdogs, even while Russia supplied Iran with uranium for enrichment and processing that could be diverted to weapons purposes. At midyear, in Geneva, U.S. authorities engaged in direct talks with Iranian nuclear negotiators for the first time and also joined major powers in offering yet another package of incentives for Iranian abandonment of its nuclear ambitions. Iran continued to obfuscate, however, and Congress tightened U.S. economic sanctions on Iran in September.

After agreeing in 2005 to scrap its nuclear weapons program in return for normalized world relations, North Korea accepted promised food and fuel assistance from the U.S. and allies. As a show of good faith, President Bush removed Pyongyang from an international blacklist as a state sponsor of terrorism. In December five countries met to persuade North Korea to accept a verification regime written by its ally, China. The talks collapsed, however, when the North Koreans refused to sign the agreement, with analysts speculating that they were waiting for more favourable terms from the new U.S. administration. Prior to the breakdown, the U.S., Russia, China, and South Korea had already delivered 500,000 tons of fuel oil promised to North Korea for its cooperation.

The U.S. continued to push for rapprochement between India and Pakistan, both to facilitate critical support for antiterrorism efforts and to counter growing Chinese influence in Asia. In October the U.S. signed an agreement to supply technological aid for India's nuclear program, even though India had tested nuclear weapons and refused to sign the Non-proliferation Treaty. In November, after Pakistan-based terrorists staged a bloody raid on Mumbai (Bombay), U.S. Secretary of State Condoleezza Rice visited the subcontinent to pressure both countries to continue normalizing relations. (*See* Special Report on page 192.)

(DAVID C. BECKWITH)

DEVELOPMENTS IN THE STATES 2008

The national economic recession hit U.S. states with a vengeance in late 2008, throwing budgets deeply into the red and prompting forecasts of even more financial trouble ahead. Forced to balance their books, a few states raised taxes or fees to generate new revenue. Most states, however, tightened their belts—postponing or canceling new programs, laying off state employees, and trimming spending across the board to weather the fiscal storm. The action came as state capitals continued to wrestle with a host of issues left unresolved on the federal level, including immigration, global warming, children's health insurance, and education reform. Regular legislative sessions were held in 44 states during the year, and 22 states staged one or more special sessions, often to deal with financial issues.

Eleven states held gubernatorial elections, and Democrats took over the Missouri governorship previously held by Republicans; this left the prospective 2009 governorship lineup at 29 Democrats and 21 Republicans. Legislative elections were staged in 44 states and resulted in modest gains for Democrats. Republicans won control of the Montana Senate and the Tennessee House and Senate, all previously tied or held by the other party. Democrats, however, took charge in the Delaware House, New York Senate, Nevada Senate, Ohio House, and Wisconsin Assembly. The Alaska Senate, previously Republican, and the Montana House, previously Democratic, were tied. That meant that Democrats had two-chamber control of 27 state legislatures, Republicans dominated in 14 states, and control was split or tied in 8 others. Nebraska had a nonpartisan unicameral legislature.

Structures, Powers. Voters in three states—Connecticut, Hawaii, and Illinois—rejected ballot measures authorizing conventions to write new state constitutions. Opponents said that the conventions could be hijacked by special interests—including opponents of same-sex marriage—and were an inefficient way to resolve local governmental concerns. California and New York became the first states to create a cabinet-level position to oversee volunteer and charitable activity.

Arkansas became the 45th state to authorize annual legislative sessions. South Dakota voters decided to keep its term limits for legislators. By a narrow margin, California voters endorsed a

Gary Kazanjan/AP

Protesters against Proposition 8—a ballot proposition that would overturn the California Supreme Court's decision to legalize same-sex marriage—march in a rally in Fresno on November 2.

proposal to have state legislative districts drawn up every 10 years by a citizen panel instead of by the legislature itself.

Finances. As a mid-decade housing boom turned to bust, state revenue projections declined early in 2008, sending state authorities scrambling for cost savings. The outlook turned even more bleak in the fall as the financial crisis accelerated the U.S. descent into recession and pushed most state budgets into deficit. States were particularly hit by economic slowdowns because sales taxes and property-transfer levies were adversely affected, while state spending on unemployment assistance, Medicaid, and other benefits rose quickly. Among the hardest-hit states were California, which was forced to lay off thousands of state workers, and New York, which was dependent upon Wall Street transactions for one-fifth of state revenue. (*See* Special Report on page 170.)

Most states were required to balance their budgets every year. Spending restrictions were enacted in some 40 states, often targeting health care and even education, the biggest items in most state budgets. The National Conference of State Legislatures reported that states found $40 billion in cost savings or additional revenue during the year but still faced an additional $97 billion in deficits for the 2009 and 2010 fiscal years. At year's end, governors petitioned President-elect Barack Obama (*see* BIOGRAPHIES) for federal infrastructure assistance and for increased federal funds to help defray fast-rising Medicaid, unemployment insurance, and food-stamp costs.

In November balloting, Colorado voters refused to repeal the state's strict limits on increased spending. Voters in North Dakota turned down a proposal to halve the state's income tax, and Massachusetts voters rejected the abolition of the state income tax. Maine voters voided a legislative plan to increase taxes on beer, wine, and soft drinks.

Several states took steps to mitigate the mortgage crisis. North Carolina approved a foreclosure-prevention law offering state mediation assistance for borrowers. Twenty-nine states tightened laws covering mortgage licensing, and four—Kentucky, Maryland, Utah, and Washington—established mortgage fraud as a crime. Seven others tried to curb unscrupulous foreclosure-rescue scams.

At midyear, with energy prices at record levels, the country's governors sought a doubling of the federal government's low-income heating-assistance program. Energy prices dropped markedly in the fall, however, and the anticipated crisis disappeared. New York became the first state to force online retailers to collect sales taxes; e-commerce company Amazon quickly filed suit in an attempt to void the law.

Social Issues. The Supreme Courts of California and Connecticut established same-sex marriage as a state constitutional right during the year, making those states the first to legalize same-sex unions since the top Massachusetts court authorized full marriage rights for homosexuals in 2003. The California decision, which was announced in June, was quickly challenged, however, and in the November election was overridden (52–48%) by state voters. The ballot result sorely disappointed gay rights advocates who were hoping for the first major voter ratification of same-sex marriage, and it also called into question the legality of 18,000 marriages performed in California in the five months following the court decision. New York's governor announced that the state would recognize gay marriages performed elsewhere. Even so, voters in Arizona and Florida banned same-sex marriage in their states, and in a related measure Arkansas voters required that foster parents be a married couple. At year's end 40 states had specifically outlawed same-sex marriage, through either state law or constitutional amendment, while 11 states and the District of Columbia legally recognized some form of domestic partnerships, civil unions, or gay marriage.

Nebraska became the fourth state to ban race-based preferences in state hiring, contracting, and educational admissions decisions. A similar referendum, however, failed on a close vote in Colorado, which represented the first defeat for the anti-affirmative-action measure.

Right-to-life advocates suffered reverses during the year. Washington voters joined Oregon in approving "death with dignity" acts allowing physician-assisted suicide. Michigan voters terminated a long-standing ban on embryonic stem cell research. South Dakota voters turned down a highly restrictive proposition banning abortion except in cases of rape, incest, or danger to the mother's health. For the second time, California voted down a ballot measure requiring parental notification before a minor could obtain an abortion.

Law, Ethics. Deadlock within the federal government on immigration reform led to state legislative action, but no consistent pattern developed. The administration of Pres. George W. Bush moved to head off a growing revolt over Real ID, a 2005 federal law requiring states to verify the identity of all drivers and issue tamper-proof licenses, a measure that states said was too costly and infringed on privacy rights. Facing widespread foot-dragging and noncompliance, the administration gave all states two additional years to conform. Oregon and Texas banned illegal immigrants from obtaining driver's licenses, and California's governor vetoed a legislative measure allowing them to be licensed. In an effort to combat accidents involving undocumented immigrants, Georgia upgraded to felony status a repeat conviction of driving without a license. Georgia and Mississippi increased mandatory use of the federal E-verify system to combat the hiring of illegal immigrants, but a U.S. judge blocked a similar Oklahoma law. Arizona voters refused to amend a controversial law that cracked down on employers who

knowingly hired illegal immigrants. Oregon voters defeated a ballot measure restricting bilingual education.

Arkansas voters, seeking to fund college scholarships, approved the 43rd state lottery. Maryland legalized slot machines at racetracks. Ohio and Maine voters rejected new casinos, but Colorado and Missouri voters expanded casino games and hours of operation. Voters in Massachusetts decriminalized the possession of one ounce or less of marijuana, and Michigan became the 13th state to allow marijuana for medical use. California voters rejected a major drug-law rewrite that would have decriminalized possession of small amounts of marijuana.

Six states increased penalties for dog and other animal fighting. Massachusetts banned greyhound racing. Concealed-carry gun laws continued to expand: Florida allowed permit holders to take weapons to work (if they were left in a parked vehicle), and Georgia allowed guns in restaurants, parks, and public transit. Alaska, Indiana, Georgia, and Tennessee toughened laws against Internet predators.

The year produced numerous ethics investigations, one involving Alaska Gov. Sarah Palin (*see* BIOGRAPHIES), whom state legislators accused of having improperly fired the state public-safety commissioner. A special counsel exonerated her one day before the November election, in which she ran as the Republican vice presidential candidate. New York Gov. Eliot Spitzer was forced to resign after he admitted having engaged a prostitute. Ohio Attorney General Marc Dann also resigned in a sexual-harassment scandal. In December, Illinois Gov. Rod Blagojevich was arrested by federal agents and charged with conspiracy to commit fraud and solicitation of bribery, including an alleged attempt to sell Barack Obama's vacated U.S. Senate seat.

Embattled Illinois Gov. Rod Blagojevich, who faced federal charges of conspiracy to commit fraud and solicitation of bribery, leaves his home in Chicago on December 15.

Charles Rex Arbogast/AP

State use of the death penalty was suspended early in the year while the U.S. Supreme Court reviewed the constitutionality of lethal injections. After executions resumed in May, the use of capital punishment continued to decline. During 2008, 37 inmates were executed, down from 42 in 2007. Florida enacted a statute setting compensation for wrongful criminal convictions; the amount was $50,000 for every year served in prison.

Health, Welfare. Iowa became the 28th state to ban smoking in any public place, including bars and restaurants. Six additional states (for a total of 28) required cigarettes to be wrapped in self-extinguishing paper to prevent fires; this effectively made the statute a national requirement.

Health-conscious California became the first state to ban trans fats and also the first to require posting of calorie and nutritional content on fast-food menus. In another antiobesity move, five states boosted the mandatory time that schoolchildren must spend at recess or gym classes.

Budget problems forced several states (including California, Illinois, Missouri, New Mexico, and Pennsylvania) to postpone expansion of state health insurance coverage. Iowa, Colorado, and Montana expanded children's health care, and Florida and Maine increased funding for their novel health insurance assistance programs. New Jersey became the first state to require that all children have health insurance, though the measure contained no enforcement clause.

New Jersey joined California and Washington in mandating that employers provide up to six weeks of paid leave annually to care for family members, but funding for Washington's law never materialized during the year. Seeking to curb infant deaths, Nebraska on July 1 joined states providing a "safe haven" for unwanted children. The new law failed to specify any age parameters, however, and within a few months, nearly three dozen older children, several from other states and some as old as 17, had been legally handed over to state care. At year's end Nebraska legislators amended the law with a 30-day age limit.

Environment, Education. California became the first state to enact a law encouraging home building in areas near workplaces and public transportation; the measure was designed to curb suburban sprawl and air pollution. Connecticut joined four other states in capping greenhouse gas emissions, and Delaware, Florida, and New Hampshire also approved measures to reduce emissions blamed for global warming. Delaware approved a major offshore wind energy project.

Massachusetts became the first state to exempt non-food-based biofuels from state gasoline taxes and also approved a unique plan to manage its waters as a wind, wave, and tidal energy resource. Alaska issued a license for a $20 billion natural gas pipeline. Meanwhile, California voters approved nearly $10 billion in bonds for high-speed-rail construction between Los Angeles and San Francisco.

Minnesota voters set aside a percentage of state sales-tax revenue for wetland protection. Alaska voters, seeking to protect moose, approved a game-management program that allowed the shooting of wolves from airplanes. Missouri voters approved a measure that required utilities to produce 15% of energy through renewable sources by 2021, but Californians rejected a more drastic requirement of 50% by 2025. Hawaii became the first state to require solar-powered water heaters in new homes.

Some 32 states increased funding for prekindergarten education programs, but some plans were trimmed in late-year budget cutting. A shortage of funds torpedoed Arizona Gov. Janet Napolitano's plan to grant free public college tuition to all high-school graduates who had at least a B average.

Regulation. Reacting to high accident rates, several states tightened restrictions on new drivers, particularly teenagers. Virginia established for teen drivers a "baby DUI" law, a strict .02 blood-alcohol standard, which was one-quarter the allowable amount for adults. California banned teens from using cell phones while driving and also outlawed text messaging for all drivers. California and Washington joined three states that banned motorist use of handheld cellular phones. Arizona and Ohio voters rejected proposals to tighten restrictions on "payday lenders" accused of having predatory business practices. (DAVID C. BECKWITH)

URUGUAY

Area: 177,879 sq km (68,679 sq mi)
Population (2008 est.): 3,350,000
Capital: Montevideo
Head of state and government: President Tabaré Ramón Vázquez Rosas

As Uruguayan Pres. Tabaré Vázquez completed his penultimate year in office in 2008, he enjoyed an approval rating well above 50%. Vázquez, leader of the leftist coalition the Progressive Encounter–Broad Front (EP-FA), could not succeed himself without a constitutional amendment, however, and he repeatedly and unequivocally indicated that he did not intend to seek reelection. This left Danilo Astori, Vázquez's former finance minister, and José Mujica, chairman of the Senate and a former Tupamaro guerrilla leader, as the two front-runners for the coalition's presidential nomination. Among the opposition, the Colorado Party barely reached double digits in the polls. The Blanco Party (PN), polling above 30%, perhaps had the best chance to unseat the EP-FA—especially if, as many expected, former president Luis Lacalle obtained PN's nomination.

Uruguay experienced another year of positive economic results. The economy grew at about 10%. Inflation remained under double digits, running at an expected 7.5%; real salaries were up by more than 12%; and unemployment dropped to 7.6%. In the last half of the year, however, the global economic crisis began to affect the country, with the Uruguayan peso falling from 19 to 24 against the U.S. dollar and significant layoffs occurring in the meatpacking and textile industries. Nevertheless, President Vazquez vowed to bring down the retailer inflation rate to the promised 3–7% threshold (the figure had risen to 8.1% in the first 11 months of the year) and to guard against food price speculation or monopolization of food.

Crime and personal security remained important issues during the year. The country's minister of the interior, Daisy Tourné, came under severe criticism because of Uruguay's sharply rising crime rate. Strikes and labour unrest increased during the year as labour unions pressured the leftist government for better wages. In November the Uruguayan parliament passed the country's first legislation permitting abortion, but Vázquez vetoed this measure a few days later.

(MARTIN WEINSTEIN)

An activist in Montevideo, Uruguay, demonstrates on November 14, the day that Pres. Tabaré Vázquez vetoed a law, passed by the parliament, that had legalized first-trimester abortions.

Matilde Campodonico/AP

UZBEKISTAN

Area: 447,400 sq km (172,700 sq mi)
Population (2008 est.): 27,345,000
Capital: Tashkent
Chief of state and head of government: President Islam Karimov, assisted by Prime Minister Shavkat Mirziyayev

In 2008 Uzbekistan continued to maintain good relations with Russia while seeking to improve its contacts with the West. In February, Uzbek Pres. Islam Karimov hailed Russian military assistance, and at the end of March the Uzbek Senate ratified Uzbekistan's return to the Collective Security Treaty Organization. During Russian Prime Minister Vladimir Putin's visit to Tashkent in September, an economic cooperation pact for 2008–12 was signed. Included in the accord was an agreement on the construction of a new pipeline for the export of Uzbek natural gas to Russia.

During the course of the year, the sanctions imposed by the European Union were reviewed and largely dropped; in September, however, the Uzbek authorities appealed to the EU for an end to the "double standard" that they felt was being applied to them. The sanctions had been imposed after the Uzbek refusal to permit independent investigation of the Andijan events in 2005, during which government troops reportedly killed hundreds of unarmed demonstrators. International human rights groups and Uzbek activists appealed to the EU not to lift the sanctions merely because a few human rights activists had been released from prison. In September Uzbekistan officially banned the use of child labour in the cotton harvest, but this did not prevent refusals by U.S. and British firms to buy Uzbek cotton because children were forced to work as pickers.

In April Karimov visited Kazakhstan, describing that country as a key partner of Uzbekistan in Central Asia, but he rejected the Kazakh concept of a Central Asian union. Relations were less smooth with Tajikistan. Much of the Central Asian region, including Uzbekistan, was affected by the extremely cold weather in January and February; the Uzbek authorities refused to honour an agreement to de-

liver electricity to Tajikistan, which was far more severely affected than was Uzbekistan, on the grounds that the power was needed at home. Only in March, after the worst of the winter was past, did Uzbekistan resume power supplies. In August Uzbekistan accused Kyrgyzstan of having violated a water-sharing agreement, holding back water that was needed for irrigation of Uzbek farms; Kyrgyzstan denied the charge. Agreements between the five Central Asian states in October raised hopes in the region that a solution might soon be found to resolving intraregional power and water-use problems. (BESS BROWN)

VANUATU

Area: 12,190 sq km (4,707 sq mi)
Population (2008 est.): 233,000
Capital: Port Vila
Chief of state: President Kalkot Mataskelekele
Head of government: Prime Ministers Ham Lini and, from September 22, Edward Natapei

Vanuatu's economy grew at 5.7% in 2008, but it remained fragile, with GDP per capita rates having remained unchanged for some 20 years. Growth was slower in inaccessible rural areas, with continuing growth of squatter settlements. Despite the problems, tourism expanded by 8.5%, and low-cost regional airlines opened markets in Australia and New Zealand, which saw airline arrivals increase by 19%. Vanuatu sent its first 200 overseas seasonal workers to labour in New Zealand's horticulture industry, and the country was invited to participate in a parallel temporary-worker scheme to be set up in Australia. Remittances from these seasonal workers were expected to broaden the sources of Vanuatu's national income.

A record 334 candidates contested Vanuatu's September 2 general election. While elections traditionally revolved around personality, in 2008 certain themes—including free education and health care, access to credit, and the promotion of opportunities for indigenous business—emerged as key electoral issues. In the event the Vanuaaku Pati (VP) earned the most seats in the parliament, and Edward Natapei of the VP formed a coalition government. Former prime minister Ham Lini of the National United Party was named deputy prime minister.

On the international front, Port Vila became the headquarters of the Melanesian Spearhead Group (MSG), a political coalition of Melanesian states. In May Vanuatu hosted the MSG leaders' 2008 summit in its new secretariat building, which was provided by China. (CLUNY MACPHERSON)

VATICAN CITY STATE

Area: 44 ha (109 ac)
Population (2008 est.): 930; about 3,000 workers live outside the Vatican
Chief of state: (sovereign pontiff) Pope Benedict XVI
Head of administration: Secretary of State Tarcisio Cardinal Bertone

As part of the Vatican's continuous diplomatic action, Pope Benedict XVI met visitors from many countries in 2008. One was Iraqi Prime Minister Nuri al-Maliki, who in turn invited the pontiff to Iraq. Syria's grand mufti, Ahmad Bader Hassoun, also extended an invitation to the pope to visit that country. In April, Pope Benedict made his first trip to the U.S. since his elevation in 2005. During a six-day visit to Washington, D.C., and New York City, the pontiff met with U.S. Pres. George W. Bush, addressed the United Nations, visited the site of the Sept. 11, 2001, terrorist attacks on the World Trade Center, and celebrated mass at Yankee Stadium. He also spoke on the recent scandal of priestly sexual abuse and met privately with several victims. Later in the year the Vatican announced an interest in playing a role in possible multilateral negotiations over the future of Jerusalem.

During the year a number of representatives of the international Islamic community sought new opportunities for debate to overcome recent misunderstandings. Changes in the Roman Catholic liturgy for the Good Friday celebration prompted a response by members of the Jewish faith, who also expressed the wish to intensify dialogue. In early November the Vatican hosted an unprecedented summit with Muslim representatives from several countries and branches of Islam.

The pope voiced concern about rising world secularism and about renewed nationalism in 2008, a risk perceived especially in connection with the conflict between Russia and Georgia. The Vatican also focused attention on some of the pernicious consequences of globalization, such as economic dualism and

Pope Benedict XVI greets members of the crowd who attended mass on April 20 at Yankee Stadium in New York City. The event took place during the pontiff's six-day visit to the United States.

Chang W. Lee/AP

the plight of immigrants seeking haven in economically advanced countries. The Holy See raised special objections to policies announced in Italy that were intended to marginalize immigrants.

The Vatican fared poorly on the financial front during the fiscal year owing to the poor performance of its investments and unfavorable exchange rates for the U.S. dollar. Most of the Vatican's investments and donations were in dollars, while its expenses were in euros. (GREGORY O. SMITH)

VENEZUELA

Area: 916,445 sq km (353,841 sq mi)
Population (2008 est.): 27,884,000
Capital: Caracas
Head of state and government: President Hugo Chávez Frías

On Nov. 30, 2008, Pres. Hugo Chávez asked Venezuela's official government political party, the United Socialist Party of Venezuela (PSUV), to call for a popular referendum that would amend the 1999 constitution to allow for the indefinite reelection of the president. Voters had narrowly rejected a similar proposal in a December 2007 constitutional referendum that would also have centralized power even further.

In the November 23 elections, opponents of Chávez's socialist revolution retained the two governorships that they had won in 2004 and added three more. These five states encompassed 44% of Venezuela's population. Opposition candidates also won election as the mayors of Caracas, Maracaibo, and Petare (a zone in eastern Caracas dominated by shantytowns), which had traditionally supported the government. On the other hand, the PSUV won a substantial majority of the governorships, mayoralties, and state legislative seats at stake. Chávez interpreted these results, mixed though they were, as strengthening his chances of winning approval for constitutional changes in a second referendum—if he acted quickly in order to blunt the ability of the opposition to take advantage of the gains that they had made in the regional and local elections.

The decline in world oil prices during the second half of the year caused economic problems. Revenue tumbled as the price of Venezuelan crude fell almost 70% between July and December. Rainy-day funds totaling more than $40 billion enabled Chávez to avoid significant cutbacks in public spending. Nevertheless, the global credit crunch raised the spectre of default or the rescheduling of Venezuela's dollar-denominated debt. The economic growth rate slowed during the year to 6%, down from 8.4% in 2007. Inflation increased to 30.9% over the 2007 rate of 19%. Traditional vulnerabilities became a greater concern, since Venezuela was more dependent than ever before on oil sales, which contributed roughly one-half of central government revenue, 95% of export revenue, and 15% of GDP. Also of concern was the continuing lack of transparency in public accounts, which contributed to creditor and investor nervousness. In October the Economist Intelligence Unit estimated that the central government's true fiscal position was worse than the official statistics suggested. This was due to the channeling of additional off-budget spending through the national development fund and the state oil company, Petróleos de Venezuela. These conditions increased the likelihood that the country's currency would come under pressure for significant devaluation, especially if high public spending continued without a significant rise in oil prices.

In the international arena, Venezuela continued to strengthen relations with countries capable of challenging the United States. Chávez signed new bilateral agreements with Iran, Russia, and China. He also attempted to form an axis of militant socialist countries in the Western Hemisphere. The U.S. government chided Venezuela over the increase in cocaine trafficking through its national territory and over the support of the Revolutionary Armed Forces of Colombia (FARC) insurgency by some of Chávez's closest confidants. Venezuelan hostility was an important consideration in U.S. Pres. George W. Bush's decision to reestablish the U.S. Navy's Fourth Fleet (oriented in the Caribbean and Latin America). The U.S. government was especially concerned over Venezuela's purchase since 2005 of more than $4 billion in arms from Russia, including aircraft and attack submarines. Relations with Brazil grew more cordial in 2008 as Chávez and Pres. Luis Ignácio Lula da Silva signed a number of bilateral cooperation agreements on energy, education, and agriculture. Venezuela also joined Brazil and other South American countries in establishing the Union of South American Nations (UNASUR), which would integrate two existing customs unions, the Common Market of the South (Mercosur) and the Andean Community. Membership in UNASUR fit well with Chávez's goal of crafting a multipolar world. (DAVID J. MYERS)

VIETNAM

Area: 331,212 sq km (127,882 sq mi)
Population (2008 est.): 88,537,000
Capital: Hanoi
Chief of state: President Nguyen Minh Triet
Head of government: Prime Minister Nguyen Tan Dung

Domestic politics in Vietnam in 2008 were shaped largely by economic issues and concern over rising social unrest. In February inflation began to rise, reaching a high of 28.3% in August. By year's end Vietnam's economy had be-

Vietnamese Roman Catholics attend a mass in September outside the Hanoi Cathedral, near one of the pieces of property that church officials claimed had been illegally seized by government authorities.

Chitose Suzuki/AP

gun to feel the impact of the global financial crisis.

The Central Committee of the Vietnam Communist Party (VCP) met three times during the year to address these issues. The first of these meetings (the sixth plenum), held in January, focused on reform of the legal system in order to create institutions compatible with Vietnam's "socialist-oriented market economy." The plenum also raised salaries and social welfare for those who had rendered service to the country in the past.

Accelerated inflation resulted in more than 500 strikes in the first half of the year by workers who could not subsist on their wages. Three-fourths of the strikes took place in foreign-invested enterprises, mainly in Ho Chi Minh City and the surrounding provinces. Most strikes were relatively short-lived and resulted in pay increases and modest improvements in working conditions. In early April the Politburo directed the cabinet to draw up a list of eight major measures to control inflation, stabilize the economy, and ensure social welfare.

In other news, social unrest broke out in the Central Highlands in mid-April when long-festering grievances by the Degar ethnic minority over land rights, religious persecution, and police brutality led to mass demonstrations in Dak Lak and Gia Lai provinces. Later that month police launched a preemptive crackdown against pro-democracy dissidents to prevent any disruption to the Beijing Olympic torch relay as it passed through Ho Chi Minh City. In May security officials responded to growing media assertiveness in reporting high-level corruption by arresting two leading journalists and their police informants. The detainees later were convicted. In August the press credentials of seven journalists and editors from four newspapers were revoked, and in October two more editors were dismissed. Meanwhile, the seventh plenum met in July and adopted three far-reaching policy resolutions on youth, intellectuals, and farmers in an effort to ensure the loyalty of these groups to the Communist Party in the period up to 2020.

Over the course of the year, the Roman Catholic Church and local authorities in Hanoi became embroiled in a dispute over ownership of two pieces of property that the church claimed had been illegally taken from it. Catholics were vilified in the state media. Tensions rose in August and September when the police, bolstered by army veterans and revolutionary youth, intervened to break up peaceful prayer vigils. Local authorities attempted to end the matter by converting the disputed land into public parks.

The Politburo's economic assessment, issued on August 12, lowered Vietnam's official growth target to 6.5% (from an 8% growth average in each of the previous three years). In October the Central Committee met for the third time at the eighth plenum; top priority was assigned to reducing the rate of inflation to a single digit by 2010.

In 2008 all of Vietnam's top leaders visited Beijing: party Secretary-General Nong Duc Manh in May–June, Pres. Nguyen Minh Triet in August, and Prime Minster Nguyen Tan Dung in October. Bilateral relations reached a new high on June 1 with the joint declaration of a comprehensive strategic partnership between Vietnam and China. On December 31, just hours before the midnight deadline, Vietnam and China settled the demarcation boundary for a long-standing border dispute. A maritime dispute was still pending, however. Vietnam's relations with the United States also were strengthened in June with the first official visit to the country by Prime Minister Dung, who met with Pres. George W. Bush in the White House. (CARLYLE A. THAYER)

YEMEN

Area: 528,076 sq km (203,891 sq mi)
Population (2008 est.): 23,013,000
Capital: Sanaa
Chief of state: President Maj. Gen. 'Ali 'Abdallah Salih
Head of government: Prime Minister Ali Muhammad Mujawar

In 2008 Yemen continued its open-door policy for tens of thousands of Somali refugees fleeing poverty and war, a policy that put a strain on the country's meagre resources. A large number of refugees died during treacherous journeys across the Gulf of Aden. The UN High Commissioner for Refugees recommended a global initiative to address the problem of Somali and other African refugees in Yemen.

A suicide car-bomb attack on the U.S. embassy in Sanaa on September 17 killed at least 18 people. Pres. Maj. Gen. 'Ali 'Abdallah Salih accused the Islamist terrorist cell that was arrested in connection with the bombing of having ties with Israel, a charge that the Israeli government denied.

Khaled Fazaa—AFP/Getty Images

Two Yemeni children—one eight years old (left) and the other nine years old—who had been forced into arranged marriages celebrate their divorces, granted them by a Yemeni court, with a party in Sanaa on July 30.

In October flooding from torrential rains caused extreme devastation, especially in the province of Hadramawt, where most of the houses were made of mud brick, and damage was extensive. Dozens were killed in the flooding, which also affected Sanaa.

During the year media attention was brought to the Yemeni practice of child marriage when three Yemeni child brides—one only eight years old—came forward to accuse their fathers of having forced them to marry against their will and to seek divorces in the Yemeni courts. Amendments to Yemeni law in the last decade had removed the legal age of consent for marriage, and the decision on when a girl could marry was left to her parents.

(AYESHA SIDDIQUA CHAUDHRY)

ZAMBIA

Area: 752,612 sq km (290,585 sq mi)
Population (2008 est.): 11,670,000
Capital: Lusaka
Head of state and government: President Levy Mwanawasa and, from June 29 (acting until November 2), Rupiah Banda

The leadership of Zambia changed suddenly in 2008 when Pres. Levy Mwanawasa died on August 19 after having suffered a severe stroke on June 29 while attending a summit meeting in Egypt of the African Union. (*See* OBITUARIES.) Vice Pres. Rupiah Banda became the acting president pending a by-election on October 30, for which he was chosen as the ruling Movement for Multiparty Democracy (MMD) candidate. Banda won by a narrow margin and was sworn in as president on November 2; however, the opposition challenged the result, alleging electoral irregularities.

Economic growth remained impressive in the early part of the year, but inflation soared later as a result of the high cost of food and fuel. Moreover, there was growing concern that the country was relying disproportionately on foreign earnings from copper exports. Meanwhile, the vast majority of Zambians remained poor, and jobs were scarce. The government attempted to help poorer farmers by supplying subsidized seed and fertilizer, but, as Mwanawasa freely admitted, the infrastructure was in such poor condition that marketing crops was difficult. Heavy floods at the beginning of the year increased food shortages, damaging between 60% and 80% of the country's food crops and prompting a ban on the export of corn (maize).

Assurances were given in February that the Chinese nationals working at the Chinese-owned Chambishi Copper Smelter (CCS) would be replaced by Zambians once construction had been completed. Nevertheless, discontent over low wages at the CCS remained a problem, especially when the Luanshya Copper Mines raised wages by 18%. CCS workers went on strike and on March 4 destroyed equipment and property. All 500 workers involved were dismissed, but most of them were subsequently reinstated, and further action was taken against only the ringleaders.

Tobacco production, which provided 400,000 jobs, fell markedly during 2008 owing to the strength of the kwacha against the U.S. dollar. New hope for employment came in August, however, when a bill was introduced in the parliament enabling the president to acquire land along the Angolan border on which foreign companies would be permitted to explore for oil.

Concerns over the situation in neighbouring Zimbabwe led Mwanawasa as chairman of the Southern Africa Development Community (SADC) to call an extraordinary summit meeting of that body. Only a guarded recommendation resulted from the meeting, however, after Zimbabwean Pres. Robert Mugabe called Mwanawasa's action an intrusion into the affairs of a sovereign state. Within Zambia itself Mwanawasa's efforts to urge the drafting of a new constitution more appropriate to the needs of the whole country were taken up by his successor. (KENNETH INGHAM)

ZIMBABWE

Area: 390,757 sq km (150,872 sq mi)
Population (2008 est.): 11,350,000, of which about 3,000,000 people might be living outside the country
Capital: Harare
Chief of state and head of government: President Robert Mugabe

Tsvangirayi Mukwazhi/AP

With inflation in Zimbabwe on its way to 2,000,000%, a man carries cash to buy groceries in Harare on March 5.

In the legislative elections in Zimbabwe on March 29, 2008, the Zimbabwe African National Union–Patriotic Front (ZANU-PF) lost control of the House of Assembly, winning 97 seats while Morgan Tsvangirai's mainstream Movement for Democratic Change (MDC) won 99 and Arthur Mutambara's breakaway faction of the MDC gained 10. There was a lengthy delay in announcing the results of the presidential election (also held in March), but eventually Tsvangirai was reported to have tallied 48% of the vote to 43% for incumbent Robert Mugabe of ZANU-PF. Because neither candidate garnered the constitutionally required minimum of more than 50%, a runoff election was scheduled for June 27. Intimidation of MDC supporters by police and ZANU-PF members began immediately. It became so bad that Tsvangirai, claiming that fair elections were impossible, withdrew from the contest on June 22 and took refuge in the Dutch embassy in Harare. The election went ahead, however, and Mugabe was sworn in as president on June 29.

As these events unfolded, South African Pres. Thabo Mbeki, acting on behalf of the Southern African Development Community (SADC), attempted to reconcile the opposing factions. On July 21 he brokered a framework agreement for three-party talks aimed at creating a government of national unity. Disagreements over the distribution of cabinet seats delayed the talks, which then adjourned on August 12 to allow Tsvangirai to reflect on a key area of disagreement, the assignment of the chairmanship of the cabinet. In the meantime, though ZANU-PF had agreed to support Mutambara's candidate for speaker of the House of Assembly, his own supporters lined up instead behind Tsvangirai's winning candidate. On September 15 all three parties signed a power-sharing agreement, but by the end of October controversy had again erupted, and further progress was halted.

Against this backdrop, the neglected economy continued its rapid decline. In January the new 10-million-Zimbabwe-dollar note, officially valued at £168 (about $325), traded on the black market for £1.68 (about $3.25). By August inflation exceeded 2,000,000%, shops were empty, there was little food in the markets, and hundreds of thousands were starving. Nevertheless, in June Anglo American mining company announced its intention to invest $400 million in a platinum mine in central Zimbabwe, and British-American Tobacco and Barclays Bank said that they would maintain though not expand existing operations. An outbreak of cholera late in the year reached epidemic proportions and forced the Mugabe regime to appeal for international assistance. (KENNETH INGHAM)

Ahmed, Inam. Deputy Editor, *The Daily Star*, Bangladesh. Contributor to *Rivers of Life*. •WORLD AFFAIRS: *Bangladesh*

Ahmed, Rumee. Assistant Professor of Religion, Colgate University, Hamilton, N.Y. •WORLD AFFAIRS: *United Arab Emirates*

Albarado, Lawrence. Projects Editor, *Arkansas Democrat-Gazette*. Member of the Society of Professional Journalists Board of Directors. •SPECIAL REPORT: *Citizen Journalism: A News [R]evolution*

Albert, Melissa. Research Editor, Encyclopædia Britannica. •BIOGRAPHIES *(in part)*; OBITUARIES *(in part)*

Alexander, Steve. Freelance Technology Writer. •COMPUTERS AND INFORMATION SYSTEMS

Alhoff, Ann. Freelance Writer. •OBITUARIES *(in part)*

Allaby, Michael. Freelance Writer. Author of *Encyclopedia of Weather and Climate* and *Basics of Environmental Science*. •THE ENVIRONMENT: *Environmental Issues; International Activities*

Andrejevich, Milan. Professor of History, Ivy Tech Community College, South Bend (Ind.) Campus; Adjunct Professor of Communication, Valparaiso (Ind.) University. •BIOGRAPHIES *(in part)*; WORLD AFFAIRS: *Bosnia and Herzegovina; Kosovo; Montenegro; Serbia*

Anthony, John Duke. President and CEO, National Council on U.S.-Arab Relations; Secretary, U.S. Gulf Cooperation Council Corporate Cooperation Committee. Author of *The United Arab Emirates: Dynamics of State Formation*. •WORLD AFFAIRS: *Oman; Qatar*

Appleby, R. Scott. Professor of History and John M. Regan, Jr., Director, Joan B. Kroc Institute for International Peace Studies, University of Notre Dame. •SPECIAL REPORT: *A Serious Fracture in the Anglican Church*

Augustyn, Adam. Assistant Editor, Encyclopædia Britannica. •BIOGRAPHIES *(in part)*

Aurora, Vincent. Lecturer in French and Romance Philology, Columbia University, New York City. Author of *Michel Leiris' Failles. Immobile in Mobili*. •LITERATURE: *French*: France

Bahry, Louay. Adjunct Professor of Political Science, University of Tennessee. Author of *The Baghdad Balm*. •BIOGRAPHIES *(in part)*; WORLD AFFAIRS: *Bahrain; Iraq; Kuwait*

Bamia, Aida A. Professor Emeritus of Arabic Language and Literature, University of Florida; Visiting Professor, University of Michigan. Author of *The Graying of the Raven: Cultural and Sociopolitical Significance of Algerian Folk Poetry*. Translator of Sahar Khalifeh's *The Inheritance* and *The Image, the Icon, and the Covenant*. •LITERATURE: *Arabic*

Barrett, David B. Research Professor of Missiometrics, World Evangelization Research Center. Author of *World Christian Encyclopedia* and *Schism and Renewal in Africa*. Coauthor of *World Christian Trends, AD 30–AD 2200: Interpreting the Annual Christian Megacensus*. •RELIGION: *Tables (in part)*

Baru, Sanjaya. Visiting Professor, Lee Kuan Yew School of Public Policy and Institute of South Asian Studies, National University of Singapore Campus; Senior Consulting Fellow of the International Institute of Strategic Studies, London, based in Singapore; Former Media Advisor to Prime Minister of India. Author of *Strategic Consequences of India's Economic Performance*. •WORLD AFFAIRS: *India*

Bauer, Patricia. Assistant Editor, Encyclopædia Britannica. •CALENDAR; DISASTERS; LITERATURE: *Table;* OBITUARIES *(in part)*; PERFORMING ARTS: *Motion Pictures (table)*

Beck, Peter M. Adjunct Professor, American University, Washington, D.C., and Yonsei (S.Kor.) University. •WORLD AFFAIRS: *Korea, Democratic People's Republic of; Korea, Republic of*

Beckwith, David C. Freelance Writer. •SPECIAL REPORT: *The U.S. Election of 2008;* WORLD AFFAIRS: *United States; United States*: Developments in the States

Bell, Susanna. Freelance Journalist. •WORLD AFFAIRS: *Finland*

Benedetti, Laura. Laura and Gaetano De Sole Associate Professor of Contemporary Italian Culture, Georgetown University, Washington, D.C. Author of *La sconfitta di Diana: un percorso per la Gerusalemme liberata* and *The Tigress in the Snow: Motherhood and Literature in Twentieth-Century Italy*. •LITERATURE: *Italian*

Berris, Linda. Freelance Writer. •NOBEL PRIZES *(in part)*

Berry, R. Stephen. Professor Emeritus, University of Chicago. Coauthor of *Phase Transitions of Simple Systems*. •NOBEL PRIZES *(in part)*

Bonds, John B. Visiting Assistant Professor of History, The Citadel, Charleston, S.C. Author of *Bipartisan Strategy: Selling the Marshall Plan*. •SPORTS AND GAMES: *Sailing (Yachting)*

Bradsher, Henry S. Foreign Affairs Analyst and Lecturer. Author of *Afghan Communism and Soviet Intervention*. •WORLD AFFAIRS: *Philippines*

Brecher, Kenneth. Professor of Astronomy and Physics; Director, Science and Mathematics Education Center, Boston University. •PHYSICAL SCIENCES: *Astronomy*

Brockmann, Stephen. Professor of German, Carnegie Mellon University, Pittsburgh. Author of *Literature and German Reunification, German Literary Culture at the Zero Hour,* and *Nuremberg: The Imaginary Capital*. •LITERATURE: *German*

Brokopp, John G. Media Relations Consultant, Freelance Journalist, and Syndicated Columnist on casino gambling. Author of *Thrifty Gambling* and *Insider's Guide to Internet Gambling: Your Sourcebook for Safe and Profitable Gambling*. •SPORTS AND GAMES: *Equestrian Sports:* Thoroughbred Racing: *United States*

Brown, Bess. Economic Officer, Organization for Security and Co-operation in Europe Centre in Dushanbe, Tajik. Author of *Authoritarianism in the New States of Central Asia*. •WORLD AFFAIRS: *Kazakhstan; Kyrgyzstan; Tajikistan; Turkmenistan; Uzbekistan*

Brown, Geoff. Critic and Historian. Associate Editor of *Directors in British and Irish Cinema: A Reference Companion*. •PERFORMING ARTS: *Motion Pictures*

Buchan, David. Political and Energy Consultant. Author of *The Single Market and Tomorrow's Europe: A Progress Report from the European Commission*. •WORLD AFFAIRS: *France*

Bungs, Dzintra. Senior Research Fellow, Latvian Institute of International Affairs, Riga. Author of *The Baltic States: Problems and Prospects of Membership in the European Union*. •WORLD AFFAIRS: *Latvia*

Burns, Erik T. Writer. •WORLD AFFAIRS: *Portugal*

Byrne, Justin. Director of Graduate Studies, New York University in Madrid. •WORLD AFFAIRS: *Spain*

Campbell, Robert. Architect and Architecture Critic. Author of *Cityscapes of Boston: An American City Through Time*. •ARCHITECTURE AND CIVIL ENGINEERING: *Architecture*

Carter, Robert W. Journalist. •SPORTS AND GAMES: *Equestrian Sports:* Steeplechasing; Thoroughbred Racing: *International*

Chaudhry, Ayesha Siddiqua. Ph.D. Candidate, Department of Middle Eastern and Islamic Studies, New York University; Pre-Doctoral Fellow, Colgate University, Hamilton, N.Y. •WORLD AFFAIRS: *Yemen*

Chenoweth, Karin. Senior Writer, The Education Trust. Author of *"It's Being Done": Academic Success in Unexpected Schools*. •EDUCATION

Cheuse, Alan. Writing Faculty, English Department, George Mason University, Fairfax, Va.; Book Commentator, National Public Radio. Author of *To Catch the Lightning: A Novel of American Dreaming; The Fires; The Light Possessed;* and *Listening to the Page: Adventures in Reading and Writing*. •LITERATURE: *English*: United States

Chua Lee Hoong. Political Editor, *The Straits Times*, Singapore. •WORLD AFFAIRS: *Singapore*

Cioroslan, Dragomir. Director of International Strategies and Development, United States Olympic Committee; Vice President, International Weightlifting Federation. Coauthor of *Banish Your Belly*. •SPORTS AND GAMES: *Weightlifting*

Clark, David Draper. Editor in Chief, *World Literature Today*. •LITERATURE: *English*: Other Literature in English

Clark, Janet H. Editor, Independent Analyst, and Writer on international economic and financial topics. •NOBEL PRIZES *(in part)*; SPECIAL REPORT: *Skyrocketing Food Prices: A Global Crisis*

Coate, Roger A. Paul Coverdell Chair of Public Policy, Georgia College and State University; Distinguished Professor Emeritus of Political Science, University of South Carolina. Coauthor of *United Nations Politics: International Organization in a Divided World* and *The United Nations and Changing World Politics*. •WORLD AFFAIRS: *United Nations*

Coller, Ken. President, West Seattle Productions. •SPORTS AND GAMES: *Wrestling:* Sumo

Collins, Nigel. Editor in Chief, *The Ring*. •SPORTS AND GAMES: *Boxing*

Cooper, Peter. Senior Music Writer, *The Tennessean*; Senior Lecturer, Vanderbilt University, Nashville. •PERFORMING ARTS: *Music:* Popular (United States)

Corkin, Nicola. Ph.D. Candidate, European Research Institute, University of Birmingham, Eng. •BIOGRAPHIES *(in part)*; WORLD AFFAIRS: *Germany*

Cosgrave, Bronwyn. Author, Journalist, and Broadcaster. Author of *Made for Each Other: Fashion and the Academy Awards* and *Costume and Fashion: A Complete History*. Editor of *Sample: 100 Fashion Designers, 010 Curators: Cuttings from Contemporary Fashion*. •BIOGRAPHIES *(in part)*; FASHIONS

Coveney, Michael. Theatre Critic. Author of *The World According to Mike Leigh, The Andrew Lloyd Webber Story,* and others. •PERFORMING ARTS: *Theatre:* Great Britain and Ireland

Craine, Anthony G. Writer. •BIOGRAPHIES *(in part)*

Crisp, Brian F. Associate Professor of Political Science, Washington University, St. Louis, Mo. Author of *Democratic Institutional Design*. •WORLD AFFAIRS: *Colombia*

Crossing, Peter F. Data Analyst, World Christian Database, Center for the Study of Global Christianity. Associate Editor of *World Christian Encyclopedia*. •RELIGION: *Tables (in part)*

Cunningham, John M. Project Coordinator, Encyclopædia Britannica. Former Staff Writer, *Stylus Magazine*. •BIOGRAPHIES *(in part)*, OBITUARIES *(in part)*

Cuttino, John Charles. President, Portal Commerce & Logistics, LLC; Lyndon B. Johnson School of Public Affairs, University of Texas at Austin. •WORLD AFFAIRS: *Brazil*

David-Barrett, Liz. Research Officer, University of Oxford. Author of *Business in the Balkans: The Case for Cross-Border Co-Operation*. •WORLD AFFAIRS: *Croatia*

Davis, Kevin. Journalist; Author; Part-Time Journalism Instructor, Loyola University, Chicago; Adjunct Faculty, Graham School of General Studies, University of Chicago. Author of *Defending the Damned: Inside Chicago's Cook County Public Defender's Office*. •HEALTH AND DISEASE

Denselow, Robin. Correspondent, BBC Television's *Newsnight;* World Music Correspondent, *The Guardian*. Author of *When the Music's Over: The Story of Political Pop*. •PERFORMING ARTS: *Music:* Popular (International)

Denzer, LaRay. Visiting Lecturer, specializing in West African history and biography, Santa Clara (Calif.) University. Author of *Folaveghe M. Akintunde-Ighodalo: A Public Life*. •WORLD AFFAIRS: *Ghana; Liberia; Nigeria, Rwanda; Sierra Leone*

Dietz, Henry A. Professor, Department of Government, University of Texas at Austin. •WORLD AFFAIRS: *Peru*

DiGiacomo, Paul. Senior Editor, STATS LLC. •BIOGRAPHIES *(in part)*; SPORTS AND GAMES:

Automobile Racing: Grand Prix Racing; *Ice Skating*

Dlamini, Nhlanhla. Lecturer, Department of History, University of Swaziland. •WORLD AFFAIRS: *Swaziland*

Dooling, Dave. Education and Public Outreach Officer, National Solar Observatory, Sacramento Peak, New Mexico. Coauthor of *Engineering Tomorrow.* •PHYSICAL SCIENCES: *Space Exploration*

D'Souza, Shanthie Mariet. Associate Fellow, Institute for Defence Studies and Analyses, New Delhi. •SPECIAL REPORT: *Terror in Mumbai*

Ebeling, Mary. Assistant Professor of Sociology, Department of Culture and Communication, Drexel University, Philadelphia. •WORLD AFFAIRS: *Burundi; Comoros; Djibouti; Mauritius; Seychelles*

El-Amir, Ayman M. Columnist and Media Consultant, *Al-Ahram Weekly.* •WORLD AFFAIRS: *Egypt; Jordan; Libya*

Erikson, Daniel P. Senior Associate for U.S. Policy and Director of Caribbean Programs, Inter-American Dialogue, Washington, D.C. Coeditor of *Transforming Socialist Economies: Lessons for Cuba and Beyond.* •WORLD AFFAIRS: *Cuba*

Esteban, Verónica. Journalist and Bilingual Editor. •LITERATURE: *Spanish:* Spain

Fagan, Brian. Emeritus Professor of Anthropology, University of California, Santa Barbara. Author of *Fish on Friday: Feasting, Fasting, and the Discovery of the New World; The Little Ice Age: How Climate Made History, 1300–1850; Floods, Famines, and Emperors: El Niño and the Fate of Civilizations;* and *The Long Summer: How Climate Changed Civilization.* •ANTHROPOLOGY AND ARCHAEOLOGY: *Archaeology:* Western Hemisphere

Fagan, Kieran. Journalist; Media Consultant; Former Assistant Editor, *The Irish Times.* Coauthor of *The Story of HB: 80 Years of Ireland's Favourite Ice Cream.* •WORLD AFFAIRS: *Ireland*

Fahey, Michael R. Journalist. •WORLD AFFAIRS: *China; Taiwan*

Fealy, Greg. Fellow and Senior Lecturer in Indonesian Politics, Australian National University, Canberra. Coauthor of *Joining the Caravan?: The Middle East, Islamism and Indonesia.* •WORLD AFFAIRS: *Indonesia*

Fendell, Robert J. Freelance Writer on automobiles and racing. Author of *The Encyclopedia of Auto Racing Greats.* •BIOGRAPHIES *(in part);* SPORTS AND GAMES: *Automobile Racing:* U.S. Auto Racing; Rallies and Other Races *(in part)*

Fisher, Martin. Editor, *Oryx.* Coeditor of *The Natural History of Oman: A Festschrift for Michael Gallagher.* •THE ENVIRONMENT: *Wildlife Conservation*

Fisher, Sharon. Central European and Balkan Specialist, Global Insight, Inc., Washington, D.C. Author of *Political Change in Post-Communist Slovakia and Croatia: From Nationalist to Europeanist.* •WORLD AFFAIRS: *Czech Republic; Slovakia*

Flink, Steve. Columnist for www.thetennischannel.com. Author of *The Greatest Tennis Matches of the Twentieth Century.* •SPORTS AND GAMES: *Tennis*

Follett, Christopher. Freelance Journalist; Editor, *Copenhagen This Week.* Author of "The Danish Composer Asger Hamerik and Berlioz." •WORLD AFFAIRS: *Denmark*

Fridovich-Keil, Judith L. Professor, Department of Human Genetics, Emory University School of Medicine, Atlanta. •LIFE SCIENCES: *Molecular Biology and Genetics*

Fuller, Elizabeth. Editor, Radio Free Europe/Radio Liberty. •WORLD AFFAIRS: *Armenia; Azerbaijan; Georgia*

Furmonavičius, Darius. Postdoctoral Research Fellow, Department of Languages and European Studies, University of Bradford, Eng. Author of *Lithuania Rejoins Europe.* •WORLD AFFAIRS: *Lithuania*

Gallagher, Tom. Professor of Ethnic Peace and Conflict, University of Bradford, Eng. Author of *Theft of a Nation: Romania Since Communism* and others. •WORLD AFFAIRS: *Moldova; Romania*

Ganado, Albert. Lawyer; Former Chairman, Malta National Archives Advisory Committee; Past President, Malta Historical Society. Author of *Valletta, Citta Nuova: A Map History (1566–1600)* and *Malta in World War II: Contemporary Watercolours by Alfred Gerada (1940–1942).* •WORLD AFFAIRS: *Malta*

Garrod, Mark. Golf Correspondent, PA Sport, U.K. •SPORTS AND GAMES: *Golf*

Gibbons, J. Whitfield. Professor of Ecology, Savannah River Ecology Laboratory, University of Georgia. Coauthor of *Ecoviews: Snakes, Snails, and Environmental Tales.* •LIFE SCIENCES: *Zoology*

Graham, John W. Chair, Canadian Foundation for the Americas; Former Canadian Ambassador. •WORLD AFFAIRS: *Dominican Republic; Suriname*

Greene, Megan. Editor and Economist, Western Europe Economist Intelligence Unit. •WORLD AFFAIRS: *Austria*

Greskovic, Robert. Dance Writer, *The Wall Street Journal.* Author of *Ballet 101.* •PERFORMING ARTS: *Dance:* North America

Griffiths, A.R.G. Associate Professor of History, Flinders University of South Australia. Author of *Contemporary Australia* and *Beautiful Lies.* •WORLD AFFAIRS: *Australia; Dependent States:* Indian Ocean; *East Timor; Nauru; Palau; Papua New Guinea*

Grigsby, Mary. Associate Professor of Rural Sociology, University of Missouri. Author of *Buying Time and Getting By: The Voluntary Simplicity Movement.* •SPECIAL REPORT: *The Freegans—The Ultimate Recyclers*

Haag, Martin. Business and Economics Writer. Author of *Percy Barnevik.* •WORLD AFFAIRS: *Sweden*

Haddad, Mahmoud. Associate Professor of History, University of Balamand, Leb. Contributor to *Altruism and Imperialism: Western Cultural and Religious Missions in the Middle East.* •WORLD AFFAIRS: *Lebanon; Saudi Arabia*

Hammer, William R. Fritiof Fryxell Professor of Geology, Augustana College, Rock Island, Ill. Author of *Gondwana Dinosaurs from the Jurassic of Antarctica.* •LIFE SCIENCES: *Paleontology*

Havemann, Joel. Retired Editor and National and European Economics Correspondent, Washington and Brussels Bureaus, *Los Angeles Times.* Author of *A Life Shaken: My Encounter with Parkinson's Disease.* •SPECIAL REPORT: *The Financial Crisis of 2008*

Hayes, David C. Freelance Science Editor. •OBITUARIES *(in part)*

Helm, Toby. Chief Political Correspondent, *The Daily Telegraph.* Whitehall Editor, *The Observer.* •WORLD AFFAIRS: *European Union*

Heper, Metin. Director of the Center of Turkish Politics and History and Dean of the Faculty of Economics, Administrative and Social Sciences, Bilkent University, Ankara, Tur. Founding Member of the Turkish Academy of Sciences. •SPECIAL REPORT: *Turkey's Secular/Islamic Conundrum*

Hobbs, Greg. Senior Contributing Writer and Football Historian. Longtime writer with newspapers and the Australian Football League. Author of *Allen Aylet: My Game* and several books on Australian football. •SPORTS AND GAMES: *Football:* Australian

Hoffman, Dean A. Member, Communicators Hall of Fame, Harness Racing Museum. Author of *Yankeeland: The Farm the Kellers Built; Castleton Farm: A Tradition of Standardbred Excellence; Quest for Excellence: Hanover Shoe Farms: The First 75 Years;* and *The Hambletonian: America's Trotting Classic.* •SPORTS AND GAMES: *Equestrian Sports:* Harness Racing

Hollar, Sherman. Associate Editor, Encyclopædia Britannica. •BIOGRAPHIES *(in part);* OBITUARIES *(in part)*

Homel, David. Freelance Writer; Lecturer, Concordia University, Montreal. Author of *The Speaking Cure: A Novel* and others. •LITERATURE: *French:* Canada

Hood, Michael. Professor of Entomology, Clemson (S.C.) University; Extension and Research Apiculturist. •LIFE SCIENCES: Sidebar

Hosch, William. Editor, Encyclopædia Britannica. •BIOGRAPHIES *(in part)*

Hunter, Paul. Hockey Reporter, *Toronto Star.* •SPORTS AND GAMES: *Ice Hockey*

Hussainmiya, B.A. Associate Professor, Department of History, University of Brunei Darussalam. Author of *The Brunei Constitution of 1959: An Inside History.* •WORLD AFFAIRS: *Brunei*

Ingham, Kenneth. Professor Emeritus of History, University of Bristol, Eng. Author of *Politics in Modern Africa: The Uneven Tribal Dimension* and others. •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *Angola; Congo, Democratic Republic of the; Kenya; Malawi; Mozambique; Sudan, The; Tanzania; Uganda; Zambia; Zimbabwe*

Iovtcheva, Iva. Process and Systems Improvement Specialist, Johnsonville Sausage, LLC, Sheboygan, Wis. •WORLD AFFAIRS: *Bulgaria (in part)*

Jacoby, Mitch. Senior Editor, Science and Technology, *Chemical & Engineering News.* •PHYSICAL SCIENCES: *Chemistry*

Jamail, Milton. Author of *Full Count: Inside Cuban Baseball* and *Venezuelan Bust, Baseball Boom: Andrés Reiner and Scouting on the New Frontier.* •SPORTS AND GAMES: *Baseball:* Latin America

Jasner, Phil. Sportswriter, *Philadelphia Daily News.* Recipient of the 2004 Curt Gowdy Award for Print Journalism, Naismith Memorial Basketball Hall of Fame. Two-time winner of the Pennsylvania Sports Writer of the Year award from the National Sportscasters and Sportswriters Association. •BIOGRAPHIES *(in part);* SPORTS AND GAMES: *Basketball:* Professional

Jerardi, Dick. Writer, *Philadelphia Daily News.* •SPORTS AND GAMES: *Basketball:* College

Joffé, George. Lecturer, Centre of International Studies, University of Cambridge; Visiting Professor, Department of Geography, King's College, University of London; Visiting Fellow, Centre for Islamic Studies, University of Oxford. Editor of *Jordan in Transition* and *Journal of North African Studies.* •WORLD AFFAIRS: *Algeria; Morocco; Tunisia*

Johnson, Todd M. Director, Center for the Study of Global Christianity. Coauthor of *World Christian Encyclopedia.* •RELIGION: *Tables (in part)*

Jones, David G.C. Author of *Atomic Physics.* •NOBEL PRIZES *(in part);* PHYSICAL SCIENCES: *Physics; Physics:* Sidebar

Jones, Mark P. Professor of Political Science, Rice University, Houston. Author of *Electoral Laws and the Survival of Presidential Democracies.* •WORLD AFFAIRS: *Argentina*

Kaplan, Eben. Associate Editor, CFR.org, Council on Foreign Relations. •WORLD AFFAIRS: *Somalia*

Kapp, Clare. Freelance Journalist; Contributor to *The Lancet.* •WORLD AFFAIRS: *Switzerland*

Karimi-Hakkak, Ahmad. Professor and Founding Director, Center for Persian Studies, University of Maryland. Poetry Editor of *Strange Times, My Dear: The PEN Anthology of Contemporary Iranian Literature.* Coeditor of *Essays on Nima Yushij: Animating Modernism in Persian Poetry.* •LITERATURE: *Persian*

Karns, Margaret P. Professor of Political Science, University of Dayton, Ohio. Coauthor of *International Organizations: The Politics and Processes of Global Governance.* •WORLD AFFAIRS: *Multinational and Regional Organizations*

Kazamaru, Yoshihiko. Literary Critic; Assistant Professor, Morioka College, Japan. •LITERATURE: *Japanese*

Kelling, George H. Ph.D.; Lieutenant Colonel, U.S. Army (ret.). Author of *Countdown to Rebellion: British Policy in Cyprus, 1939–1955.* •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *Cyprus*

Kellner, Peter. President, YouGov PLC. Author of *The New Mutualism* and others. •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *United Kingdom*

Kelly, Tom. Vice President, Communications, United States Ski and Snowboard Association. •SPORTS AND GAMES: *Skiing*

Knox, Paul. Associate Professor and Chair, School of Journalism, Ryerson University, Toronto. •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *Bolivia; Ecuador*

Koper, Keith D. Associate Professor of Geophysics, St. Louis (Mo.) University. •EARTH SCIENCES: *Geophysics*

Krause, Stefan. Freelance Analyst. •WORLD AFFAIRS: *Greece; Macedonia*

Kuiper, Kathleen. Senior Editor, Encyclopædia Britannica. Editor of *Merriam-Webster's Encyclopedia of Literature.* •BIOGRAPHIES *(in part)*

Lawler, Nancy Ellen. Professor Emerita, Oakton Community College, Des Plaines, Ill. Author of *Soldiers, Airmen, Spies, and Whisperers: The Gold Coast in World War II* and others. •WORLD AFFAIRS: *Benin; Burkina Faso; Cameroon; Central African Republic; Congo, Republic of the; Côte d'Ivoire; Gabon; Guinea; Mali; Mauritania; Niger; Senegal; Togo*

Lawson, Fred H. Professor of Government, Mills College, Oakland, Calif. Author of *Why Syria Goes to War.* •WORLD AFFAIRS: *Syria*

Le Comte, Douglas. Meteorologist, Climate Prediction Center, U.S. National Oceanic and Atmospheric Administration. •EARTH SCIENCES: *Meteorology and Climate*

Legassick, Martin. Emeritus Professor of History, University of the Western Cape, Bellville, S.Af. Author of *Subjugation and the Roots of Democracy in South Africa: The Struggle for the Eastern Cape, 1800–1854.* •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *South Africa*

Levin, Ben. Documentary Filmmaker; Professor, Department of Radio, Television, and Film, University of North Texas. Co-producer and Co-director, *Verso Negro: Black Verse Poetry of the Spanish Caribbean.* •PERFORMING ARTS: *Motion Pictures:* Documentary Films

Lindstrom, Sieg. Managing Editor, *Track & Field News.* •BIOGRAPHIES *(in part);* SPORTS AND GAMES: *Track and Field Sports (Athletics)*

Litweiler, John. Jazz Critic. Author of *The Freedom Principle: Jazz After 1958* and *Ornette Coleman: A Harmolodic Life.* •OBITUARIES *(in part);* PERFORMING ARTS: *Music:* Jazz

Longmore, Andrew. Senior Sports Writer, *The Sunday Times* (London); Former Assistant Editor, *The Cricketer.* Author of *The Complete Guide to Cycling.* •SPORTS AND GAMES: *Cricket*

Luehering, J.E. Senior Editor, Encyclopædia Britannica. •BIOGRAPHIES *(in part)*

Lynch, Nola Healy. Freelance Editor and Writer. •OBITUARIES *(in part)*

Macpherson, Cluny. Professor, College of Humanities and Social Sciences, Massey University, Albany Campus, Auckland, N.Z. Coauthor of *Samoan Medical Belief and Practice.* •WORLD AFFAIRS: *Dependent States:* Pacific Ocean; *Fiji; Kiribati; Marshall Islands; Micronesia, Federated States of; Samoa; Solomon Islands; Tonga; Tuvalu; Vanuatu*

Maguire, Robert. Director, Trinity University Haiti Program, Washington, D.C. Author of *Haiti Held Hostage: International Responses to the Quest for Nationhood 1986–1996.* •WORLD AFFAIRS: *Haiti*

Malik, Mohan. Professor, Asia-Pacific Center for Security Studies, Honolulu. Author of *Dragon on Terrorism: Assessing China's Tactical Gains and Strategic Losses Post-September 11.* •WORLD AFFAIRS: *Myanmar (Burma)*

Mancoff, Debra N. Adjunct Professor of Art History, School of the Art Institute of Chicago. Author of *Treasures of the DIA: The Detroit Institute of Arts* and *Treasures from the Art Institute of Chicago.* •ART AND ART EXHIBITIONS: *Art; Art Exhibitions*

Mango, Andrew. Foreign Affairs Analyst. Author of *Atatürk: The Biography of the Founder of Modern Turkey* and *The Turks Today.* •WORLD AFFAIRS: *Turkey*

Marek, Janele M. Account Director, The Woodbine Agency. •SPORTS AND GAMES: *Bobsleigh, Skeleton, and Luge:* Luge

Marples, David R. Professor of History, University of Alberta. Author of *Heroes and Villains: Creating National History in Contemporary Ukraine; Belarus: A Denationalized Nation;* and *Motherland: Russia in the Twentieth Century.* •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *Belarus; Ukraine*

Marston, John A. Professor, Centro de Estudios de Asia y África, El Colegio de México. Coeditor of *History, Buddhism, and New Religious Movements in Cambodia.* •WORLD AFFAIRS: *Cambodia*

Matthíasson, Björn. Economist, Ministry of Finance, Iceland. •WORLD AFFAIRS: *Iceland*

McLachlan, Keith S. Professor Emeritus, School of Oriental and African Studies, University of London. Author of *The Boundaries of Modern Iran.* Coeditor of *Land-Locked States of Africa and Asia* and *Libya: State & Region: A Study of Regional Evolution.* •WORLD AFFAIRS: *Iran*

McMillan, Neale. Managing Editor, South Pacific News Service. Author of *Top of the Greasy Pole: New Zealand Prime Ministers of Recent Times.* •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *New Zealand*

McNamee, Gregory. Contributing Editor, Encyclopædia Britannica; Literary Critic, *Hollywood Reporter.* Author of *Moveable Feasts: The History, Science, and Lore of Food.* •EARTH SCIENCES: Sidebar

Meixner, Alex. Director of Government Relations, Save Darfur Coalition. •WORLD AFFAIRS: *Sudan, The:* Sidebar

Mendell, David. Journalist. Author of *Obama: From Promise to Power.* •BIOGRAPHIES *(in part)*

Mendes, Victor K. Associate Professor and Graduate Program Director, University of Massachusetts Dartmouth. •LITERATURE: *Portuguese:* Portugal

Middlebrook, Kevin J. Reader in Latin American Politics, Institute for the Study of the Americas, University of London. Coauthor of *Mexico Since 1980 (The World Since 1980).* •WORLD AFFAIRS: *Mexico*

Moredock, Janet. Freelance Writer and Editor. •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *Malaysia*

Morgan, Paul. Editor, *Rugby World.* •SPORTS AND GAMES: *Football:* Rugby

Myers, David J. Professor of Political Science, Pennsylvania State University. Coeditor of and contributor to *The Unraveling of Representative Democracy in Venezuela.* •WORLD AFFAIRS: *Venezuela*

Nan Lu. Founding Director, Traditional Chinese Medicine World Foundation. Author of *Traditional Chinese Medicine: A Natural Guide to Weight Loss That Lasts.* •SPECIAL REPORT: *The Precepts of Traditional Chinese Medicine*

Nishizaki, Yoshinori. Assistant Professor, Department of Political Science, National University of Singapore. •WORLD AFFAIRS: *Thailand*

Noda, Hiroki. Sporting News Reporter, *Kyodo News,* Tokyo. •SPORTS AND GAMES: *Baseball:* Japan

O'Leary, Christopher. Managing Editor, *The M&A Lawyer;* Contributing Editor and Writer, *Investment Dealers Digest;* Contributing Writer, *Registered Rep.* •BUSINESS OVERVIEW

Oppenheim, Lois Hecht. Professor of Political Science, American Jewish University, Los Angeles. Author of *Politics in Chile: Socialism, Authoritarianism, and Market Democracy,* 3rd ed. Coeditor of *After Pinochet: The Chilean Road to Democracy and the Market.* •WORLD AFFAIRS: *Chile*

O'Quinn, Jim. Editor in Chief, *American Theatre.* •PERFORMING ARTS: *Theatre:* U.S. and Canada

Ortega, Robert. Journalist; Assistant Professor, School of Journalism, Ryerson University, Toronto. Author of *In Sam We Trust: The Untold Story of Sam Walton and How Wal-Mart Is Devouring America.* •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *Paraguay*

Orwig, Sarah Forbes. Executive Editor, Book Development and Publishing, American Bar Association. Former Associate Editor, Encyclopædia Britannica. Contributor to *The Next Phase of Business Ethics: Integrating Psychology and Ethics.* •BIOGRAPHIES *(in part)*

Palacio, Joseph O. Ph.D.; Former Resident Tutor and Head, University Centre, University of the West Indies School of Continuing Studies, Belize. Author of *Development in Belize, 1960–1980: Initiatives at the State and Community Levels.* •WORLD AFFAIRS: *Belize*

Parry, Julie. Merchandising Communications Manager, Sprint Nextel. •BIOGRAPHIES *(in part);* SPORTS AND GAMES: *Bobsleigh, Skeleton, and Luge:* Bobsleigh; Skeleton

Parsons, Neil. Professor of History, University of Botswana. Author of *King Khama, Emperor Joe, and the Great White Queen.* •WORLD AFFAIRS: *Botswana*

Peaker, Carol. Writer. •LITERATURE: *English:* United Kingdom

Pérez, Orlando J. Professor of Political Science, Central Michigan University. Editor of *Post-Invasion Panama: The Challenges of Democratization in the New World Order* and others. •WORLD AFFAIRS: *Panama*

Peszek, Luan. Publications Director and Editor, *U.S.A. Gymnastics.* Author of *The Gymnastics Almanac.* •BIOGRAPHIES *(in part);* SPORTS AND GAMES: *Gymnastics*

Pholsena, Vatthana. Research Fellow, CNRS (National Centre for Scientific Research), France. Author of *Post-War Laos: The Politics of Culture, History, and Identity.* •WORLD AFFAIRS: *Laos*

Ponmoni Sahadevan. Professor, Jawaharlal Nehru University, New Delhi. Author of *Conflict and Peacemaking in South Asia.* •WORLD AFFAIRS: *Maldives*

Poudel, Keshab. Managing Editor, *Spotlight.* •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *Bhutan; Nepal*

Rauch, Robert. Freelance Editor and Writer. •BIOGRAPHIES *(in part);* NOBEL PRIZES *(in part)*

Raun, Toivo U. Professor of Central Eurasian Studies, Indiana University. Author of *Estonia and the Estonians.* •WORLD AFFAIRS: *Estonia*

Raz-Russo, Michal. Freelance Author. •BIOGRAPHIES *(in part)*

Reddington, André. Assistant Editor, *Amateur Wrestling News.* •SPORTS AND GAMES: *Wrestling:* Freestyle and Greco-Roman

Renwick, David. Freelance Journalist. •WORLD AFFAIRS: *Antigua and Barbuda; Bahamas, The; Barbados; Dependent States:* Caribbean and Bermuda; *Dominica; Grenada; Guyana; Jamaica; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Trinidad and Tobago*

Reuning, Winifred. Editor and Web Manager, Office of Polar Programs, National Science Foundation. •WORLD AFFAIRS: *Antarctica*

Roby, Anne. Freelance Journalist; Program Associate, Institute for Mathematics and Science Education, University of Illinois at Chicago. •WORLD AFFAIRS: *Andorra; Liechtenstein; Luxembourg; Monaco*

Rogers, Kara. Life Sciences Editor, Encyclopædia Britannica. •BIOGRAPHIES *(in part)*

Rollin, Jack. Editor, *Sky Sports Football Yearbook* and *Playfair Football Annual.* Author of *Soccer at War 1939–45.* Coauthor of *The Forgotten FA Cup: The Competition of 1945–46* and others. •BIOGRAPHIES *(in part);* SPORTS AND GAMES: *Football:* Association Football (Soccer): *Africa and Asia; Europe*

Sanders, Alan J.K. Freelance Mongolist; Former Lecturer in Mongolian Studies, School of Oriental and African Studies, University of London. Author of *Historical Dictionary of Mongolia.* Coauthor of *Colloquial Mongolian.* •WORLD AFFAIRS: *Mongolia*

Sandvik, Hilde. Dr. Philos.; Associate Professor, Department of History, University of Oslo. Author of *Norsk historie 1300–1625.* •WORLD AFFAIRS: *Norway*

Saracino, Peter. Freelance Defense Journalist. •BIOGRAPHIES *(in part);* MILITARY AFFAIRS; MILITARY AFFAIRS: Sidebar; OBITUARIES *(in part)*

Saunders, Christopher. Professor of Historical Studies, University of Cape Town. Coauthor of *Historical Dictionary of South Africa* and *South*

Africa: A Modern History. •WORLD AFFAIRS: *Cape Verde; Chad, Equatorial Guinea; Gambia, The; Guinea Bissau; Lesotho; Madagascar; Namibia; São Tomé and Príncipe*

Schiavo, Leda. Professor Emerita, University of Illinois at Chicago. Author of *El extasis de los límites. temas y figuras del decadentismo.* •LITERATURE: *Spanish:* Latin America

Schmidt, Fabian. Head of the Albanian Program, Deutsche Welle. •WORLD AFFAIRS: *Albania*

Schoppa, Leonard. Professor, Department of Politics, University of Virginia. Author of *Race for the Exits: The Unraveling of Japan's System of Social Protection.* •WORLD AFFAIRS: *Japan*

Schreiber, Barbara A. Editorial Assistant, Encyclopædia Britannica. •BIOGRAPHIES *(in part);* OBITUARIES *(in part)*

Schuster, Angela M.H. Contributing Editor, *Archaeology* magazine; Contributor, *New York Times;* Editor, *The Explorers Journal.* •ANTHROPOLOGY AND ARCHAEOLOGY: *Archaeology:* Eastern Hemisphere

Sego, Stephen. Freelance Journalist; Former Director, Radio Free Afghanistan. •WORLD AFFAIRS: *Afghanistan*

Seligson, Mitchell A. Centennial Professor of Political Science, Vanderbilt University, Nashville. Editor of *Elections and Democracy in Central America, Revisited.* Coauthor of *The Legitimacy Puzzle in Latin America: Political Support and Democracy in Eight Nations.* •WORLD AFFAIRS: *Costa Rica*

Serafin, Steven R. Director, Writing Center, Hunter College, City University of New York. Coeditor of *The Continuum Encyclopedia of American Literature* and *The Continuum Encyclopedia of British Literature.* •NOBEL PRIZES *(in part)*

Shelley, Andrew. Chief Executive, Women's International Squash Players Association; Technical Director, World Squash Federation. Author of *Squash Rules: A Player's Guide.* •SPORTS AND GAMES: *Squash*

Shepherd, Melinda C. Senior Editor, Encyclopædia Britannica. •OBITUARIES *(in part);* SPECIAL REPORT: *Games of the XXIX Olympiad;* SPORTS AND GAMES: *Automobile Racing:* Rallies and Other Races *(in part); Football:* Canadian; U.S.; SPORTS AND GAMES: Sidebar; WORLD AFFAIRS: *Dependent States:* Europe and the Atlantic

Shubinsky, Valery. Freelance Critic and Journalist. Author of *Daniil Kharms: zhizn' cheloveka na vetru; Mikhail Lomonosov: vserossiiskii chelovek;* and *Nikolay Gumilyov: zhizn poeta.* •LITERATURE: *Russian*

Simons, Paul. Freelance Journalist. Author of *The Action Plant.* •LIFE SCIENCES: *Botany*

Simonson, Michael. Program Professor, Fischler School, Nova Southeastern University, North Miami Beach, Fla. Coauthor of *Teaching and Learning at a Distance: Foundations of Distance Education.* •EDUCATION: Sidebar

Simpson, Jane. Freelance Writer. •PERFORMING ARTS: *Dance:* European

Siska, Anne. Freelance Writer. •BIOGRAPHIES *(in part);* OBITUARIES *(in part)*

Smith, Gregory O. Director, European Management Institute, Rome. •WORLD AFFAIRS: *San Marino; Vatican City State*

Smith, Lahra. Assistant Professor, Georgetown University, Washington, D.C. •WORLD AFFAIRS: *Ethiopia*

Snodgrass, Donald. Institute Fellow Emeritus, Harvard University; Coauthor of *Economics of Development,* 5th ed. •WORLD AFFAIRS: *Sri Lanka*

Sparks, Karen J. Director and Editor, Encyclopædia Britannica. •OBITUARIES *(in part)*

Spencer, Donna. Journalist, The Canadian Press. •SPORTS AND GAMES: *Curling*

Stern, Irwin. Teaching Associate Professor of Foreign Languages, North Carolina State University. Editor of *Dictionary of Brazilian Literature.* Coauthor of *Spanish for Mental Health Professionals: A Step by Step Handbook.* •LITERATURE: *Portuguese:* Brazil

Stos, William. Ph.D. Candidate, York University, Toronto. •WORLD AFFAIRS: *Canada*

Streicker, John. Lecturer, Yukon College; Researcher, Northern Climate Exchange, Northern Research Institute. Coauthor of *Quilt Sensations.* •WORLD AFFAIRS: *Arctic Regions*

Sumrall, Harry Classical Music Editor, Gracenote, Inc. •PERFORMING ARTS: *Music:* Classical

Susser, Leslie D. Diplomatic Correspondent, *The Jerusalem Report.* Coauthor of *Shalom Friend: The Life and Legacy of Yitzhak Rabin.* •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *Israel*

Szilagyi, Zsofia. Political Consultant and Freelance Writer. •WORLD AFFAIRS: *Hungary*

Taylor, Jolanda Vanderwal. Associate Professor of Dutch and German, University of Wisconsin at Madison. Author of *A Family Occupation: Children of the War and the Memory of World War II in Dutch Literature of the 1980s.* •WORLD AFFAIRS: *The Netherlands*

Taylor, Richard. Basketball Correspondent, *The Independent;* Production and Sports Editor, Midland Weekly Media (Trinity Mirror). •SPORTS AND GAMES: *Basketball:* International

Taylor-Robinson, Michelle M. Associate Professor of Political Science, Texas A&M University. Coauthor of *Negotiating Democracy: Transitions from Authoritarian Rule.* •WORLD AFFAIRS: *Honduras*

Teague, Elizabeth. U.K. Foreign and Commonwealth Office. (The opinions expressed are personal and do not necessarily represent those of the British government.) •WORLD AFFAIRS: *Russia*

Teslik, Lee Hudson. Associate Editor, CFR.org, Council on Foreign Relations. •BUSINESS OVERVIEW: Sidebar

Thayer, Carlyle A. Professor of Politics, Australian Defence Force Academy, Canberra. Author of *The Vietnam People's Army Under Doi Moi.* •WORLD AFFAIRS: *Vietnam*

Thimangu, Patrick L. Reporter, *St. Louis* (Mo.) *Business Journal.* •WORLD AFFAIRS: *Eritrea*

Tikkanen, Amy. Corrections Manager, Encyclopædia Britannica. •BIOGRAPHIES *(in part)*

Trumbull, Charles. Freelance Writer and Editor. •BIOGRAPHIES *(in part)*

Turner, Darrell J. Freelance Writer; Former Religion Writer, *Fort Wayne* (Ind.) *Journal Gazette;* Former Associate Editor, Religion News Service. •RELIGION

Valencic, Joseph. Author, Film Writer, and Slovenian Scholar. •WORLD AFFAIRS: Slovenia

Verdi, Robert. Senior Writer, *Golf Digest* and *Golf World;* Contributing Columnist, *Chicago Tribune.* Author of *Chicago Blackhawks: Seventy-Five Years.* Coauthor of *McMahon!: The Bare Truth About Chicago's Brashest Bear; Once a Bum, Always a Dodger: My Life in Baseball from Brooklyn to Los Angeles;* and *Holy Cow!* •BIOGRAPHIES *(in part);* SPORTS AND GAMES: *Baseball:* U.S. and Canada

Wallenfeldt, Jeff. Senior Editor, Encyclopædia Britannica. •BIOGRAPHIES *(in part);* OBITUARIES *(in part)*

Wang Xiaoming. Professor of Chinese Literature and Chair of the Board of the Center for Modern Chinese Literature, East China Normal University; Professor of Cultural Studies and Director of the Center for Contemporary Culture Studies, Shanghai University. Author of *Life Cannot Be Faced Straight-On: A Biography of Lu Xun.* •LITERATURE: *Chinese*

Wanninger, Richard S. Freelance Journalist. •SPORTS AND GAMES: *Volleyball*

Watson, Rory. Freelance Journalist, specializing in European Union affairs; Brussels Correspondent, *The Times* (London). Coauthor of *The Belgian House of Representatives.* Contributor to *The European Union: How Does It Work?* •WORLD AFFAIRS: *Belgium*

Weil, Eric. Columnist and Contributor, *Buenos Aires Herald;* Reporter, Associated Press; South America Correspondent, *World Soccer;* Contributor, *FIFA Magazine.* •SPORTS AND GAMES: *Football:* Association Football (Soccer); *The Americas*

Weinstein, Martin. Professor of Political Science, William Paterson University of New Jersey. Author of *Uruguay: Democracy at the Crossroads* and numerous articles and book chapters on Uruguay. •WORLD AFFAIRS: *Uruguay*

White, Martin L. Freelance Writer. •BIOGRAPHIES *(in part);* OBITUARIES *(in part)*

Whitney, Barbara. Copy Supervisor, Encyclopædia Britannica. •BIOGRAPHIES *(in part);* OBITUARIES *(in part)*

Whitten, Phillip. Executive Director, College Swimming Coaches Association of America; Former Editor in Chief, *Swimming World.* Author and/or editor of 18 books, including *The Complete Book of Swimming.* •BIOGRAPHIES *(in part);* SPORTS AND GAMES: *Swimming*

Wilentz, Sean. Professor of History, Princeton University. Author of *The Age of Reagan: A History, 1974–2008* and others. •BIOGRAPHIES *(in part)*

Wilkinson, John R. Sportswriter, Coventry Newspapers. •BIOGRAPHIES *(in part);* SPORTS AND GAMES: *Cycling*

Wilson, Keith. Editorial Director, *Outdoor Photography* and *Black & White Photography.* Author of *The AVA Guide to Travel Photography.* •ART AND ART EXHIBITIONS: *Photography*

Winner, Christopher P. Editor and Publisher, *The American* (Rome). •WORLD AFFAIRS: *Italy*

Wolfe, Justin. Associate Professor, Department of History, Tulane University, New Orleans. Author of *The Everyday Nation-State: Community and Ethnicity in Nineteenth-Century Nicaragua.* •WORLD AFFAIRS: *Nicaragua*

Woods, Elizabeth Rhett. Writer. Author of *1970: A Novel Poem; Beyond the Pale; The Absinthe of Desire; Family Fictions;* and others. Web site: www.elizabethrhettwoods.ca. •LITERATURE: *English:* Canada

Woodward, Ralph Lee, Jr. Professor Emeritus of Latin American History, Tulane University, New Orleans. Author of *A Short History of Guatemala.* •WORLD AFFAIRS: *El Salvador; Guatemala*

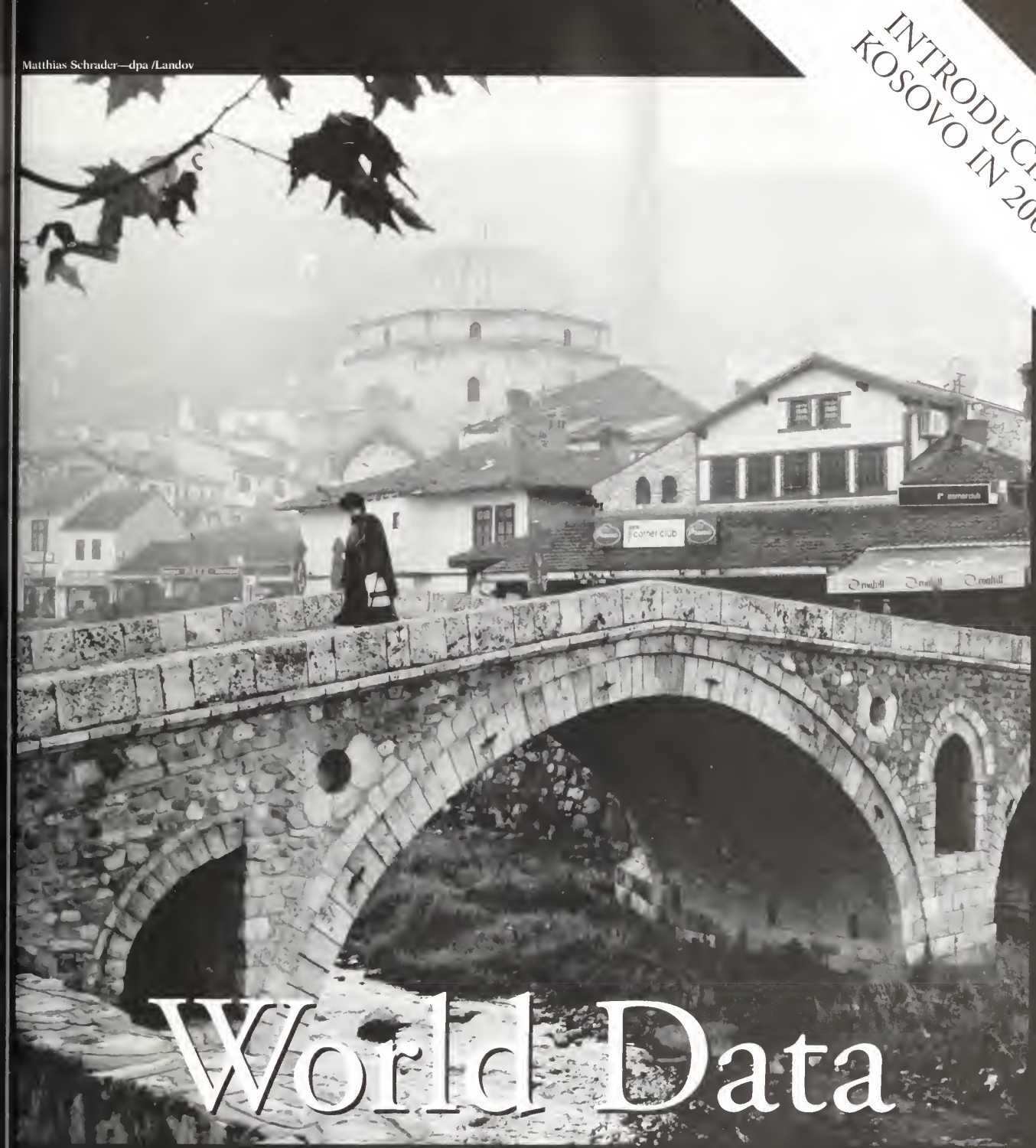
Wyganowski, Michael. Executive Director, Center for European Policy Analysis. •WORLD AFFAIRS: *Poland*

Wyllie, Peter J. Professor Emeritus of Geology, California Institute of Technology. Author of *The Dynamic Earth* and *The Way the Earth Works.* •EARTH SCIENCES: *Geology and Geochemistry*

Yovchev, Boris. Graduate Student, Information Systems, DePaul University, Chicago. •WORLD AFFAIRS: *Bulgaria (in part)*

Zegura, Stephen L. Professor of Anthropology, University of Arizona. •ANTHROPOLOGY AND ARCHAEOLOGY: *Anthropology*

Ziring, Lawrence. Arnold E. Schneider Professor Emeritus of Political Science, Western Michigan University. Author of *Pakistan in the Twentieth Century: A Political History* and *Pakistan: At the Crosscurrent of History.* Coauthor of *The United Nations: International Organization and World Politics.* •BIOGRAPHIES *(in part);* WORLD AFFAIRS: *Pakistan*



Matthias Schrader—dpa /Landov

World Data

This 16th-century bridge was built during the Ottoman Empire. It is a symbol of Prizren, Kosovo's picturesque second largest city with a 2004 population of 107,614, situated in the foothills of the Šar Mountains in southern Kosovo.

Director, World Data	Rosaline Jackson-Keys
Senior Editor	Stephen Neher
Editor, Almanac and World Data	Thad King
Assistant Editor	Mary Kasprzak
Contributors	Susana Darwin
Director, Copy Department	Sylvia Wallace
Supervisor, Copy Department	Dennis Skord
Senior Coordinator, Production Control	Marilyn L. Barton
Cartographer	Michael Nutter
Director, Information Management	Carmen-Maria Hetrea
Director, Editorial Technologies	Steven Bosco
Editorial Technologies Staff	Bruce Walters, Mark Wiechec
Manager, Media Acquisition	Kathy Nakamura
Photography Editor	Kimberly L. Cleary
Director, Art and Composition	Steven N. Kapusta
Supervisor, Composition	Carol A. Gaines
Director, Manufacturing	Kim Gerber
Head Librarian	Henry Bolzon
Curator, Geography	Lars Mahinske
Assistant Librarian	Robert L. Lewis

ENCYCLOPÆDIA BRITANNICA, INC.

Chairman of the Board	Jacob E. Safra
President	Jorge Aguilar-Cauz
Senior Vice President, Corporate Development	Michael Ross
Senior Vice President and Editor	Dale H. Hoiberg
Director of Production	Marsha Mackenzie

© 2009

ENCYCLOPÆDIA BRITANNICA, INC.
Britannica, Encyclopædia Britannica, Britannica Book of the Year, and the thistle logo
are registered trademarks of Encyclopædia Britannica, Inc.

No part of this work may be reproduced or utilized in any form or by
any means, electronic or mechanical, including photocopying, recording,
or by any information storage and retrieval system, without permission in writing from the publisher.

CONTENTS

500 Introduction

501 Glossary

506 **The Nations of the World**

506 Afghanistan
507 Albania
508 Algeria
509 American Samoa
510 Andorra
511 Angola
512 Antigua and Barbuda
513 Argentina
514 Armenia
515 Aruba
516 Australia
518 Austria
519 Azerbaijan
520 Bahamas, The
521 Bahrain
522 Bangladesh
523 Barbados
524 Belarus
525 Belgium
526 Belize
527 Benin
528 Bermuda
529 Bhutan
530 Bolivia
531 Bosnia and Herzegovina
532 Botswana
533 Brazil
535 Brunei
536 Bulgaria
537 Burkina Faso
538 Burundi
539 Cambodia
540 Cameroon
541 Canada
543 Cape Verde
544 Cayman Islands
545 Central African Republic
546 Chad
547 Chile
548 China
550 Colombia
551 Comoros
552 Congo, Democratic Republic of the
553 Congo, Republic of the
554 Costa Rica
555 Côte d'Ivoire
556 Croatia
557 Cuba
558 Cyprus
559 Czech Republic
560 Denmark
561 Djibouti
562 Dominica
563 Dominican Republic
564 East Timor
565 Ecuador
566 Egypt
567 El Salvador
568 Equatorial Guinea
569 Eritrea
570 Estonia
571 Ethiopia
572 Faroe Islands
573 Fiji
574 Finland
575 France
577 French Guiana
578 French Polynesia
579 Gabon
580 Gambia, The
581 Georgia
582 Germany
584 Ghana
585 Greece
586 Greenland
587 Grenada
588 Guadeloupe
589 Guam
590 Guatemala
591 Guernsey
592 Guinea
593 Guinea-Bissau
594 Guyana
595 Haiti
596 Honduras
597 Hong Kong
598 Hungary
599 Iceland
600 India
602 Indonesia
603 Iran
604 Iraq
605 Ireland
606 Isle of Man
607 Israel
608 Italy
610 Jamaica
611 Japan
614 Jersey
615 Jordan
616 Kazakhstan
617 Kenya
618 Kiribati
619 Korea, North
620 Korea, South
621 Kosovo
622 Kuwait
623 Kyrgyzstan
624 Laos
625 Latvia
626 Lebanon
627 Lesotho
628 Liberia
629 Libya
630 Liechtenstein
631 Lithuania
632 Luxembourg
633 Macau
634 Macedonia
635 Madagascar
636 Malawi
637 Malaysia
638 Maldives
639 Mali
640 Malta
641 Marshall Islands
642 Martinique
643 Mauritania
644 Mauritius
645 Mayotte
646 Mexico
648 Micronesia, Federated States of
649 Moldova
650 Monaco
651 Mongolia
652 Montenegro
653 Morocco
654 Mozambique
655 Myanmar (Burma)
656 Namibia
657 Nauru
658 Nepal
659 Netherlands, The
660 Netherlands Antilles
661 New Caledonia
662 New Zealand
663 Nicaragua
664 Niger
665 Nigeria
666 Northern Mariana Islands
667 Norway
668 Oman
669 Pakistan
670 Palau
671 Panama
672 Papua New Guinea
673 Paraguay
674 Peru
675 Philippines
676 Poland
677 Portugal
678 Puerto Rico
679 Qatar
680 Réunion
681 Romania
682 Russia
684 Rwanda
685 St. Kitts and Nevis
686 St. Lucia
687 St. Vincent and the Grenadines
688 Samoa
689 San Marino
690 São Tomé and Príncipe
691 Saudi Arabia
692 Senegal
693 Serbia
694 Seychelles
695 Sierra Leone
696 Singapore
697 Slovakia
698 Slovenia
699 Solomon Islands
700 Somalia
701 South Africa
702 Spain
703 Sri Lanka
704 Sudan, The
705 Suriname
706 Swaziland
707 Sweden
708 Switzerland
709 Syria
710 Taiwan
711 Tajikistan
712 Tanzania
713 Thailand
714 Togo
715 Tonga
716 Trinidad and Tobago
717 Tunisia
718 Turkey
719 Turkmenistan
720 Tuvalu
721 Uganda
722 Ukraine
723 United Arab Emirates
724 United Kingdom
726 United States
733 Uruguay
734 Uzbekistan
735 Vanuatu
736 Venezuela
737 Vietnam
738 Virgin Islands (U.S.)
739 Yemen
740 Zambia
741 Zimbabwe

742 **Comparative National Statistics**

742 World and regional summaries
744 Government and international organizations
750 Area and population
756 Major cities and national capitals
766 Language
771 Religion
774 Vital statistics, marriage, family
780 National product and accounts
786 Employment and labour
792 Crops and livestock
798 Energy
804 Communications
810 Health services
816 Social protection and defense services (social security, crime, military)
822 Education

828 Bibliography and sources

INTRODUCTION

Britannica World Data provides a statistical portrait of some 220 countries and dependencies of the world, at a level appropriate to the significance of each. It contains 217 country statements (the "Nations of the World" section), ranging in length from one to seven pages, and permits, in the 15 major thematic tables (the "Comparative National Statistics" [CNS] section), comparisons among these larger countries and 3 other states.

Updated annually, Britannica World Data is particularly intended as direct, structured support for many of Britannica's other reference works—encyclopaedias, yearbooks, atlases—at a level of detail that their editorial style or design do not permit.

Like the textual, graphic, or cartographic modes of expression of these other products, statistics possess their own inherent editorial virtues and weaknesses. Two principal goals in the creation of Britannica World Data were up-to-dateness and comparability, each possible to maximize separately, but not always possible to combine. If, for example, research on some subject is completed during a particular year (x), figures may be available for 100 countries for the preceding year ($x - 1$), for 140 countries for the year before that ($x - 2$), and for 180 countries for the year before that ($x - 3$).

Which year should be the basis of a thematic compilation for 218 countries so as to give the best combination of up-to-dateness and comparability? And, should $x - 1$ be adopted for the thematic table, ought up-to-dateness in the country table (for which year x is already available) be sacrificed for agreement with the thematic table? In general, the editors have opted for maximum up-to-dateness in the country statistical boxes and maximum comparability in the thematic tables.

Comparability, however, also resides in the meaning of the numbers compiled, which may differ greatly from country to country. The headnotes to the thematic tables explain many of these methodological problems; the Glossary serves the same purpose for the country statistical pages. Published data do not always provide the researcher or editor with a neat, unambiguous choice between a datum compiled on two different bases (say, railroad track length, or route length), one of which is wanted and the other not. More often a choice must be made among a variety of official, private, and external intergovernmental (UN, FAO, IMF) sources, each reporting its best data but each representing a set of problems: (1) of methodological variance from (or among) international conventions; (2) of analytical completeness (data for a single year may, successively, be projected [based on 10 months' data], preliminary [for 12 months], final, revised or adjusted, etc.); (3) of time frame, or accounting interval (data may represent a full Gregorian calendar year [preferred], a fiscal year, an Islamic or other national or religious year, a multiyear period or average [when a one-year statement would contain unrepresentative results]); (4) of continuity with previous data; and the like. Finally, published data on a particular subject may be complete and final but impossible to summarize in a simple manner. The education system of a single country may include, for example, public and private sectors; local, state, or national systems; varying grades, tracks, or forms within a single system; or opportunities for double-counting or fractional counting of a student, teacher, or institution. When no recent official data exist, or they exist, but may be suspect, the tables may show unofficial estimates, a range (of published opinion), analogous data, or no data at all.

The published basis of the information compiled is the statistical collections of Encyclopædia Britannica, Inc., some of the principal elements of which are enumerated in the Bibliography. Holdings for a given country may include any of the following: the national statistical abstract; the constitution; the most recent censuses of population; periodic or occasional reports on vital statistics, social indicators, agriculture, mining, labour, manufacturing, domestic and foreign trade, finance and banking, transportation, and communications. Further information is received in a variety of formats—telephone, letter, fax, microfilm and microfiche, and most recently, in electronic formats such as computer disks, CD-ROMs, and the Internet. So substantial has the resources of the Internet become that it was decided to add uniform resource locators (URLs) to the great majority of country pages and a number of the CNS tables (summary world sites with data on all countries still being somewhat of a rarity) so as to apprise the reader of the possibility and means to access current information on these subjects year-round.

The recommendations offered are usually to official sites (national statistical offices, general national governments, central banks, embassies, intergovernmental organizations [especially the UN Development Programme], and the like). Though often dissimilar in content, they will usually be updated year-round, expanded as opportunity permits, and lead on to related sites, such as parliamentary offices, information offices, diplomatic and consular sites, news agencies and newspapers, and, beyond, to the myriad academic, commercial, and private sites now accessible from the personal computer. While these URLs were correct and current at the time of writing, they may be subject to change.

The great majority of the social, economic, and financial data contained in this work should not be interpreted in isolation. Interpretive text of long perspective, such as that of the *Encyclopædia Britannica* itself; political, geographic, and topical maps, such as those in the *Britannica Atlas;* and recent analysis of political events and economic trends, such as that contained in the articles of the *Book of the Year,* will all help to supply analytic focus that numbers alone cannot. By the same token, study of those sources will be made more concrete by use of *Britannica World Data* to supply up-to-date geographic, demographic, and economic detail.

GLOSSARY

A number of terms that are used to classify and report data in the "Nations of the World" section require some explanation.

Those italicized terms that are used regularly in the country compilations to introduce specific categories of information (*e.g., birth rate, budget*) appear in this glossary in italic boldface type, followed by a description of the precise kind of information being offered and how it has been edited and presented.

All other terms are printed here in roman boldface type. Many terms have quite specific meanings in statistical reporting, and they are so defined here. Other terms have less specific application as they are used by different countries or organizations. Data in the country compilations based on definitions markedly different from those below will usually be footnoted.

Terms that appear in small capitals in certain definitions are themselves defined at their respective alphabetical locations.

Terms whose definitions are marked by an asterisk (*) refer to data supplied only in the larger two- to four-page country compilations.

activity rate, *see* participation/activity rates.

age breakdown, the distribution of a given population by age, usually reported here as percentages of total population in 15-year age brackets except for, when available, the 75–84 group. When substantial numbers of persons do not know, or state, their exact age, distributions may not total 100.0%.

aquatic plants production, the weight of aquatic plants (primarily seaweeds) harvested in freshwater or marine areas; the share harvested by farming is *aquaculture* production.

area, the total surface area of a country or its administrative subdivisions, including both land and inland (nontidal) water area. Land area is usually calculated from "mean low water" on a "plane table," or flat, basis.

area and population, a tabulation usually including the first-order administrative subdivisions of the country (such as the states of the United States), with capital (headquarters, or administrative seat), area, and population. When these subdivisions are especially numerous or, occasionally, nonexistent, a planning, electoral, census, or other nonadministrative scheme of regional subdivisions has been substituted.

associated state, *see* state.

atheist, in statements of religious affiliation, one who professes active opposition to religion; "nonreligious" refers to those professing only no religion, nonbelief, or doubt.

balance of payments, a financial statement for a country for a given period showing the balance among: (1) transactions in goods, services, and income between that country and the rest of the world, (2) changes in ownership or valuation of that country's monetary gold, SPECIAL DRAWING RIGHTS, and claims on and liabilities to the rest of the world, and (3) unrequited transfers and counterpart entries needed (in an accounting sense) to balance transactions and changes among any of the foregoing types of exchange that are not mutually offsetting. Detail of national law as to what constitutes a transaction, the basis of its valuation, and the size of a transaction visible to fiscal authorities all result in differences in the meaning of a particular national statement.*

balance of trade, the net value of all international goods trade of a country, usually excluding reexports (goods received only for transshipment), and the percentage that this net represents of total trade.

Balance of trade refers only to the "visible" international trade of goods as recorded by customs authorities and is thus a segment of a country's BALANCE OF PAYMENTS, which takes all visible and invisible trade with other countries into account. (Invisible trade refers to imports and exports of money, financial instruments, and services such as transport, tourism, and insurance.) A country has a favourable, or positive (+), balance of trade when the value of exports exceeds that of imports and negative (–) when imports exceed exports.

barrel (bbl), a unit of liquid measure. The barrel conventionally used for reporting crude petroleum and petroleum products is equal to 42 U.S. gallons, or 159 litres. The number of barrels of crude petroleum per metric ton, ranging typically from 6.20 to 8.13, depends upon the specific gravity of the petroleum. The world average is roughly 7.33 barrels per ton.

birth rate, the number of live births annually per 1,000 of midyear population. Birth rates for individual countries may be compared with the estimated world annual average of 20.3 births per 1,000 population in 2005.

budget, the annual receipts and expenditures—of a central government for its activities only; does not include state, provincial, or local

Abbreviations

Measurements

cu m	cubic metre(s)
kg	kilograms(s)
km	kilometre(s)
kW	kilowatt(s)
kW-hr	kilowatt-hour(s)
metric ton-km	metric ton-kilometre(s)
mi	mile(s)
passenger-km	passenger-kilometre(s)
passenger-mi	passenger-mile(s)
short ton-mi	short ton-mile(s)
sq km	square kilometre(s)
sq m	square metre(s)
sq mi	square mile(s)
troy oz	troy ounce(s)
yr	year(s)

Political Units and International Organizations

ASEAN	Association of Southeast Asian Nations
CACM	Central American Common Market
Caricom	Caribbean Community and Common Market
CFA	Communauté Financière Africaine
CFP	Change franc Pacifique
CIS	Commonwealth of Independent States
CUSA	Customs Union of Southern Africa
EC	European Communities
ESCWA	Economic and Social Commission for Western Asia
EU	European Union
FAO	United Nations Food and Agriculture Organization
ILO	International Labour Organisation
IMF	International Monetary Fund
Neth.	The Netherlands
OECD	Organization for Economic Cooperation and Development
OECS	Organization of Eastern Caribbean States
Serb.-Mont.	Serbia and Montenegro
Trin./Tab.	Trinidad and Tobago
U.A.E.	United Arab Emirates
UNDP	United Nations Development Programme

Months

Jan.	January	Oct.	October
Feb.	February	Nov.	November
Aug.	August	Dec.	December
Sept.	September		

Miscellaneous

AIDS	Acquired Immune Deficiency Syndrome
avg.	average
c.i.f.	cost, insurance, and freight
commun.	communications
CPI	consumer price index
est.	estimate(d)
excl.	excluding
f.o.b.	free on board
GDP	gross domestic product
GNP	gross national product
govt.	government
incl.	including
LNG	liquefied natural gas
n.a.	not available (in text)
n.e.s.	not elsewhere specified
no.	number
pl.	plural
pub. admin.	public administration
SDR	Special Drawing Right
SITC	Standard International Trade Classification
svcs.	services
teacher tr.	teacher training
transp.	transportation
VAT	value-added taxes
voc.	vocational
$	dollar (of any currency area)
£	pound (of any currency area)
...	not available (in tables)
—	none, less than half the smallest unit shown, or not applicable (in tables)

governments or semipublic (parastatal, quasi-nongovernmental) corporations unless otherwise specified. Figures for budgets are limited to ordinary (recurrent) receipts and expenditures, wherever possible, and exclude capital expenditures—*i.e.*, funds for development and other special projects originating as foreign-aid grants or loans.

When both a recurrent and a capital budget exist for a single country, the former is the budget funded entirely from national resources (taxes, duties, excises, etc.) that would recur (be generated by economic activity) every year. It funds the most basic governmental services, those least able to suffer interruption. The capital budget is usually funded by external aid and may change its size considerably from year to year.

capital, usually, the actual seat of government and administration of a state. When more than one capital exists, each is identified by kind; when interim arrangements exist during the creation or movement of a national capital, the de facto situation is described.

Anomalous cases are annotated, such as those in which (1) the de jure designation under the country's laws differs from actual local practice (*e.g.*, Benin's designation of one capital in constitutional law, but another in actual practice), (2) international recognition does not validate a country's claim (as with the proclamation by Israel of a capital on territory not internationally recognized as part of Israel), or (3) both a state and a capital have been proclaimed on territory recognized as part of another state (as with the Turkish Republic of Northern Cyprus).

capital budget, *see* budget.

causes of death, as defined by the World Health Organization (WHO), "the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of accident or violence which produced the fatal injury." This principle, the "underlying cause of death," is the basis of the medical judgment as to cause; the statistical classification system according to which these causes are grouped and named is the *International List of Causes of Death*, the latest revision of which is the Tenth. Reporting is usually in terms of events per 100,000 population. When data on actual causes of death are unavailable, information on morbidity, or illness rate, usually given as reported cases per 100,000 of infectious diseases (notifiable to WHO as a matter of international agreement), may be substituted.

chief of state/head of government, paramount national governmental officer(s) exercising the highest executive and/or ceremonial roles of a country's government. In general usage, the chief of state is the formal head of a national state. The primary responsibilities of the chief of state may range from the purely ceremonial—convening legislatures and greeting foreign officials—to the exercise of complete national executive authority. The head of government, when this function exists separately, is the officer nominally charged (by the constitution) with the majority of actual executive powers, though they may not in practice be exercised, especially in military or single-party regimes in which effective power may reside entirely outside the executive governmental machinery provided by the constitution. A prime minister, for example, usually the actual head of government, may in practice exercise only Cabinet-level authority.

In communist countries an official identified as the chief of state may be the chairman of the policy-making organ, and the official given as the head of government the chairman of the nominal administrative/executive organ.

c.i.f. (trade valuation): *see* imports.

commonwealth (U.K. and U.S.), a self-governing political entity that has regard to the common weal, or good; usually associated with the United Kingdom or United States. Examples include the Commonwealth (composed of independent states [from 1931 onward]), Puerto Rico since 1952, and the Northern Marianas since 1979.

communications, collectively, the means available for the public transmission of information within a country. Data are tabulated for: daily newspapers and their total circulation; television as total numbers of receivers; telephone data as landlines, or the number of subscriber lines (not receivers) having access to the public switched network; cellular telephones and Internet broadband users as number of subscribers; and personal computers and Internet users as number of units. For each, a rate per 1,000 persons is given.

constant prices, an adjustment to the members of a financial time series to eliminate the effect of inflation year by year. It consists of referring all data in the series to a single year so that "real" change may be seen.

constitutional monarchy, *see* monarchy.

consumer price index (CPI), also known as the retail price index, or the cost-of-living index, a series of index numbers assigned to the price of a selected "basket," or assortment, of basic consumer goods and services in a country, region, city, or type of household in order to measure changes over time in prices paid by a typical household for those goods and services. Items included in the CPI are ordinarily determined by governmental surveys of typical household expenditures and are assigned weights relative to their proportion of those expenditures. Index values are period averages unless otherwise noted.

coprincipality, *see* monarchy.

current prices, the valuation of a financial aggregate as of the year reported.

daily per capita caloric intake (supply), the calories equivalent to the known average daily supply of foodstuffs for human consumption in a given country divided by the population of the country (and the proportion of that supply provided, respectively, by vegetable and animal sources). The daily per capita caloric intake of a country may be compared with the corresponding recommended minimum daily requirement. The latter is calculated by the Food and Agriculture Organization of the United Nations from the age and sex distributions, average body weights, and environmental temperatures in a given region to determine the calories needed to sustain a person there at normal levels of activity and health. The daily per capita caloric requirement ranges from 2,200 to 2,500.

de facto population, for a given area, the population composed of those actually present at a particular time, including temporary residents and visitors (such as immigrants not yet granted permanent status, "guest" or expatriate workers, refugees, or tourists), but excluding legal residents temporarily absent.

de jure population, for a given area, the population composed only of those legally resident at a particular time, excluding temporary residents and visitors (such as "guest" or expatriate workers, refugees, or tourists), but including legal residents temporarily absent.

death rate, the number of deaths annually per 1,000 of midyear population. Death rates for individual countries may be compared with the estimated world annual average of 8.6 deaths per 1,000 population in 2005.

density (of population), usually, the DE FACTO POPULATION of a country divided by its total area. Special adjustment is made for large areas of inland water, desert, or other uninhabitable areas—*e.g.*, excluding the ice cap of Greenland.

dependency, an area annexed to, or controlled by, an independent state but not an integral part of it; a non-self-governing territory. A dependency has a charter and may have a degree of self-government. A crown dependency is a dependency originally chartered by the British government (*see* Table).

direct taxes, taxes levied directly on firms and individuals, such as taxes on income, profits, and capital gains. The *immediate* incidence, or burden, of direct taxes is on the firms and individuals thus taxed; direct taxes on firms may, however, be passed on to consumers and other economic units in the form of higher prices for goods and services, blurring the distinction between direct and indirect taxation.

divorce rate, the number of legal, civilly recognized divorces annually per 1,000 population.

doubling time, the number of complete years required for a country to double its population at its current rate of natural increase.

earnings index, a series of index numbers comparing average wages in a collective industrial sample for a country or region with the same industries at a previous period to measure changes over time in those wages. It is

Dependencies[1]

Australia
Christmas Island
Cocos (Keeling) Islands
Norfolk Island

Denmark
Faroe Islands
Greenland

France
French Guiana
French Polynesia
Guadeloupe
Martinique
Mayotte
New Caledonia
Réunion
Saint-Barthélemy
Saint-Martin
Saint Pierre and Miquelon
Wallis and Futuna

Netherlands, The
Aruba
Netherlands Antilles

New Zealand
Cook Islands
Niue
Tokelau

United Kingdom
Anguilla
Bermuda
British Virgin Islands
Cayman Islands
Falkland Islands
Gibraltar
Guernsey
Isle of Man
Jersey
Montserrat
Pitcairn Island
Saint Helena and Dependencies
Turks and Caicos Islands

United States
American Samoa
Guam
Northern Mariana Islands
Puerto Rico
Virgin Islands (of the U.S.)

[1]Excludes territories (1) to which Antarctic Treaty is applicable in whole or in part, (2) without permanent civilian population, (3) without internationally recognized civilian government (Western Sahara, Gaza Strip), or (4) representing unadjudicated unilateral or multilateral territorial claims.

most commonly reported for wages paid on a daily, weekly, or monthly basis; annual figures may represent total income or averages of these shorter periods. The scope of the earnings index varies from country to country. The index is often limited to earnings in manufacturing industries. The index for each country applies to all wage earners in a designated group and ordinarily takes into account basic wages (overtime is normally distinguished), bonuses, cost-of-living allowances, and contributions toward social security. Some countries include payments in kind. Contributions toward social security by employers are usually excluded, as are social security benefits received by wage earners.

economically active population, *see* population economically active.

education, tabulation of the principal elements of a country's educational establishment, classified as far as possible according to the country's own system of primary, secondary, and higher levels (the usual age limits for these levels being identified in parentheses), with total number of schools (physical facilities) and of teachers and students (whether full- or part-time). The student-teacher ratio is calculated whenever available data permit.

educational attainment, the distribution of the population age 25 and over with completed educations by the highest level of formal education attained or completed; it must sometimes be reported, however, for age groups still in school or for the economically active only.

emirate, *see* monarchy.

enterprise, a legal entity formed to conduct a business, which it may do from more than one establishment.

ethnic/linguistic composition, ethnic, racial, or linguistic composition of a national population, reported here according to the most reliable breakdown available, whether published in official sources (such as a census) or in external analysis (when the subject is not addressed in national sources).

exchange rate, the value of one currency compared with another, or with a standardized unit of account such as the SPECIAL DRAWING RIGHT, or as mandated by local statute when one currency is "tied" by a par value to another. Rates given usually refer to free market values when the currency has no, or very limited, restrictions on its convertibility into other currencies.

exports, material goods legally leaving a country (or customs area) and subject to customs regulations. The total value and distribution by percentage of the major items (in preference to groups of goods) exported are given, together with the distribution of trade among major trading partners (usually single countries or trading blocs). Valuation of goods exported is free on board (f.o.b.) unless otherwise specified. The value of goods exported and imported f.o.b. is calculated from the cost of production and excludes the cost of transport.

external debt, public and publicly guaranteed debt with a maturity of more than one year owed to nonnationals of a country and repayable in foreign currency, goods, or services. The debt may be an obligation of a national or subnational governmental body (or an agency of either), of an autonomous public body, or of a private debtor that is guaranteed by a public entity. The debt is usually either outstanding (contracted) or disbursed (drawn).

external territory (Australia), *see* territory.

federal, consisting of first-order political subdivisions that are prior to and independent of the central government in certain functions.

federal constitutional monarchy, *see* monarchy.

federal republic, *see* republic.

federation, union of coequal, preexisting political entities that retain some degree of autonomy and (usually) right of secession within the union.

fertility rate, *see* total fertility rate.

financial aggregates, tabulation of seven-year time series, providing principal measures of the financial condition of a country, including: (1) the exchange rate of the national currency against the U.S. dollar, the pound sterling, and the International Monetary Fund's SPECIAL DRAWING RIGHT (SDR), (2) the amount and kind of international reserves (holdings of SDRs, gold, and foreign currencies) and reserve position of the country in the IMF, and (3) principal economic rates and prices (central bank discount rate, government bond yields, and industrial stock [share] prices). For BALANCE OF PAYMENTS, the origin in terms of component balance of trade items and balance of invisibles (net) is given.[5]

fisheries production, the live-weight equivalent of the aquatic animals (including fish, crustaceans, mollusks, and other aquatic mammals) caught in freshwater or marine areas by national fleets and landed in domestic or foreign harbours for commercial, industrial, or subsistence purposes. The share of fisheries production that is harvested by farming is *aquaculture* production.

f.o.b. (trade valuation), *see* exports.

food, *see* daily per capita caloric intake.

foreign direct investment (FDI), a long-term investment with a significant degree of control by a business entity or individual of one country into another country's economy. FDI comprises three components—equity capital, reinvested earnings, and intra-company loans. The net balance of the three FDI components is often volatile from one year to the next. If negative for a particular time period, the balance of the three components is called a reverse investment, or disinvestment.

form of government/political status, the type of administration provided for by a country's constitution—whether or not suspended by extralegal military or civil action, although such de facto administrations are identified—together with the number of members (elected, ap-pointed, and ex officio) for each legislative house, named according to its English rendering. Dependent states (*see* Table) are classified according to the status of their political association with the administering country.

gross domestic product (GDP), the total value of the final goods and services produced by residents and nonresidents within a given country during a given accounting period, usually a year. Unless otherwise noted, the value is given in current prices of the year indicated. The *System of National Accounts* (SNA, published under the joint auspices of the UN, IMF, OECD, EC, and World Bank) provides a framework for international comparability in classifying domestic accounting aggregates and international transactions comprising "net factor income from abroad," the measure that distinguishes GDP and GNP.

gross national income (GNI), also called gross national product (GNP), the total value of final goods and services produced both from within a given country *and* from external (foreign) transactions in a given accounting period, usually a year. Unless otherwise noted, the value is given in current prices of the year indicated. GNI is equal to GROSS DOMESTIC PRODUCT adjusted by net factor income from abroad, which is the income residents receive from abroad for factor services (labour, investment, and interest) less similar payments made to nonresidents who contribute to the domestic economy.

head of government, *see* chief of state/head of government.

health, a group of measures including number of accredited physicians currently practicing or employed and their ratio to the total population; total hospital beds and their ratio; and INFANT MORTALITY RATE.

household, economically autonomous individual or group of individuals living in a single dwelling unit. A family household is one composed principally of individuals related by blood or marriage.

household income and expenditure, data for average size of a HOUSEHOLD (by number of individuals) and median household income. Sources of income and expenditures for major items of consumption are given as percentages.

In general, household income is the amount of funds, usually measured in monetary units, received by the members (generally those 14 years old and over) of a household in a given time period. The income can be derived from (1) wages or salaries, (2) nonfarm or farm SELF-EMPLOYMENT, (3) transfer payments, such as pensions, public assistance, unemployment benefits, etc., and (4) other income, including interest and dividends, rent, royalties, etc. The income of a household is expressed as a gross amount before deductions for taxes. Data on expenditure refer to consumption of personal or household goods and services; they normally exclude savings, taxes, and insurance; practice with regard to inclusion of credit purchases differs markedly.

imports, material goods legally entering a country (or customs area) and subject to customs regulations; excludes financial movements. The total value and distribution by percentage of the major items (in preference to groups of goods) imported are given, together with the direction of trade among major trading partners (usually single countries), trading blocs (such as the European Union), or customs areas (such as Belgium-Luxembourg). The value of goods imported is given free on board (f.o.b.) unless otherwise specified; f.o.b. is defined above under EXPORTS.

The principal alternate basis for valuation of goods in international trade is that of cost, insurance, and freight (c.i.f.); its use is restricted to imports, as it comprises the principal charges needed to bring the goods to the customs house in the country of destination. Because it inflates the value of imports relative to exports, more countries have, latterly, been estimating imports on an f.o.b. basis as well.

incorporated territory (U.S.), *see* territory.

independent, of a state, autonomous and controlling both its internal and external affairs. Its date usually refers to the date from which the country was in effective control of these affairs within its present boundaries, rather than the date independence was proclaimed or the date recognized as a de jure act by the former administering power.

indirect taxes, taxes levied on sales or transfers of selected intermediate goods and services, including excises, value-added taxes, and tariffs, that are ordinarily passed on to the ultimate consumers of the goods and services. Figures given for individual countries are limited to indirect taxes levied by their respective central governments unless otherwise specified.

infant mortality rate, the number of children per 1,000 live births who die before their first birthday. Total infant mortality includes neonatal mortality, which is deaths of children within one month of birth.

invisibles (invisible trade), *see* balance of trade.

kingdom, *see* monarchy.

labour force, portion of the POPULATION ECONOMICALLY ACTIVE (PEA) comprising those most fully employed or attached to the labour market (the unemployed are considered to be "attached" in that they usually represent persons previously employed seeking to be reemployed), particularly as viewed from a short-term perspective. It normally includes those who are self-employed, employed by others (whether full-time, part-time, seasonally, or on some other less than full-time, basis), and, as noted above, the unemployed (both those previously employed and those seeking work for the first time). In the "gross domestic product and labour force" table, the majority

of the labour data provided refer to population economically active, since PEA represents the longer-term view of working population and, thus, subsumes more of the marginal workers who are often missed by shorter-term surveys.

land use, distribution by classes of vegetational cover or economic use of the land area only (excluding inland water, built-up areas, and wasteland), reported as percentages. The principal categories utilized include: (1) arable land under temporary cultivation including land left fallow for less than five years, (2) land under permanent cultivation (significantly tree crops but also grapes, pineapples, and bananas), (3) pastures and rangeland, which includes land in temporary or permanent use whose principal purpose is the growing of animal fodder, and (4) forest areas, whose definition overlaps with other land use classes per the FAO *State of the World's Forests;* forest areas may include scrub forests, forest plantations, and recently afforested or reforested land.

life expectancy, the number of years a person born within a particular population group (age cohort) would be expected to live, based on actuarial calculations.

literacy, the ability to read and write a language with some degree of competence; the precise degree constituting the basis of a particular national statement is usually defined by the national census and is often tested by the census enumerator. Elsewhere, particularly where much adult literacy may be the result of literacy campaigns rather than passage through a formal educational system, definition and testing of literacy may be better standardized.

major cities, usually the five largest cities/towns proper (national capitals are almost always given, regardless of size); fewer cities/towns may be listed if there are fewer urban localities in the country. For multipage tables, 10 or more may be listed.* Populations for cities/towns will usually refer to the city/town proper—*i.e.,* the legally bounded corporate entity, or the most compact, contiguous, demographically urban portion of the entity defined by the local authorities. Occasionally figures for METROPOLITAN AREAS, urban areas, or urban agglomerations are cited when the relevant civil entity at the core of a major agglomeration had an unrepresentatively small population.

manufacturing, mining, and construction enterprises/retail sales and service enterprises, a detailed tabulation of the principal industries in these sectors, showing for each industry the number of enterprises and employees, wages in that industry as a percentage of the general average wage, and the value of that industry's output in terms of value added or turnover.*

marriage rate, the number of legal, civilly recognized marriages annually per 1,000 population.

material well-being, a group of measures indicating the percentage of households or dwellings possessing certain goods or appliances, including automobiles, telephones, television receivers, refrigerators, air conditioners, and washing machines.*

metropolitan area, a city and the region of dense, predominantly urban, settlement around the city; the population of the whole usually has strong economic and cultural affinities with the central city.

military expenditure, the apparent value of all identifiable military expenditure by the central government on hardware, personnel, pensions, research and development, etc., reported here both as a percentage of the GNP, with a comparison to the world average, and as a per capita value in U.S. dollars.

military personnel, *see* total active duty personnel.

mobility, the rate at which individuals or households change dwellings, usually measured between censuses and including international as well as domestic migration.*

monarchy, a government in which the CHIEF OF STATE holds office, usually hereditarily and for life, but sometimes electively for a term. The state may be a coprincipality, emirate, kingdom, principality, sheikhdom, or sultanate. The powers of the monarch may range from absolute (*i.e.,* the monarch both reigns and rules) through various degrees of limitation of authority to nominal, as in a constitutional monarchy, in which the titular monarch reigns but others, as elected officials, effectively rule.

monetary unit, currency of issue, or that in official use in a given country; name and abbreviation or symbol according to local practice or name and 3-digit code according to the ISO (International Organization for Standardization); and valuation in U.S. dollars and U.K. pounds sterling, usually according to free-market rates.

See also exchange rate.

natural increase, also called natural growth, or the balance of births and deaths, the excess of births over deaths in a population; the rate of natural increase is the difference between the BIRTH RATE and the DEATH RATE of a given population. The estimated world average during 2005 was 11.7 per 1,000 population, or 1.35% annually. Natural increase is added to the balance of migration to calculate the total growth of that population.

nonreligious, *see* atheist.

official development assistance, officially administered grants and concessional loans that donors (usually developed countries) give to developing countries to promote economic development and welfare.

official language(s), that (or those) prescribed by the national constitution for day-to-day conduct and publication of a country's official business or, when no explicit constitutional provision exists, that of the constitution itself, the national gazette (record of legislative activity), or like official documents. Other languages may have local protection, may be permitted in parliamentary debate or legal action (such as a trial), or may be "national languages," for the protection of which special provisions have been made, but these are not deemed official. The United States, for example, does not yet formally identify English as "official," though it uses it for virtually all official purposes.

official name, the local official form(s), short or long, of a country's legal name(s) taken from the country's constitution or from other official documents. The English-language form is usually the protocol form in use by the country, the U.S. Department of State, and the United Nations.

official religion, generally, any religion prescribed or given special status or protection by the constitution or legal system of a country. Identification as such is not confined to constitutional documents utilizing the term explicitly.

organized territory (U.S.), *see* territory.

overseas department (France), *see* department.

overseas territory (France), *see* territory.

parliamentary state, *see* state.

part of a realm, a dependent Dutch political entity with some degree of self-government and having a special status above that of a colony (*e.g.,* the prerogative of rejecting for local application any law enacted by The Netherlands).

participation/activity rates, measures defining differential rates of economic activity within a population. Participation rate refers to the percentage of those employed or economically active who possess a particular characteristic (sex, age, etc.); activity rate refers to the fraction of the total population who *are* economically active.

passenger-miles, or **passenger-kilometres,** aggregate measure of passenger carriage by a specified means of transportation, equal to the number of passengers carried multiplied by the number of miles (or kilometres) each passenger is transported. Figures given for countries are often calculated from ticket sales and ordinarily exclude passengers carried free of charge.

people's republic, *see* republic.

place of birth/national origin, if the former, numbers of native- and foreign-born population of a country by actual place of birth; if the latter, any of several classifications, including those based on origin of passport at original admission to country, on cultural heritage of family name, on self-designated (often multiple) origin of (some) ancestors, and on other systems for assigning national origin.*

political status, *see* form of government/political status.

population, the number of persons present within a country, city, or other civil entity at the date of a census of population, survey, cumulation of a civil register, or other enumeration. Unless otherwise specified, populations given are DE FACTO, referring to those actually present, rather than DE JURE, those legally resident but not necessarily present on the referent date. If a time series, noncensus year, or per capita ratio referring to a country's total population is cited, it will usually refer to midyear of the calendar year indicated.

population economically active, the total number of persons (above a set age for economic labour, usually 10–15 years) in all employment statuses—self-employed, wage- or salary-earning, part-time, seasonal, unemployed, etc. The International Labour Organisation defines the economically active as "all persons of either sex who furnish the supply of labour for the production of economic goods and services." National practices vary as regards the treatment of such groups as armed forces, inmates of institutions, persons seeking their first job, unpaid family workers, seasonal workers and persons engaged in part-time economic activities. In some countries, all or part of these groups may be included among the economically active, while in other countries the same groups may be treated as inactive. In general, however, the data on economically active population do not include students, persons occupied solely in family or household work, retired persons, persons living entirely on their own means, and persons wholly dependent upon others.

See also labour force.

population projection, the expected population in the years 2010 and 2020, embodying the country's own projections wherever possible. Estimates of the future size of a population are usually based on assumed levels of fertility, mortality, and migration. Projections in the tables, unless otherwise specified, are medium (*i.e.,* most likely) variants, whether based on external estimates by the United Nations, World Bank, or U.S. Department of Commerce or on those of the country itself.

price and earnings indexes, tabulation comparing the change in the CONSUMER PRICE INDEX over a period of seven years with the change in the general labour force's EARNINGS INDEX for the same period.

principality, *see* monarchy.

production, the physical quantity or monetary value of the output of an industry, usually tabulated here as the most important items or groups of items (depending on the available detail) of primary (extractive) and secondary (manufactured) production, including construction. When a single consistent measure of value, such as VALUE ADDED, can be obtained, this is given, ranked by value; otherwise, and more usually, quantity of production is given.

public debt, the current outstanding debt of all periods of maturity for which the central government and its organs are obligated. Publicly guaranteed private debt is excluded. For

countries that report debt under the World Bank Debtor Reporting System (DRS), figures for outstanding, long-term EXTERNAL DEBT are given.

purchasing power parity, an economic theory used to determine the number of units in a country's currency that are required to buy the same amount of goods and services in another country. As such it is often used to compare the standards of living between countries expressed in a common currency which is usually U.S.$. *Britannica World Data* publishes only purchasing power parity rates as calculated by the World Bank method.

quality of working life, a group of measures including weekly hours of work (including overtime); rates per 100,000 for job-connected injury, illness, and mortality; coverage of labour force by insurance for injury, permanent disability, and death; workdays lost to labour strikes and stoppages; and commuting patterns (length of journey to work in minutes and usual method of transportation).*

railroads, mode of transportation by self-driven or locomotive-drawn cars over fixed rails. Length-of-track figures include all mainline and spurline running track but exclude switching sidings and yard track. Route length, when given, does not compound multiple running tracks laid on the same trackbed.

recurrent budget, *see* budget.

religious affiliation, distribution of nominal religionists, whether practicing or not, as a percentage of total population. This usually assigns to children the religion of their parents.

remittances, amount of a migrant's earnings sent from the migration destination to the place of origin. Remittance data are compiled somewhat differently from one country source to another but usually include cash transfers of long-term legal migrants. Cash transfers of short-term ("for less than one year of residence") legal migrants or the cash transfers of illegal migrants and refugees are also often included with remittances. The standard (but not universal) sources used in BWD for national remittances are the latest editions of World Bank publications and UNCTAD *Handbook of Statistics*. These two sources may also (1) include net wages and salaries of all nonresident migrants and (2) approximate the value of migrants' transfers of household and personal effects to their place of origin as part of a broader remittances definition.

republic, a state with elected leaders and a centralized presidential form of government, local subdivisions being subordinate to the national government. A *federal republic* (as distinguished from a unitary republic) is a republic in which power is divided between the central government and the constituent subnational administrative divisions (*e.g.,* states, provinces, or cantons) in whom the central government itself is held to originate, the division of power being defined in a written constitution and jurisdictional disputes usually being settled in a court; sovereignty usually rests with the authority that has the power to amend the constitution. A *unitary republic* (as distinguished from a federal republic) is a republic in which power originates in a central authority and is not derived from constituent subdivisions. A *people's republic,* in the dialectics of Communism, is the first stage of development toward a communist state, the second stage being a *socialist republic.* An *Islamic republic* is structured around social, ethical, legal, and religious precepts central to the Islamic faith.

retail price index, *see* consumer price index.

retail sales and service enterprises, *see* manufacturing, mining, and construction enterprises/retail sales and service enterprises.

roundwood, wood obtained from removals from forests, felled or harvested (with or without bark), in all forms. Roundwood used for fuel is fuelwood; other roundwood used in construction, paper products, flooring, furniture manufacture, etc., is called industrial roundwood.

rural, *see* urban-rural.

self-employment, work in which income derives from direct employment in one's own business, trade, or profession, as opposed to work in which salary or wages are earned from an employer.

self-governing, of a state, in control of its internal affairs in degrees ranging from control of most internal affairs (though perhaps not of public order or of internal security) to complete control of all internal affairs (*i.e.,* the state is autonomous) but having no control of external affairs or defense. In this work the term self-governing refers to the final stage in the successive stages of increasing self-government that generally precede independence.

service/trade enterprises, *see* manufacturing, mining, and construction enterprises/retail sales and service enterprises.

sex distribution, ratios, calculated as percentages, of male and female population to total population.

sheikhdom, *see* monarchy.

social deviance, a group of measures, usually reported as rates per 100,000 for principal categories of socially deviant behaviour, including specified crimes, alcoholism, drug abuse, and suicide.*

social participation, a group of measures indicative of the degree of social engagement displayed by a particular population, including rates of participation in such activities as elections, voluntary work or memberships, trade unions, and religion.*

social security, public programs designed to protect individuals and families from loss of income owing to unemployment, old age, sickness or disability, or death and to provide other services such as medical care, health and welfare programs, or income maintenance.

socialist republic, *see* republic.

sources of income, *see* household income and expenditure.

Special Drawing Right (SDR), a unit of account utilized by the International Monetary Fund (IMF) to denominate monetary reserves available under a quota system to IMF members to maintain the value of their national currency unit in international transactions.*

state, in international law, a political entity possessing the attributes of: territory, permanent civilian population, government, and the capacity to conduct relations with other states. Though the term is sometimes limited in meaning to fully independent and internationally recognized states, the more general sense of an entity possessing a *preponderance* of these characteristics is intended here. It is, thus, also a first-order civil administrative subdivision, especially of a federated union. An associated state is an autonomous state in free association with another that conducts its external affairs and defense; the association may be terminated in full independence at the instance of the autonomous state in consultation with the administering power. A *parliamentary state* is an independent state of the Commonwealth that is governed by a parliament and that may recognize the British monarch as its titular head.

structure of gross domestic product and labour force, tabulation of the principal elements of the national economy, according to standard industrial categories, together with the corresponding distribution of the labour force (when possible POPULATION ECONOMICALLY ACTIVE) that generates the GROSS DOMESTIC PRODUCT.

sultanate, *see* monarchy.

territory, a noncategorized political dependency; a first-order administrative subdivision; a dependent political entity with some degree of self-government, but with fewer rights and less autonomy than a colony because there is no charter. An *external territory* (Australia) is a territory situated outside the area of the country. An *organized territory* (U.S.) is a territory for which a system of laws and a settled government have been provided by an act of the United States Congress. An *overseas territory* (France) is an overseas subdivision of the French Republic with elected representation in the French Parliament, having individual statutes, laws, and internal organization adapted to local conditions.

ton-miles, or **ton-kilometres,** aggregate measure of freight hauled by a specified means of transportation, equal to tons of freight multiplied by the miles (or kilometres) each ton is transported. Figures are compiled from waybills (nationally) and ordinarily exclude mail, specie, passengers' baggage, the fuel and stores of the conveyance, and goods carried free.

total active duty personnel, full-time active duty military personnel (excluding militias and part-time, informal, or other paramilitary elements), with their distribution by percentages among the major services.

total fertility rate, the sum of the current age-specific birth rates for each of the child-bearing years (usually 15–49). It is the probable number of births, given present fertility data, that would occur during the lifetime of each woman should she live to the end of her child-bearing years.

tourism, service industry comprising activities connected with domestic and international travel for pleasure or recreation; confined here to international travel and reported as expenditures in U.S. dollars by tourists of all nationalities visiting a particular country and, conversely, the estimated expenditures of that country's nationals in all countries of destination.

transfer payments, *see* household income and expenditure.

transport, all mechanical methods of moving persons or goods. Data reported for national establishments include: for railroads, length of track and volume of traffic for passengers and cargo (but excluding mail, etc.); for roads, length of network and numbers of passenger cars and of commercial vehicles (*i.e.,* trucks and buses); and for air transport, traffic data for passengers and cargo.

undernourished population, the number of persons according to an FAO study whose daily caloric consumption (based on a weighted average of all age and sex groups) is below a minimum level needed for maintaining a healthy life and performing light physical activity.

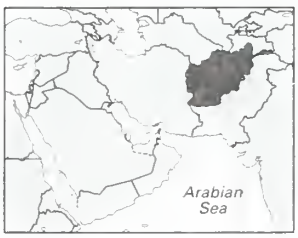
unincorporated territory (U.S.), *see* territory.

unitary republic, *see* republic.

urban-rural, social characteristic of local or national populations, defined by predominant economic activities, "urban" referring to a group of largely nonagricultural pursuits, "rural" to agriculturally oriented employment patterns. The distinction is usually based on the country's own definition of urban, which may depend only upon the size (population) of a place or upon factors like employment, administrative status, density of housing, etc.

value added, also called value added by manufacture, the gross output value of a firm or industry minus the cost of inputs—raw materials, supplies, and payments to other firms—required to produce it. Value added is the portion of the sales value or gross output value that is actually created by the firm or industry. Value added generally includes labour costs, administrative costs, and operating profits.

Afghanistan



Official name: Islamic Republic of Afghanistan (Jomhūrī-ye Eslāmī-ye Afghānestān [Dari]); Da Afghanestan Eslami Jamhuriyat (Pashto)[1].
Form of government: Islamic republic[1] with two legislative bodies (House of Elders [102]; House of the People [249]).
Head of state and government: President.
Capital: Kabul.
Official languages: Dari; Pashto[2].
Official religion: Islam.
Monetary unit: (new) afghani (Af); valuation (Sept. 8, 2008) 1 U.S.$ = Af 46.73; 1 £ = Af 82.56[3].

Population (2006 estimate)[4]

Province	population ('000)	Province	population ('000)	Province	population ('000)
Badakhshān	823.0	Jowzjān	461.7	Orūzgān	303.6
Bādghīs	429.5	Kābol (Kabul)	3,138.1	Paktīā	477.5
Baghlān	779.0	Kandahār	1,011.7	Paktīkā	377.1
Balkh	1,096.1	Kāpīsā	382.6	Panjshīr[5]	133.2
Bāmīān	387.3	Khowst	498.0	Parvān	573.1
Dāykundī[6]	399.6	Konar	390.2	Samangān	334.8
Farāh	438.0	Kondoz	851.3	Sar-e Pol	482.9
Fāryāb	858.6	Laghmān	386.4	Takhār	845.3
Ghaznī	1,062.6	Lowgar	339.7	Vardak	517.2
Ghowr	598.6	Nangarhār	1,289.0	Zābol	263.2
Helmand	799.0	Nīmrūz	141.4	TOTAL	22,575.9
Herāt	1,578.2	Nūrestān	128.4		

Demography

Area: 249,347 sq mi, 645,807 sq km.
Population (2008): 28,266,000[7].
Density (2008): persons per sq mi 113.4, persons per sq km 43.8.
Urban-rural (2006): urban 21.5%; rural 78.5%.
Sex distribution (2006): male 51.14%; female 48.86%.
Age breakdown (2006): under 15, 44.6%; 15–29, 26.7%; 30–44, 16.0%; 45–59, 8.6%; 60–74, 3.5%; 75 and over 0.6%.
Population projection: (2010) 30,389,000; (2020) 40,993,000.
Ethnolinguistic composition (2004): Pashtun *c.* 42%; Tajik *c.* 27%; Hazāra *c.* 9%; Uzbek *c.* 9%; Chahar Aimak *c.* 4%; Turkmen *c.* 3%; other *c.* 6%.
Religious affiliation (2004): Sunnī Muslim *c.* 82%; Shī'ī Muslim *c.* 17%; other *c.* 1%.
Major cities (2006): Kabul 2,536,300; Herāt 349,000; Kandahār (Qandahār) 324,800; Mazār-e Sharīf 300,600; Jalālābād 168,600.

Vital statistics

Birth rate per 1,000 population (2006): 46.6 (world avg. 20.3).
Death rate per 1,000 population (2006): 20.3 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 6.69.
Life expectancy at birth (2006): male 43.2 years; female 43.5 years.

National economy

Budget (2005–06). Revenue: Af 67,531,000,000 (grants for development revenue 51.3%; grants for current revenue 24.8%; domestic revenue 23.9%, of which taxes 18.2%). Expenditures: Af 91,417,000,000 (development expenditure 64.0%; current expenditure 36.0%).
Gross national income (GNI; 2007): U.S.$10,137,000,000 (U.S.$373 per capita); purchasing power parity GNI (U.S.$, n.a.).

Structure of gross domestic product and labour force

	2006–07		2002–03	
	in value Af '000,000	% of total value	labour force[4]	% of labour force[4]
Agriculture	117,277	31.7	5,181,400	69.6
Mining	876	0.2		
Manufacturing	62,618	16.9	362,200	4.9
Public utilities	593	0.2		
Transp. and commun	45,535	12.3	169,500	2.3
Construction	37,412	10.1	98,600	1.3
Trade, hotels, restaurants	33,139	8.9	509,600	6.8
Finance, real estate[8]				
Pub. administration	27,543	7.4	1,126,000	15.1
Services[8]	33,874	9.1		
Other	11,579[9]	3.1[9]		
TOTAL	370,446	100.0[10]	7,447,300	100.0

Public debt (external, outstanding; 2006): U.S.$1,761,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2006–07): wheat 3,363,000, barley 364,000, rice 361,000, corn (maize) 359,000, grapes (2005) 350,000, potatoes 300,000, berries (2005) 57,000, apricots (2005) 38,448, almonds 20,000, opium poppy (2007) 8,200[11]; livestock (number of live animals) 9,259,000 sheep, 6,746,000 goats, 174,000 camels; roundwood (2005) 3,226,629 cu m, of which fuelwood 45%; fisheries production (2005) 1,000 (from aquaculture, none). Mining and quarrying: salt (2005) 34,000; gemstones (particularly lapis lazuli), n.a. Manufacturing (value added in Af '000,000; 2005–06): food 48,575; chemicals 1,206; cement, bricks, and ceramics 809; textiles, wearing apparel, and fur 569; base metals 139. Energy production (consumption): electricity (kW-hr; 2006–07) 916,900,000 (483,600,000); hard coal (metric tons; 2005) 33,000 (33,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (186,000); natural gas (cu m; 2005) 2,600,000 (2,600,000).
Household income and expenditure (2003). Average household size 8.0; sources of income: wages and salaries 49%, self-employment 47%; expenditure (2004)[12]: food 60.6%, housing and energy 16.5%, clothing 9.1%.
Population economically active (2005): total 4,296,300; activity rate of total population 18.0% (participation rates: female 47.0%; unemployed 8.5%).

Price index (2005 = 100)

	2004	2005	2006	2007
Consumer price index	89.3	100.0	109.1	132.5

Land use as % of total land area (2003): in temporary crops 12.1%, in permanent crops 0.2%, in pasture 46.0%; overall forest area (2005) 1.3%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (1998) 1.0; remittances, n.a.; foreign direct investment (2004–06 avg.) 2[13]; official development assistance (2006) 3,000. Disbursements for (U.S.$'000,000): n.a.

Foreign trade[14]

Balance of trade (current prices)

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07
U.S.$'000,000	−1,628	−2,352	−1,957	−1,872	−2,087	−2,328
% of total	92.3%	92.2%	87.2%	75.4%	73.1%	73.7%

Imports (2006–07): U.S.$2,744,000,000 (machinery and equipment 19.4%; household items and medicine 12.0%; food 12.0%; base and fabricated metals 10.0%; mineral fuels 9.3%). *Major import sources* (2005–06): Japan 16.8%; Pakistan 15.9%; China 12.8%; Russia 9.2%; Uzbekistan 8.3%.
Exports (2006–07): U.S.$416,000,000 (carpets and handicrafts 45.0%; dried fruits 30.3%; fresh fruits 9.4%; skins 5.5%). *Major export destinations* (2005–06): Pakistan 77.6%; India 6.0%; Russia 3.4%; U.A.E. 2.9%.

Transport and communications

Transport. Railroads (2006): none. Roads (2005): total length 34,782 km (paved 7%). Vehicles (2004–05): passenger cars 197,449; trucks and buses 123,964. Air transport (2004–05): passenger-km 681,000,000; metric ton-km cargo 20,624,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Telephones				Televisions	2003	312	14
Cellular	2007	4,668[15]	172[15]	Internet users	2007	580	21
Landline	2007	81	3.0	Broadband	2005	0.22[15]	0.01[15]

Education and health

Educational attainment: n.a. *Literacy* (2006): total population age 15 and over literate 28.1%; males 43.1%; females 12.6%.

Education (2004)

	schools	teachers	students	student/ teacher ratio
Primary	5,854	67,983	4,430,142	65.2
Secondary	2,423	34,271[16]	400,000	18.1[16]
Higher	19	1,886	39,514	21.0

Health: physicians (2005) 4,747 (1 per 5,000 persons); hospital beds (2004)[17] 9,667 (1 per 2,381 persons); infant mortality rate (2006) 160.2.

Military

Total active duty personnel (May 2008): 76,000 (army 100%)[18]. *Military expenditure as percentage of GDP* (2005): 9.9%; per capita expenditure *c.* U.S.$31.

[1]From promulgation of new constitution on Jan. 26, 2004. [2]Six additional locally official languages per the 2004 constitution are Uzbek, Turkmen, Balochi, Kafiri (Nuristani), Pashai, and Pamiri. [3]The afghani was re-denominated on Oct. 7, 2002; from that date 100 (old) afghanis equaled 1 (new) afghani. [4]Refers to settled population only and excludes refugees in Pakistan and Iran. [5]Created in 2004 from part of Parvān. [6]Created in 2004 from part of Orūzgān. [7]Includes Afghan refugees in Pakistan and Iran and nomadic population; the first complete national census was to be conducted between June and August 2008. [8]Services includes Finance, real estate. [9]Taxes on imports less imputed bank service charges. [10]Detail does not add to total given because of rounding. [11]Represents 93% of world production. [12]Weights of consumer price index components. [13]Estimate. [14]Exports f.o.b.; imports c.i.f. [15]Subscribers. [16]2002. [17]Public hospitals only. [18]Foreign troops (October 2008): 41-country NATO-sponsored security and development force 50,700, of which U.S. 20,600, U.K. 8,300, Germany 3,300, France 2,700, Canada 2,500, Italy 2,400; other combat operations along Pakistan border *c.* 20,000 troops, of which U.S. *c.* 18,000.

Internet resources for further information:
- **Central Statistics Office http://www.cso-af.net**

Albania

Official name: Republika e Shqipërisë (Republic of Albania).
Form of government: unitary multiparty republic with one legislative house (Assembly [140]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Tirana (Tiranë).
Official language: Albanian.
Official religion: none.
Monetary unit: lek (L); valuation (Sept. 8, 2008) 1 U.S.$ = 85.55 leks; 1 £ = 151.14 leks.

Area and population

Counties	Capitals	area sq mi	area sq km	population 2004 estimate
Berat	Berat	696	1,802	181,901
Dibër	Peshkopi	968	2,507	166,367
Durrës	Durrës	319	827	280,996
Elbasan	Elbasan	1,266	3,278	353,825
Fier	Fier	729	1,887	380,736
Gjirokastër	Gjirokastër	1,113	2,883	107,416
Korçë	Korçë	1,433	3,711	263,585
Kukës	Kukës	916	2,373	102,037
Lezhë	Lezhë	610	1,581	159,881
Shkodër	Shkodër	1,375	3,562	250,351
Tiranë	Tirana (Tiranë)	612	1,586	677,871
Vlorë	Vlorë	1,045	2,706	202,295
TOTAL		11,082	28,703	3,127,261[1]

Demography

Population (2008): 3,194,000.
Density (2008): persons per sq mi 288.2, persons per sq km 111.3.
Urban-rural (2005[2]): urban 44.5%; rural 55.5%.
Sex distribution (2005[2]): male 49.82%; female 50.18%.
Age breakdown (2005): under 15, 26.9%; 15–29, 25.3%; 30–44, 19.8%; 45–59, 16.0%; 60–74, 9.3%; 75–84, 2.4%; 85 and over, 0.3%.
Population projection: (2010) 3,231,000; (2020) 3,415,000.
Doubling time: 86 years.
Ethnic composition (2000): Albanian 91.7%; Greek 2.3%; Aromanian 1.8%; Rom 1.8%; other 2.4%.
Traditional religious groups (2005)[3]: Muslim *c.* 68%, of which Sunnī *c.* 51%, Bektashi *c.* 17%; Orthodox *c.* 22%; Roman Catholic *c.* 10%.
Major cities (2001): Tirana (Tiranë) 343,078; Durrës 99,546; Elbasan 87,797; Shkodër 82,455; Vlorë 77,691.

Vital statistics

Birth rate per 1,000 population (2007): 10.7 (world avg. 20.3).
Death rate per 1,000 population (2007): 4.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 5.9 (world avg. 11.7).
Marriage/divorce rates per 1,000 population (2005): 8.4/0.9.
Total fertility rate (avg. births per childbearing woman; 2006): 2.03.
Life expectancy at birth (2006): male 74.8 years; female 80.3 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 419.4, of which cerebrovascular disease 151.5, ischemic heart disease 121.4; malignant neoplasms (cancers) 114.9; diseases of the respiratory system 43.3; accidents 41.9.

National economy

Budget (2005). Revenue: 199,600,000,000 leks (tax revenue 91.3%, of which turnover tax/VAT 31.7%, social security contributions 18.4%, customs duties and excise taxes 17.0%, taxes on income and profits 11.8%; other revenue 8.7%). Expenditures: 245,100,000,000 leks (current expenditure 79.4%, of which social security and welfare 22.5%, wages and salaries 22.5%, debt service 12.2%; development expenditure 20.6%).
Gross national income (GNI; 2007): U.S.$10,456,000,000 (U.S.$3,290 per capita; purchasing power parity GNI (U.S.$6,580 per capita).

Structure of gross domestic product and labour force

	2004 in value '000,000 leks	2004 % of total value	2006 labour force	2006 % of labour force
Agriculture	151,562	20.2	542,000	50.0
Mining	5,522	0.7	5,000	0.5
Manufacturing	62,539	8.3	58,000	5.4
Public utilities	...	..	10,900	1.0
Construction	94,300	12.5	53,200	4.9
Transp. and commun.	62,196	8.3	19,000	1.8
Trade, restaurants	147,514	19.6	83,900	7.7
Finance, real estate, Pub. admin., defense, Services	157,347	20.9	162,700	15.0
Other	71,388[4]	9.5[4]	150,000[5]	13.8[5]
TOTAL	752,368	100.0	1,084,000[6]	100.0[6]

Public debt (external, outstanding; 2006): U.S.$1,588,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2006): alfalfa for forage and silage 2,962,000, corn (maize) 245,400, wheat 230,900, watermelons 169,100, tomatoes 164,900, potatoes 150,000, grapes 127,800; livestock (number of live animals) 1,830,000 sheep, 940,000 goats, 634,000 cattle, 4,572,000 chickens; roundwood (2005) 296,200 cu m, of which fuelwood 75%; fisheries production (2005) 5,275 (from aquaculture 28%). Mining and quarrying (2005): chromium ore 50,000. Manufacturing (value added in U.S.$'000,000; 2005): basic chemicals 33; textiles 33; base metals 32; leather (all forms) 28; glass and glass products 28; beverages 15. Energy production (consumption): electricity (kW-hr; 2005) 5,443,000,000 (5,814,000,000); lignite (metric tons; 2005) 92,000 (105,000); crude petroleum (barrels; 2007) 1,820,000 ([2005] 2,950,000); petroleum products (metric tons; 2005) 222,000 (1,048,000); natural gas (cu m; 2005) 17,170,000 (17,170,000).
Population economically active (2006): total 1,084,000; activity rate of total population 34.6% (participation rates: ages 15–64, 53.7%; female 39.6%; unemployed 13.8%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.1	111.1	111.7	114.2	116.9	119.7	123.7
Monthly earnings index	115.1	131.4	142.5	163.1	179.2	..	..

Household income and expenditure (2002). Average household size 4.3; average annual income per household: 401,928 leks (U.S.$2,868); sources of income (2000)[7]: wages and salaries/self-employment 64.2%, transfers/pensions 14.8%, other 21.0%; expenditure: food, beverages, and tobacco 68.2%, energy 9.2%, transportation and communications 6.6%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 854; remittances (2006) 1,359; foreign direct investment (FDI; 2004–06 avg.) 313; official development assistance (2006) 321. Disbursements for (U.S.$'000,000): tourism (2005) 786; remittances (2006) 27; FDI (2004–06 avg.) 10.
Land use as % of total land area (2003): in temporary crops 21.1%, in permanent crops 4.4%, in pasture 15.4%; overall forest area (2005) 29.0%.

Foreign trade[8]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
'000,000,000 leks	–163	–171	–174	–196	–222	–280
% of total	63.2%	61.1%	58.3%	59.9%	58.8%	59.2%

Imports (2007): 376,796,000,000 leks (nonelectrical and electrical machinery 20.8%; mineral fuels and electricity 16.7%; food, beverages, and tobacco 16.6%; construction materials and base and fabricated metals 15.8%; textiles and footwear 10.4%). *Major import sources:* Italy 27.1%; Greece 14.6%; China 8.0%; Turkey 7.3%; Germany 5.5%.
Exports (2007): 96,688,000,000 leks (textiles and footwear 48.4%; construction materials and base and fabricated metals 15.8%; mineral fuels and electricity 15.4%; food, beverages, and tobacco 7.3%). *Major export destinations:* Italy 68.1%; Greece 8.3%; Germany 2.4%; Macedonia 2.3%; Turkey 2.3%.

Transport and communications

Transport. Railroads (2004): length (2005) 447 km; passenger-km 89,000,000; metric ton-km cargo 32,000,000. Roads (2002): total length 18,000 km (paved 39%). Vehicles (2005[2]): passenger cars 190,004; trucks and buses 71,875. Air transport (2005)[9]: passenger-km 152,000,000; metric ton-km, none.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	989	318	PCs	2002	36	12
Telephones				Dailies	2003	76[10]	25[10]
Cellular	2007	2,300[11]	721[11]	Internet users	2006	471	150
Landline	2007	81	3.0	Broadband	2006	300[11]	95[11]

Education and health

Educational attainment (2001). Population age 20 and over having: no formal schooling/incomplete primary education 7.8%; primary 55.6%; lower secondary 2.7%; upper secondary 17.9%; vocational 8.8%; university 7.2%. *Literacy* (2006): total population age 15 and over literate 98.7%; males 99.2%; females 98.3%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 6–9)	1,721	11,653	250,487	21.5
Secondary (age 10–17)	374	22,560	397,056	17.6
Higher	11	2,066	53,014	25.7

Health: physicians (2004) 3,699 (1 per 845 persons); hospital beds (2005) 9,284 (1 per 339 persons); infant mortality rate per 1,000 live births (2006) 20.8; undernourished population (2002–04) 200,000 (6% of total population based on the consumption of a minimum daily requirement of 1,980 calories).

Military

Total active duty personnel (November 2007): 11,020 (army 56.3%, navy 10.0%, air force 12.4%, other 21.3%[12]). *Military expenditure as percentage of GDP* (2005): 1.4%; per capita expenditure U.S.$37.

[1]Summed total of average annual population; reported total is 3,127,263. [2]January 1. [3]In actuality, a majority of citizens are secular after decades of rigidly enforced atheism. [4]Net taxes less subsidies and less imputed bank service charges. [5]Unemployed. [6]Detail does not add to total given because of rounding. [7]Urban areas only. [8]Imports c.i.f.; exports f.o.b. [9]Albanian Air only. [10]Circulation of daily newspapers. [11]Subscribers. [12]Includes logistics support command and training and doctrine command.

Internet resources for further information:
- **Bank of Albania http://www.bankofalbania.org**
- **Instituti i Statistikës http://www.instat.gov.al**

Algeria

Official name: Al-Jumhūrīyah al-Jazā'irīyah ad-Dīmuqrāṭīyah ash-Sha'bīyah (Arabic) (People's Democratic Republic of Algeria).
Form of government: multiparty republic with two legislative bodies (Council of the Nation [144][1]; National People's Assembly [389]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Algiers.
Official language: Arabic[2].
Official religion: Islam.
Monetary unit: Algerian dinar (DA); valuation (Sept. 8, 2008) 1 U.S.$ = DA 61.07; 1 £ = DA 107.89.

Population (2008 preliminary census)

Provinces	population	Provinces	population	Provinces	population
Adrar	402,197	El-Bayadh	262,187	Ouargla	552,539
Aïn Defla	771,890	El-Oued	673,934	Oum el-Bouaghi	644,364
Aïn Temouchent	368,713	Et-Tarf	411,783	Relizane	733,060
Alger	2,947,461	Ghardaïa	375,988	Saïda	328,685
Annaba	640,050	Guelma	482,261	Sétif	1,496,150
Batna	1,128,030	Illizi	54,490	Sidi bel-Abbès	603,369
Béchar	274,866	Jijel	634,412	Skikda	904,195
Bejaïa	915,835	Khenchela	384,268	Souk Ahras	440,299
Biskra	730,262	Laghouat	477,328	Tamanrasset	198,691
Blida	1,009,892	Mascara	780,959	Tébessa	657,227
Bordj Bou Arreridj	634,396	Médéa	830,943	Tiaret	842,060
Bouira	694,750	Mila	768,419	Tindouf	58,193
Boumerdes	795,019	Mostaganem	746,947	Tipaza	617,661
Constantine	943,112	M'Sila	991,846	Tissemsilt	296,366
Djelfa	1,223,223	Naâma	209,470	Tizi Ouzou	1,119,646
Ech-Cheliff	1,013,718	Oran	1,443,052	Tlemcen	945,525
				TOTAL	34,459,729[3]

Demography

Area: 919,595 sq mi, 2,381,741 sq km.
Population (2008): 34,574,000.
Density (2008): persons per sq mi 37.6, persons per sq km 14.5.
Urban-rural (2005): urban 60.0%; rural 40.0%.
Sex distribution (2005): male 50.46%; female 49.54%.
Age breakdown (2005): under 15, 29.7%; 15–29, 32.1%; 30–44, 21.0%; 45–59, 10.8%; 60–74, 5.0%; 75–84, 1.2%; 85 and over, 0.2%.
Population projection: (2010) 35,630,000; (2020) 40,868,000.
Doubling time: 56 years.
Ethnic composition (2000): Algerian Arab 59.1%; Berber 26.2%, of which Arabized Berber 3.0%; Bedouin Arab 14.5%; other 0.2%.
Religious affiliation (2000): Muslim 99.7%, of which Sunnī 99.1%, Ibāḍīyah 0.6%; Christian 0.3%.
Major cities (1998): Algiers 1,519,570 (urban agglom. [2007] 3,354,000); Oran 692,516; Constantine 462,187; Annaba 348,554; Batna 242,514.

Vital statistics

Birth rate per 1,000 population (2006): 17.1 (world avg. 20.3).
Death rate per 1,000 population (2006): 4.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 12.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.89.
Marriage rate per 1,000 population (2005): 8.5.
Life expectancy at birth (2006): male 71.7 years; female 74.9 years.
Notified cases of infectious diseases per 100,000 population (2003): measles 39.8; meningitis 19.6; brucellosis 8.7; hepatitis 6.5; dysentery 6.1.

National economy

Budget (2006). Revenue: DA 3,639,900,000,000 (hydrocarbon revenue 76.9%, nonhydrocarbon revenue 23.1%). Expenditures: DA 2,452,700,000,000 (current expenditure 58.5%, capital expenditure 41.5%).
Public debt (external, outstanding; 2006): U.S.$3,738,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2006): wheat 2,687,930, potatoes 2,180,961, barley 1,235,880, tomatoes 796,160, onions 703,873, dates 491,188, oranges 474,453, grapes 398,018, olives 364,733; livestock (number of live animals) 19,615,730 sheep, 3,754,590 goats; roundwood 7,742,000 cu m, of which fuelwood 99%; fisheries production (2005) 126,627 (from aquaculture, negligible). Mining and quarrying (2006): iron ore 1,996,000; phosphate rock 1,510,000; zinc (metal content) 572. Manufacturing (value added in U.S.$'000,000; 2005): food and beverages 1,230; fabricated metals 880; refined petroleum/manufactured gas 720; motor vehicles and parts 400. Energy production (consumption): electricity (kW-hr; 2005) 32,873,000,000 (32,846,000,000); hard coal (metric tons; 2005) none (779,000); crude petroleum (barrels; 2006) 524,700,000 ([2005] 142,200,000); petroleum products (metric tons; 2005) 37,994,000 (10,393,000); natural gas (cu m; 2006) 84,900,000,000 ([2005] 31,450,000,000).
Land use as % of total land area (2003): in temporary crops 3.2%, in permanent crops 0.2%, in pasture 13.3%; overall forest area (2005) 1.0%.
Household income and expenditure. Average household size (2004) 6.2; disposable income per household (2002) *c.* U.S.$5,700; sources of income (2004): self-employment 39.9%, wages and salaries 36.9%, transfers 23.2%; expenditure (1989)[4]: food and beverages 44.1%, clothing and footwear 11.6%, transportation and communications 11.5%, household furnishings 6.8%.
Gross national income (GNI; 2007): U.S.$122,465,000,000 (U.S.$3,620 per capita); purchasing power parity GNI (U.S.$7,850 per capita [estimate]).

Structure of gross domestic product and labour force

	2005		2004	
	in value DA '000,000	% of total value	labour force[5]	% of labour force[5]
Agriculture	577,000	7.7	1,616,200	17.1
Petroleum and natural gas	3,394,000[6]	45.1[6]	135,100[6]	1.4[6]
Other mining	393,000[5]	5.2[6]		
Manufacturing			846,700[6]	8.9[6]
Public utilities	559,000	7.4	79,100	0.8
Construction			967,600	10.2
Transp. and commun.			435,900	4.6
Trade, restaurants	1,451,000	19.3	1,339,200	14.1
Finance, real estate			141,200	1.5
Services			1,113,300	11.8
Pub. admin., defense	646,000	8.6	1,104,100	11.7
Other	499,000[7]	6.6[7]	1,691,600[8]	17.9[6]
TOTAL	7,519,000	100.0[9]	9,470,000	100.0

Population economically active (2006): total 10,109,600; activity rate of population *c.* 30% (participation rates: ages 15–64 [1998] 52.6%; female 16.9%; unemployed 12.3%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.2	105.7	108.4	112.3	114.1	117.0	121.1

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 184; remittances (2006) 2,527; foreign direct investment (FDI; 2004–06 avg.) 1,253; official development assistance (2006) 209. Disbursements for (U.S.$'000,000): tourism (2005) 370; remittances, n.a.; FDI (2004–06 avg.) 117.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007[11]
U.S.$'000,000	+6,829	+11,079	+13,775	+25,645	+33,157	+29,177
% of total	22.1%	29.0%	27.3%	38.6%	43.6%	37.7%

Imports (2006): U.S.$21,456,000,000 (food and live animals 16.9%, nonelectrical machinery 16.0%, iron and steel 12.9%, motor vehicles 11.1%). *Major import sources:* France 20.4%; Italy 8.8%; China 8.0%; Germany 6.9%; U.S. 6.6%.
Exports (2006): U.S.$54,613,000,000 (crude petroleum 55.6%, natural gas 27.7%, manufactured gas 7.4%, refined petroleum 7.2%). *Major export destinations:* U.S. 27.2%; Italy 17.1%; Spain 11.0%; France 8.4%; Canada 6.6%.

Transport and communications

Transport. Railroads (2004): route length 2,468 mi, 3,973 km; (2000) passenger-km 1,142,000,000; metric ton-km cargo 2,029,000,000. Roads (2004): total length 67,295 mi, 108,302 km (paved 70%). Vehicles (2005): passenger cars 1,905,892; trucks and buses 1,068,520. Air transport (2005)[12]: passenger-km 3,101,000,000; metric ton-km cargo 36,177,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,633	114	PCs	2005	1,920	58
Telephones				Dailies	2004	873[13]	27[13]
Cellular	2007	21,446[14]	633[14]	Internet users	2007	3,500	103
Landline	2007	2,923	86	Broadband	2005	195[14]	5.9[14]

Education and health

Educational attainment (1998). Percentage of economically active population age 6 and over having: no formal schooling 30.1%; primary education 29.9%; lower secondary 20.7%; upper secondary 13.4%; higher 4.3%; other 1.6%.
Literacy (2005): total population age 15 and over literate 72.1%; males literate 80.6%; females literate 63.4%.

Education (2004–05)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–11)	17,041	171,471	4,361,744	25.4
Secondary (age 12–17)	5,267	168,434	3,379,355	20.1
Higher	55	26,072	721,833	27.7

Health: physicians (2003) 36,347 (1 per 877 persons); hospital beds (1999) 57,796 (1 per 520 persons); infant mortality rate (2006) 29.9; undernourished population (2002–04) 1,400,000 (4% of total population based on the consumption of a minimum daily requirement of 1,870 calories).

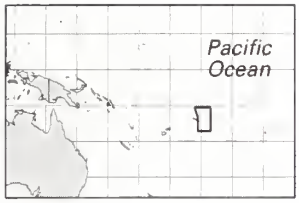
Military

Total active duty personnel (November 2007): 147,000 (army 86.4%, navy 4.1%, air force 9.5%). *Military expenditure as percentage of GDP* (2005): 2.9%; per capita expenditure U.S.$89.

[1]Includes 48 nonelected seats. [2]The Berber language, Tamazight, became a national language in April 2002. [3]Reported total; summed total equals 34,459,731. [4]Weights of consumer price index components; Algiers only. [5]Based on labour force survey. [6]Petroleum and natural gas excludes (and Manufacturing includes) refined petroleum. [7]Import taxes and duties. [8]Nearly all unemployed including 1,149,400 seeking first employment. [9]Detail does not add to total given because of rounding. [10]Imports c.i.f.; exports f.o.b. [11]Excludes December. [12]Air Algérie. [13]Circulation. [14]Subscribers.

Internet resources for further information:
- **Statistiques Algérie http://www.ons.dz/them_sta.htm**
- **Banque d'Algerie http://www.bank-of-algeria.dz**

American Samoa



Official name: American Samoa (English); Amerika Samoa (Samoan).
Political status: unincorporated and unorganized territory of the United States with two legislative houses (Senate [18]; House of Representatives [21[1]]).
Chief of state: President of the United States.
Head of government: Governor.
Capital: Fagatogo[2] (legislative and judicial) and Utulei (executive).
Official languages: English; Samoan.
Official religion: none.
Monetary unit: dollar (U.S.$); valuation (Sept. 8, 2008) 1 U.S.$ = £0.57.

Area and population

Districts and islands	area sq mi	area sq km	population 2000 census
Eastern District	25.9	67.1	23,441
Tutuila Island (part)	25.3	65.5	21,673
Aunu'u Island	0.6	1.6	1,768
Western District	28.8	74.6	32,435
Tutuila Island (part)	28.8	74.6	32,435
Manu'a District (Manu'a Islands)	21.9	56.7	1,378
Ofu Island	2.8	7.2	289
Olosega Island	2.0	5.2	216
Ta'u Island	17.1	44.3	873
Rose Island[3]	0.1	0.3	0
Swains Island[3]	0.6	1.5	37
TOTAL	77.3[4]	200.2[4]	57,291

Demography

Population (2008): 69,400.
Density (2008): persons per sq mi 897.8, persons per sq km 346.7.
Urban-rural (2003): urban 54.0%; rural 46.0%.
Sex distribution (2006): male 51.42%; female 48.58%.
Age breakdown (2006): under 15, 34.7%; 15–29, 24.9%; 30–44, 22.4%; 45–59, 13.0%; 60–74, 4.1%; 75 and over, 0.9%.
Population projection: (2010) 72,000; (2020) 82,000.
Doubling time: 40 years.
Ethnic composition (2000): Samoan 88.2%; Tongan 2.8%; Asian 2.8%; Caucasian 1.1%; other 5.1%.
Religious affiliation (2005): Protestant *c.* 38%, of which Congregational *c.* 21%; Mormon *c.* 19%; Roman Catholic *c.* 15%; other (including nonreligious) *c.* 28%.
Major villages (2000): Tafuna 8,406; Nu'uuli 5,154; Pago Pago 4,278 (urban agglomeration [2001] 15,000); Leone 3,568; Fagatogo 2,096[2].

Vital statistics

Birth rate per 1,000 population (2007): 21.6 (world avg. 20.3); (2006) within marriage 65.3%; outside of marriage 34.7%.
Death rate per 1,000 population (2007): 4.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 17.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 3.16.
Marriage/divorce rates per 1,000 population: (2006) 2.6/(1993) 0.5.
Life expectancy at birth (2006): male 72.5 years; female 79.8 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 121.7; malignant neoplasms (cancers) 59.3; diseases of the respiratory system 54.6; diabetes mellitus 39.0; accidents, injuries, and violence 34.3.

National economy

Budget (2005). Revenue: U.S.$182,014,612 (U.S. government grants 48.5%, taxes 27.7%, charges for services 4.6%, other 19.2%). Expenditures: U.S.$192,498,724 (education and culture 34.2%, general government 23.7%, health and welfare 16.6%, economic development 10.4%, public safety 6.1%, capital projects 3.9%, public works and parks 3.0%, debt 2.1%).
Gross domestic product (2002): U.S.$559,000,000 (U.S.$9,040 per capita).

Structure of labour force

	2000 labour force	2000 % of labour force
Agriculture, forestry, and fishing	517	2.9
Manufacturing	5,900	33.4
Construction	1,066	6.0
Transp. and commun.	1,036	5.9
Trade	1,790	10.1
Finance, real estate	311	1.8
Public administration	1,550	8.8
Services	4,548	25.7
Other	946[5]	5.4
TOTAL	17,664	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): coconuts 4,642, taros 1,500, bananas 678, yams 100, coconut oil 65, citrus fruits 26, pineapples 20; livestock (number of live animals) 10,500 pigs, 38,000 chickens; roundwood, n.a.; fisheries production (2005) 3,943[6] (from aquaculture, none). Mining and quarrying: n.a. Manufacturing (value of exports in U.S.$; 2003): canned tuna 467,700,000; pet food 9,800,000; other manufactures include garments, handicrafts, soap, and alcoholic beverages. Energy production (consumption): electricity (kW-hr; 2005) 189,000,000 (189,000,000); coal, none (n.a.); crude petroleum, none (n.a.); petroleum products (metric tons; 2002) none (93,000); natural gas, none (n.a.).
Public debt: n.a.
Population economically active (2000): total 17,664; activity rate of total population 30.8% (participation rates: ages 16 and over 52.0%; female 41.5%; unemployed 5.1%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006
Consumer price index[7]	101.4	103.4	108.4	116.1	122.1	125.8

Household income and expenditure. Average household size (2005) 5.7; income per household (2000) U.S.$24,000; sources of income: n.a.; expenditure (1995): food and beverages 30.9%, housing and furnishings 25.8%, church donations 20.7%, transportation and communications 9.4%, clothing 2.9%, other 10.3%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (1998) 10; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.$'000,000): tourism (1996) 2.0; remittances, n.a.
Land use as % of total land area (2003): in temporary crops *c.* 10%, in permanent crops *c.* 15%, in pasture, n.a.; overall forest area (2005) *c.* 90%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−203.0	−111.1	−164.3	−158.1	−132.4	−140.7
% of total	24.2%	12.5%	15.2%	15.1%	15.0%	13.8%

Imports (2006): U.S.$579,200,000 (fish for cannery 41.0%, other food 24.4%, tin plates 8.3%, mineral fuels 6.1%). *Major import sources* (2000): United States 56.7%; Australia 14.9%; New Zealand 11.1%; Fiji 5.7%; Samoa 3.1%.
Exports (2006): U.S.$438,500,000 (canned tuna 98.4%, pet food 1.6%). *Major export destination* (2000): United States 99.6%.

Transport and communications

Transport. Railroads: none. Roads (1991): total length 217 mi, 350 km (paved, 43%). Vehicles (2006): passenger cars 7,758; trucks and buses 602. Air transport (2006): passenger arrivals 75,116; passenger departures 81,907; incoming cargo 1,376 metric tons, outgoing cargo 1,411 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	13	211	PCs	...	...	...
Telephones				Dailies	2004	6.3[8]	195[8]
Cellular	2005	8.1[9]	123[9]	Internet users	2005	...	..
Landline	2006	11	160	Broadband	2005	..	...

Education and health

Educational attainment (2005). Percentage of population age 25 and over having: no formal schooling to some secondary education 31.2%; completed secondary 42.6%; some college 19.0%; bachelor's degree 5.0%; graduate degree 2.2%. *Literacy* (2000): total population age 10 and over literate 99.4%; males literate 99.4%; females literate 99.5%.

Education (2006)

	schools	teachers	students	student/teacher ratio
Primary (age 6–14)	35	528[10]	11,100	21.7[10]
Secondary (age 14–18)	12	269[10]	5,074	18.5[10]
Vocational[11]	...	21	160	7.6
Higher[12]	1	67[10]	1,607	23.9[10]

Health (2003): physicians 49 (1 per 1,253 persons); hospital beds 128 (1 per 480 persons); infant mortality rate per 1,000 live births (2007) 11.8; undernourished population, n.a.

Military

Military defense is the responsibility of the United States.

[1]Including the appointed nonvoting delegate from Swains Island. [2]The seat of the legislature, as defined by the Constitution of American Samoa, is at Fagatogo, one of a number of villages within an urban agglomeration collectively known as Pago Pago. [3]Not within district administrative structure. Swains Island is administered by a village government and a representative of the governor. [4]Area of American Samoa including deeply indented harbour is 84.4 sq mi (218.6 sq km). [5]Includes 909 unemployed and 37 in military. [6]Mostly tuna. [7]Excludes rent. [8]Circulation of daily newspapers. [9]Subscribers. [10]2005. [11]1997–98. [12]American Samoa Community College at Mapusaga.

Internet resources for further information:
- **U.S. Department of the Interior: Pacific Web http://www.pacificweb.org**
- **American Samoa Government Department of Commerce http://www.asdoc.info**

Andorra

Official name: Principat d'Andorra (Principality of Andorra).
Form of government: parliamentary coprincipality with one legislative house (General Council [28]).
Chiefs of state: President of France; Bishop of Urgell, Spain.
Head of government: Head of Government.
Capital: Andorra la Vella.
Official language: Catalan.
Official religion: none[1].
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Parishes	Capitals	area sq mi	area sq km	population 2008[2] estimate
Andorra la Vella	Andorra la Vella	11	27	24,574
Canillo	Canillo	47	121	5,422
Encamp	Encamp	29	74	14,029
Escaldes–Engordany	Escaldes-Engordany	12	32	16,475
La Massana	La Massana	23	61	9,357
Ordino	Ordino	34	89	3,685
Sant Julià de Lòria	Sant Julià de Lòria	23	60	9,595
TOTAL		179	464	83,137

Demography

Population (2008): 84,100.
Density (2008): persons per sq mi 469.8, persons per sq km 181.3.
Urban-rural (2003): urban 93%; rural 7%.
Sex distribution (2005): male 52.16%; female 47.84%.
Age breakdown (2005[2]): under 15, 14.8%; 15–29, 19.4%; 30–44, 29.3%; 45–59, 20.2%; 60–74, 10.3%; 75–84, 4.2%; 85 and over, 1.8%.
Population projection: (2010) 88,000; (2020) 99,000.
Doubling time: 98 years.
Ethnic composition (by nationality; 2005[2]): Spanish 37.4%; Andorran 35.7%; Portuguese 13.0%; French 6.6%; British 1.3%; Moroccan 0.7%; Argentinian 0.5%; other 4.8%.
Religious affiliation (2000): Roman Catholic 89.1%; other Christian 4.3%; Muslim 0.6%; Hindu 0.5%; nonreligious 5.0%; other 0.5%.
Major urban areas (2008[2]): Andorra la Vella 24,574; Escaldes–Engordany 16,475; Encamp 14,029; Sant Julià de Lòria 9,595.

Vital statistics

Birth rate per 1,000 population (2007): 10.0 (world avg. 20.3).
Death rate per 1,000 population (2007): 2.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 7.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.30.
Marriage rate per 1,000 population (2007): 3.1.
Life expectancy at birth (2006): male 80.6 years; female 86.6 years.
Major causes of death per 100,000 population (2002–06 avg.): malignant neoplasms (cancers) 108.2; diseases of the circulatory system 100.6; diseases of the respiratory system 28.5; injuries and poisoning 27.7; diseases of the digestive system 18.2.

National economy

Budget (2005). Revenue: €308,500,000 (indirect taxes 70.9%, investment income 7.1%, taxes and other income 22.0%). Expenditures: €308,500,000 (current expenditures 52.6%; development expenditures 47.2%; financial operations 0.2%).
Public debt (2004): *c.* U.S.$278,000,000.
Production. Agriculture, forestry, fishing (2006): tobacco 315 metric tons; other traditional crops include hay, potatoes, and grapes; livestock (number of live animals; 2006) 2,524 sheep[3], 1,434 cattle, 508 goats; roundwood, n.a.; fisheries production, n.a. Quarrying: small amounts of marble are quarried. Manufacturing (value of recorded exports in €'000; 2003): motor vehicles and parts 17,513; electrical machinery and apparatus 11,433; optical, photographic, and measuring apparatus 10,658; fabricated metal products 6,107; perfumery and cosmetic preparations 5,008. Energy production (consumption): electricity (kW-hr; 2005) 83,900,000 (568,000,000); coal, none (n.a.); crude petroleum, none (n.a.); petroleum products (metric tons; 1998) none (nearly 100,000); natural gas, none (n.a.).
Household income and expenditure (2003): average household size 2.8; expenditure per household €35,470 (U.S.$40,034); sources of income: n.a.; expenditure: transportation 22.1%, food, beverages, and tobacco products 19.4%, housing and energy 16.1%, hotels and restaurants 7.8%, clothing and footwear 7.6%, recreation and culture 6.9%.
Population economically active (2007): total 43,234; activity rate of total population *c.* 55% (participation rates: ages 15–64 [2003] 75.1%; female 46.6%; unemployed, n.a.[4]).

Price and earnings indexes (2000 = 100)[5]

	2000	2001	2002	2003	2004	2005
Consumer price index	100.0	102.8	106.3	109.3	113.0	116.5
Annual earnings index	100.0	105.8	111.4	116.8	123.5	130.0

Gross national income (at current market prices; 2007): U.S.$3,250,000,000 (U.S.$43,504 per capita)[6].

Structure of gross domestic product and labour force

	2007 value in U.S.$'000,000	% of total value	labour force	% of labour force
Agriculture	17.2	0.5	147	0.3
Mining, Public utilities	21.2	0.7	...	...
			159	0.4
Manufacturing	84.9	2.6	1,730	4.0
Construction	332.6	10.2	6,682	15.5
Transportation and communications	104.5	3.2	1,300	3.0
Trade, Restaurants, hotels	829.9	25.6	11,316	26.2
			5,523	12.8
Finance, real estate, Pub. admin., defense, Services	1,475.0	45.4	5,824	13.5
			4,452	10.3
			5,876	13.6
Other	380.1[7]	11.7[7]	225	0.5
TOTAL	3,245.4	100.0[8]	43,234	100.0[8]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism[9]; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances (2001–02) 12.
Land use as % of total land area (2000): in temporary and permanent crops *c.* 4%, in pasture *c.* 45%; overall forest area (2005) *c.* 36%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	–1,202	–1,258	–1,313	–1,328	–1,297	–1,304
% of total	90.0%	88.9%	87.0%	85.4%	84.4%	87.6%

Imports (2005): €1,442,000,000 (food and beverages 16.6%; electrical machinery and apparatus 13.0%; motor vehicles 11.3%; clothing and knitwear 7.8%; perfumes, cosmetics, and soaps 7.4%; mineral fuels 4.6%). *Major import sources* (2007): Spain 58.7%; France 18.8%; Germany 5.1%; Italy 3.3%; Japan 2.7%.
Exports (2005): €114,000,000 (food and beverages 28.7%; electrical machinery and apparatus 18.7%; motor vehicles 16.3%; optical equipment, photo equipment, and other professional goods 6.3%; perfumes, cosmetics, and soaps 3.0%). *Major export destinations* (2007): Spain 61.6%; France 16.2%; Germany 15.7%; Italy 2.2%.

Transport and communications

Transport. Railroads: none; however, both French and Spanish railways stop near the border. Roads (1999): total length 167 mi, 269 km (paved 74%). Vehicles (2006): passenger cars 50,952; trucks and buses 4,463.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	36	461	PCs	...	...	...
Telephones				Dailies[10]	2004	17[11]	232[11]
Cellular	2006	69[12]	864[12]	Internet users	2005	27	284
Landline	2006	36	457	Broadband	2006	15[12]	183[12]

Education and health

Educational attainment, n.a. *Literacy:* resident population is virtually 100% literate.

Education (2004–05)

	schools[13]	teachers	students	student/teacher ratio
Primary/lower secondary (age 7–15)	12	...	6,871	...
Upper secondary	6	...	720	...
Vocational	...	...	231	...
Higher	1	...	1,173[14]	...

Health (2003): physicians 244 (1 per 296 persons); hospital beds 233 (1 per 310 persons); infant mortality rate per 1,000 live births (2006) 4.0; undernourished population, n.a.

Military

Total active duty personnel: none. France and Spain are responsible for Andorra's external security; the police force is assisted in alternate years by either French gendarmerie or Barcelona police. Andorra has no defense budget.

[1]Roman Catholicism enjoys special recognition in accordance with Andorran tradition. [2]January 1. [3]Large herds of sheep and goats from Spain and France feed in Andorra in the summer. [4]The restricted size of the indigenous labour force necessitates immigration to serve the tourist trade, especially seasonal cross-border workers from Portugal and Spain. [5]All indexes are end of year. [6]Tourism (including winter-season sports, fairs, festivals, and income earned from low-duty imported manufactured items) and the banking system are the primary sources of gross national income. [7]Includes taxes and customs duties. [8]Detail does not add to total given because of rounding. [9]In 2005, Andorra had 11,049,490 visitors, of which daily excursionists from Spain 4,558,686, daily excursionists from France 3,867,674. [10]Data apply to the readership of the *Diari d'Andorra*, one of two daily newspapers. [11]Circulation. [12]Subscribers. [13]1999–2000. [14]Includes students in Andorra (342), in Spain (644), in France (181), and elsewhere (6).

Internet resources for further information:

- **Andorra Statistical Yearbook**
  http://www.estadistica.ad/cdanuari/ANG/presentacio.htm
- **Cambra de Comerç Indústria i Serveis d'Andorra**
  http://www.ccis.ad/ing/index.html

Angola

Official name: República de Angola (Republic of Angola).
Form of government: unitary multiparty republic with one legislative house (National Assembly [220[1]]).
Head of state and government: President assisted by Prime Minister.
Capital: Luanda.
Official language: Portuguese.
Official religion: none.
Monetary unit: kwanza (AOA); valuation (Sept. 8, 2008) 1 U.S.$ = AOA 74.81; 1 £ = AOA 132.17.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2004 estimate
Bengo	Caxito	12,112	31,371	
Benguela	Benguela	12,273	31,788	
Bié	Kuito	27,148	70,314	
Cabinda	Cabinda	2,807	7,270	
Cuando Cubango	Menongue	76,853	199,049	
Cuanza Norte	N'dalatando	9,340	24,190	
Cuanza Sul	Sumbe	21,491	55,660	
Cunene	Ondjiva	34,495	89,342	
Huambo	Huambo	13,233	34,274	
Huíla	Lubango	28,959	75,002	
Luanda	Luanda	934	2,418	
Lunda Norte	Lucapa	39,685	102,783	
Lunda Sul	Saurimo	17,625	45,649	
Malanje	Malanje	37,684	97,602	
Moxico	Luena	86,110	223,023	
Namibe	Namibe	22,447	58,137	
Uíge	Uíge	22,664	58,698	
Zaire	M'banza Congo	15,494	40,130	
TOTAL		481,354	1,246,700	11,521,000

Demography

Population (2008): 12,531,000.
Density (2008): persons per sq mi 26.0, persons per sq km 10.1.
Urban-rural (2006): urban 55.8%; rural 44.2%.
Sex distribution (2005): male 50.48%; female 49.52%.
Age breakdown (2005): under 15, 43.8%; 15–29, 26.5%; 30–44, 16.7%; 45–59, 8.5%; 60–74, 3.9%; 75 and over, 0.6%.
Population projection: (2010) 13,068,000; (2020) 15,898,000.
Doubling time: 35 years.
Ethnic composition (2000): Ovimbundu 25.2%; Kimbundu 23.1%; Kongo 12.6%; Lwena (Luvale) 8.2%; Chokwe 5.0%; Kwanyama 4.1%; Nyaneka 3.9%; Luchazi 2.3%; Ambo (Ovambo) 2.0%; Mbwela 1.7%; Nyemba 1.7%; mixed race (Eurafrican) 1.0%; white 0.9%; other 8.3%.
Religious affiliation (2001): Christian 94.1%, of which Roman Catholic 62.1%, Protestant 15.0%; traditional beliefs 5.0%; other 0.9%.
Major cities (2004): Luanda (urban agglomeration; 2005) 2,766,000; Huambo 173,600; Lobito 137,400; Benguela 134,500; Namibe 132,900.

Vital statistics

Birth rate per 1,000 population (2006): 45.0 (world avg. 20.3).
Death rate per 1,000 population (2006): 25.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 19.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 6.35.
Life expectancy at birth (2006): male 36.5 years; female 38.2 years.
Major causes of death (percentage of total deaths; 2002): diarrheal diseases 16%; respiratory infections 15%; HIV/AIDS 7%; perinatal conditions 6%; malaria 6%.
Adult population (ages 15–49) *living with HIV* (2007): 2.1% (world avg. 0.8%).

National economy

Budget (2006). Revenue: U.S.$20,966,000,000 (petroleum revenue 80.1%, non-petroleum revenue 19.9%). Expenditure: U.S.$14,269,000,000 (current expenditure 71.8%; development expenditure 28.2%).
Household income and expenditure (2002). Average household size 5.0; annual income per household: n.a.; sources of income: n.a.; expenditure[2]: food and nonalcoholic beverages 46.1%, housing and energy 12.3%, household furnishings 6.5%, transportation 6.5%.
Production (metric tons except as noted). Agriculture, forestry, fishing (2006): cassava 8,810,000, sweet potatoes 685,000, potatoes 593,000, corn (maize) 566,000, sugarcane 360,000, bananas 305,851, oil palm fruit 291,233, millet 137,864, dry beans 100,000, peanuts (groundnuts) 57,000, pineapples 40,741, coffee 1,860; livestock (number of live animals) 4,150,000 cattle, 2,050,000 goats, 780,000 pigs; roundwood 4,670,000 cu m, of which fuelwood 77%; fisheries production (2005) 240,000 (from aquaculture, none). Mining and quarrying (2006): diamonds 9,175,000 carats (90% gem grade). Manufacturing (2003): fuel oil 639,319; cement 500,620; diesel fuel 407,542; jet fuel 324,841; wheat flour 38,168; frozen fish 36,173; beer 1,920,000 hectolitres. Energy production (consumption): electricity (kW-hr; 2005) 2,653,000,000 (2,653,000,000); coal, none (none); crude petroleum (barrels; 2007) 627,000,000 ([2005] 13,500,000); petroleum products (metric tons; 2005) 1,595,000 (1,834,000); natural gas (cu m; 2005) 730,000,000 (730,000,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 88; remittances, n.a.; foreign direct investment (FDI; 2004–06 avg.) –331; official development assistance (2006) 171. Disbursements for (U.S.$'000,000): tourism (2005) 74; remittances (2006) 413; FDI (2004–06 avg.) 138.
Gross national income (GNI; 2007): U.S.$43,635,000,000 (U.S.$2,560 per capita); purchasing power parity GNI (U.S.$4,400 per capita).

Structure of gross domestic product and labour force

	2006 in value AOA '000,000	2006 % of total value	2003 labour force	2003 % of labour force
Agriculture	322,900	8.9		
Crude petroleum[3, 4]	2,120,700	58.4	4,406,000	71.0
Diamond mining	120,600	3.3		
Manufacturing	154,400	4.3		
Construction	131,700	3.6		
Public utilities	1,200	0.1		
Trade, restaurants	566,100	15.6	1,796,000	29.0
Finance				
Transp. and commun.	210,400	5.8		
Pub. admin., defense				
Services				
Other[5]	1,600	0.1		
TOTAL	3,629,700[6]	100.0	6,202,000	100.0

Public debt (external, outstanding; 2006): U.S.$7,398,000,000.
Population economically active (1999): total 5,729,000; activity rate of total population 57.7% (participation rates: over age 10 [1991] 60.1%; female 38.4%; unemployed [2002] 70%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	269.7	527.6	1,045.8	1,501.2	1,872.8	2,091.5	2,347.7

Land use as % of total land area (2003): in temporary crops 2.6%, in permanent crops 0.2%, in pasture 43.3%; overall forest area (2005) 47.4%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+3,355	+4,568	+4,028	+7,643	+15,756	+22,277
% of total	34.6%	37.8%	26.9%	39.6%	48.5%	53.7%

Imports (2006): U.S.$10,776,000,000 (consumer goods 60.3%, capital goods 28.8%, intermediate goods 10.9%). *Major import sources* (2005): South Korea 20.5%; Portugal 13.4%; U.S. 12.5%; South Africa 7.4%; Brazil 7.0%.
Exports (2006): U.S.$31,817,000,000 (crude petroleum 94.2%, diamonds 3.6%, refined petroleum 0.9%). *Major export destinations* (2005): U.S. 39.8%; China 29.6%; France 7.8%; Chile 5.4%; Taiwan 4.4%.

Transport and communications

Transport. Railroads (2004): route length of lines in operation *c.* 850 km; (2001) passenger-km 3,722,300,000; metric ton-km cargo, n.a. Roads (2001): total length 31,956 mi, 51,429 km (paved 10%). Vehicles (2001): passenger cars 117,200; trucks and buses 118,300. Air transport: passenger-km (2001)[7] 732,968,000; metric ton-km cargo (2004) 64,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	582	52	PCs	2004	27	2.3
Telephones				Dailies	2005	51[8]	4.3[8]
Cellular	2007	3,307[9]	194[9]	Internet users	2007	100	5.9
Landline	2005	94	7.9	Broadband	2007	.	.

Education and health

Educational attainment: n.a. *Literacy* (2006): percentage of population age 15 and over literate 67.4%; males literate 82.9%; females literate 54.2%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–9)	.	.	1,057,188[10]	.
Secondary (age 10–16)	.	12,448[10]	317,155	.
Voc., teacher tr		3,999[10]	76,540	.
Higher		1,285	12,566	9.8

Health: physicians (2004) 1,165 (1 per 9,890 persons); hospital beds (2001) 13,810 (1 per 769 persons); infant mortality rate per 1,000 live births (2006) 186.6; undernourished population (2002–04) 4,800,000 (35% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

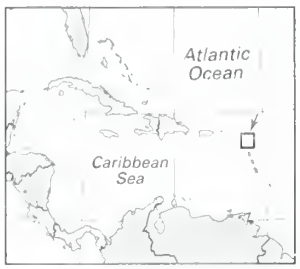
Military

Total active duty personnel (November 2007): 107,000 (army 93.5%, navy 0.9%, air force 5.6%). *Military expenditure as percentage of GDP* (2005): 5.7%; per capita expenditure U.S.$140.

[1]Excludes 3 unfilled seats reserved for Angolans living abroad. [2]Weights of consumer price index components: Luanda only. [3]Includes liquefied petroleum gas. [4]In 2008 about half of crude petroleum production comes from offshore Cabinda, an exclave separated from Angola proper by a sliver of the Dem. Rep. of the Congo. Onshore production in Cabinda is stymied by the possibility of secessionist unrest. [5]Import duties. [6]Detail does not add to total given because of rounding. [7]TAAG airline. [8]Circulation of daily newspapers. [9]Subscribers. [10]1999–2000.

Internet resources for further information:
- **Bank of Angola http://www.bna.ao**

Antigua and Barbuda



Official name: Antigua and Barbuda.
Form of government: constitutional monarchy with two legislative houses (Senate [17]; House of Representatives [17[1]]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Saint John's.
Official language: English.
Official religion: none.
Monetary unit: Eastern Caribbean dollar (EC$); valuation (Sept. 8, 2008) 1 U.S.$ = EC$2.70; 1 £ = EC$4.77.

Area and population

	area		population
Parishes (of Antigua)[2]	sq mi	sq km	2001 census
Saint George	9.3	24.1	6,673
Saint John's (city)	2.9	7.5	24,451
Saint John's (rural)	25.6	66.3	20,895
Saint Mary	22.0	57.0	6,793
Saint Paul	18.5	47.9	7,848
Saint Peter	12.7	32.9	5,439
Saint Phillip	17.0	44.0	3,462
Other islands[2]			
Barbuda	62.0	160.6	1,325
Redonda	0.5	1.3	0
TOTAL	170.5	441.6	76,886[3]

Demography

Population (2008): 87,500.
Density (2008): persons per sq mi 513.2, persons per sq km 198.1.
Urban-rural (2003): urban 37.7%; rural 62.3%.
Sex distribution (2001): male 46.96%; female 53.04%.
Age breakdown (2001): under 15, 28.3%; 15–29, 24.4%; 30–44, 25.0%; 45–59, 13.0%; 60–74, 6.2%; 75–84, 2.3%; 85 and over, 0.8%.
Population projection: (2010) 91,000; (2020) 100,000.
Ethnic composition (2000): black 82.4%; U.S. white 12.0%; mulatto 3.5%; British 1.3%; other 0.8%.
Religious affiliation (2001): Christian *c.* 74%, of which Anglican *c.* 23%, independent Christian *c.* 23%, other Protestant (including Methodist, Moravian, and Seventh-day Adventist) *c.* 28%; Rastafarian *c.* 2%; atheist/nonreligious *c.* 5%; other/unknown *c.* 19%.
Major city (2004): Saint John's 23,600[4].

Vital statistics

Birth rate per 1,000 population (2006): 16.9 (world avg. 20.3); (2001) within marriage 25.7%; outside of marriage 74.3%.
Death rate per 1,000 population (2006): 5.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 11.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.24.
Marriage/divorce rates per 1,000 population (2001): 23.6/1.2.
Life expectancy at birth (2006): male 69.8 years; female 74.7 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 317, of which cerebrovascular disease 127, ischemic heart disease 71; malignant neoplasms (cancers) 129; communicable diseases 106; diabetes mellitus 54; accidents and injuries 33.

National economy

Budget (2007). Revenue: EC$718,300,000 (tax revenue 91.4%, of which taxes on international transactions 38.3%, taxes on income and profits 14.0%; current nontax revenue 5.1%; grants 2.8%; development revenue 0.7%). Expenditures: EC$923,800,000 (current expenditures 78.3%, of which transfers and subsidies 21.7%; development expenditures 21.7%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2005): tropical fruit (including papayas, guavas, soursops, and oranges) 7,900, mangoes 1,430, melons 840, eggplants 340, lemons and limes 285, carrots 240, "Antiguan Black" pineapples 210; livestock (number of live animals) 19,000 sheep, 14,300 cattle; roundwood, n.a.; fisheries production 2,999 (from aquaculture, none). Mining and quarrying: crushed stone for local use. Manufacturing: manufactures include cement, handicrafts, and furniture, as well as electronic components for export. Energy production (consumption): electricity (kW-hr; 2005) 109,000,000 (109,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (134,000); natural gas, none (none).
Population economically active (2001): total 39,564; activity rate of total population 51.5% (participation rates: ages 15–64, 77.0%; female *c.* 50%; unemployed 8.4%).

Price and earnings indexes (2000 = 100)

	2002	2003	2004	2005	2006	2007
Consumer price index	103.9	105.9	108.0	110.3	113.2	116.7
Annual earnings index	...	..		...	...	...

Household income and expenditure (2001). Average household size 3.1; income per household: n.a.; sources of income: n.a.; expenditure[5]: housing 21.8%, food 21.4%, transportation and communications 15.4%, household furnishings 12.6%, clothing and footwear 11.1%.

Gross national income (GNI; 2007): U.S.$977,000,000 (U.S.$11,520 per capita); purchasing power parity GNI (U.S.$16,210 per capita [estimate]).

Structure of gross domestic product and labour force

	2006		2001	
	in value EC$'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	75.3	2.8	946	2.4
Quarrying	49.4	1.8	106	0.3
Manufacturing	42.4	1.6	1,541	3.9
Construction	466.4	17.2	3,122	7.9
Public utilities	62.0	2.3	513	1.3
Transp. and commun.	450.4	16.6	2,808	7.1
Trade, restaurants, and hotels	424.7	15.6	9,927	25.1
Finance, real estate	357.3	13.2	2,509	6.3
Pub. admin., defense	359.8	13.2	4,376	11.1
Services	142.9	5.3	7,417	18.7
Other	286.0[6]	10.5[6]	6,299[7]	15.9[7]
TOTAL	2,716.7[8]	100.0[8]	39,564	100.0

Public debt (external, outstanding; 2004): U.S.$519,900,000.
Land use as % of total land area (2003): in temporary crops *c.* 18%, in permanent crops *c.* 5%, in pasture *c.* 9%; overall forest area (2005) *c.* 21%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 327; remittances (2006) 11; foreign direct investment (2004–06 avg.) 145; official development assistance (2006) 3.3. Disbursements for (U.S.$'000,000): tourism (2005) 40; remittances, n.a.

Foreign trade[9]

Balance of trade (current prices)

	2001	2002	2003	2004	2005
U.S.$'000,000	–273	–269	–308	–317	–308
% of total	75.3%	80.0%	77.5%	73.5%	65.1%

Imports (2005): U.S.$525,000,000 (refined petroleum 33.8%; food and live animals 13.3%; machinery and apparatus 11.5%; transport equipment 9.5%). *Major import sources* (2005): U.S. 48.9%; Trinidad and Tobago 10.9%; Netherlands Antilles 10.2%; U.K. 6.8%; Japan 2.8%.
Exports (2005): U.S.$121,000,000 (refined petroleum 69.9%; yachts, sailboats, rowboats, and canoes 10.4%; telecommunications equipment 5.1%). *Major export destinations* (2005): Netherlands Antilles 23.4%; U.K. 16.7%; Saint Kitts and Nevis 10.3%; U.S. 7.7%; Anguilla 7.0%; British Virgin Islands 6.7%.

Transport and communications

Transport. Railroad[10]. Roads (2002): total length 725 mi, 1,165 km (paved 33%). Vehicles: passenger cars (1998) 24,000; trucks and buses (1995) 1,342. Air transport (2001): passenger-km 304,000,000; metric ton-km cargo 200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	34	449	PCs	...	...	...
Telephones				Dailies	2005	...	...
Cellular	2004	54[11]	701[11]	Internet users	2007	60	723
Landline	2004	38	494	Broadband	2005	...	...

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 0.6%; incomplete primary education 2.6%; complete primary 27.9%; secondary 43.6%; higher (not university) 14.4%; university 10.9%. *Literacy* (2003): percentage of total population age 15 and over literate 85.8%.

Education (2000–01)

	schools	teachers	students	student/ teacher ratio
Primary (age 5–11)	55	525	10,427	19.9
Secondary (age 12–16)	14	361	5,794	16.0
Higher[12]	1	68	841	12.4

Health: physicians (1999) 76 (1 per 867 persons); hospital beds (1996) 255 (1 per 269 persons); infant mortality rate per 1,000 live births (2006) 18.9; undernourished population, n.a.

Military

Total active duty personnel (November 2007): a 170-member defense force (army 73.5%, navy 26.5%) is part of the Eastern Caribbean regional security system. *Military expenditure as percentage of GDP* (2004): 0.6%; per capita expenditure U.S.$57.

[1]Directly elected seats only; attorney general and speaker may serve ex officio if they are not elected to House of Representatives. [2]Community councils on Antigua and the local government council on Barbuda are the organs of local government. [3]Based on table of detailed de facto census results released in July 2004. [4]Large settlements include (2001): All Saints 3,412; Liberta 2,239; Potters Village 2,067; Codrington 980. [5]Weights of consumer price index components. [6]Net indirect taxes less imputed bank service charges. [7]Includes 3,329 unemployed and 2,970 inadequately defined activities. [8]Detail does not add to total given because of rounding. [9]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [10]Mostly nonoperative privately owned tracks. [11]Subscribers. [12]Antigua State College; 2002–03.

Internet resources for further information:
- **Eastern Caribbean Central Bank http://www.eccb-centralbank.org**
- **Reports and Statistics http://www.antigua.gov.ag/gov_v2/government/statsandreports/index.html**

Argentina

Official name: República Argentina (Argentine Republic).
Form of government: federal republic with two legislative houses (Senate [72]; Chamber of Deputies [257]).
Head of state and government: President.
Capital: Buenos Aires.
Official language: Spanish.
Official religion: Roman Catholicism.
Monetary unit: peso (ARS); valuation (Sept. 8, 2008) 1 U.S.$ = ARS 3.04; 1 £ = ARS 5.37.

Area and population

Provinces	area sq km	population 2001 census	Provinces	area sq km	population 2001 census
Buenos Aires	307,571	13,827,203	Neuquén	94,078	474,155
Catamarca	102,602	334,568	Río Negro	203,013	552,822
Chaco	99,633	984,446	Salta	155,488	1,079,051
Chubut	224,686	413,237	San Juan	89,651	620,023
Córdoba	165,321	3,066,801	San Luis	76,748	367,933
Corrientes	88,199	930,991	Santa Cruz	243,943	196,958
Entre Ríos	78,781	1,158,147	Santa Fe	133,007	3,000,701
Formosa	72,066	486,559	Santiago del Estero	136,351	804,457
Jujuy	53,219	611,888	Tierra del Fuego[1]	21,571	101,079
La Pampa	143,440	299,294	Tucumán	22,524	1,338,523
La Rioja	89,680	289,983	**Autonomous city**		
Mendoza	148,827	1,579,651	Buenos Aires	203	2,776,138
Misiones	29,801	965,522	TOTAL	2,780,403	36,260,130

Demography

Population (2008): 39,737,000.
Density (2008): persons per sq mi 37.0, persons per sq km 14.3.
Urban-rural (2003): urban 90.1%; rural 9.9%.
Sex distribution (2007): male 49.23%; female 50.77%.
Age breakdown (2005): under 15, 26.4%; 15–29, 25.5%; 30–44, 19.1%; 45–59, 15.0%; 60–74, 9.6%; 75–84, 3.5%; 85 and over, 0.9%.
Population projection: (2010) 40,519,000; (2020) 44,163,000.
Doubling time: 65 years.
Ethnic composition (2000): European extraction 86.4%; mestizo 6.5%; Amerindian 3.4%; Arab 3.3%; other 0.4%.
Religious affiliation (2000): Roman Catholic 79.8%[2]; Protestant 5.4%; Muslim 1.9%; Jewish 1.3%; other 11.6%.
Major cities (2001): Buenos Aires 2,776,138 (11,460,575[3]); Córdoba 1,267,521; San Justo 1,253,921; Rosario 908,163; La Plata 563,943; Mar del Plata 541,733.

Vital statistics

Birth rate per 1,000 population (2007): 18.3 (world avg. 20.3).
Death rate per 1,000 population (2007): 7.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 10.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 2.39.
Marriage/divorce rates per 1,000 population (2003): 3.4/n.a.
Life expectancy at birth (2007): male 72.9 years; female 79.6 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 239.8; malignant neoplasms (cancers) 144.8; accidents and violence 47.7; infectious and parasitic diseases 35.2; diabetes mellitus 24.4.
Adult population (ages 15–49) *living with HIV* (2007): 0.5% (world avg. 0.8%).

National economy

Budget (2005). Revenue: ARS 82,106,000,000 (tax revenue 77.4%; social security contributions 16.2%; nontax revenue 2.3%; other 4.1%). Expenditure: ARS 77,531,000,000 (current expenditure 88.2%, of which interest on debt 13.0%; capital expenditure 11.8%).
Public debt (external, outstanding; 2006): U.S.$64,711,000,000.
Gross national income (GNI; 2007): U.S.$238,853,000,000 (U.S.$6,050 per capita); purchasing power parity GNI (U.S.$12,990 per capita).

Structure of gross domestic product and labour force

	2005		2001	
	in value ARS '000,000	% of total value	labour force	% of labour force
Agriculture	46,331	8.7	910,996	6.0
Mining	28,820	5.4	37,979	0.2
Manufacturing	114,091	21.4	1,245,544	8.2
Construction	24,059	4.5	638,566	4.2
Public utilities	8,520	1.6	90,165	0.6
Transp. and commun.	44,428	8.4	717,573	4.7
Trade, restaurants	70,558	13.3	2,213,065	14.5
Finance, real estate	75,001	14.1	898,264	5.9
Pub. admin., defense	26,621	5.0	969,280	6.3
Services	54,397	10.2	2,762,447	18.1
Other	39,114[4]	7.4[4]	4,780,904[5]	31.3[5]
TOTAL	531,939[6]	100.0	15,264,783	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): soybeans 40,467,100, alfalfa 38,783,332, sugarcane 18,799,056, corn (maize) 14,445,538, wheat 14,000,000, sunflower seeds 3,797,836, grapes 2,880,927, potatoes 2,432,330, sorghum 2,327,865, lemons and limes 1,393,380, apples 1,271,536, maté 265,181, tobacco leaves 163,528; livestock (number of live animals; 2006) 50,768,000 cattle, 12,450,000 sheep, 3,655,000 horses; roundwood (2005) 14,917,000 cu m, of which industrial roundwood 63%, fuelwood 37%; fisheries production (2005) 933,902 (from aquaculture, negligible). Mining and quarrying (2006): copper (metal content) 180,144; silver 248,227 kg; gold 44,131 kg. Manufacturing (value added in U.S.$'000,000; 2002): food products 10,152, of which vegetable oils and fats 3,864; base metals 4,031; industrial and agricultural chemicals 2,770; refined petroleum products 2,514; beverages 1,977; transport equipment 1,958. Energy production (consumption): electricity (kW-hr; 2007) 104,448,000,000 ([2005] 110,930,000,000); coal (metric tons; 2005) 25,000 (1,380,000); crude petroleum (barrels; 2007) 238,200,000 ([2005] 188,100,000); petroleum products (metric tons; 2005) 25,370,000 (20,303,000); natural gas (cu m; 2007) 59,484,000,000 ([2005] 42,992,000,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 3,308; remittances (2006) 542; foreign direct investment (FDI; 2004–06 avg.) 4,800; official development assistance (2006) 114. Disbursements for (U.S.$'000,000): tourism (2006) 3,131; remittances (2006) 367; FDI (2004–06 avg.) 1,200.
Population economically active (2006)[7]: total 11,089,700; activity rate of total population 46.2% (participation rates: ages 15–64 and over 68.5%; female 43.4%; unemployed 9.5%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	98.9	124.5	141.3	147.5	161.7	179.4	195.2

Household size and expenditure. Average household size (2001) 3.6; average annual income per household (1996–97): ARS 12,972 (U.S.$12,978); sources of income: n.a.; expenditure (1996–97): food products 26.8%, transportation and communications 15.0%, housing and energy 13.4%, health 10.2%.
Land use as % of total land area (2000): in temporary crops 12.2%, in permanent crops 0.5%, in pasture 51.9%; overall forest area 12.7%.

Foreign trade[8]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007[9]
U.S.$'000,000	+17,178	+16,448	+13,265	+13,051	+13,977	+11,068
% of total	50.3%	38.5%	23.7%	19.3%	17.7%	12.5%

Imports (2006): U.S.$34,160,000,000 (machinery and apparatus 31.1%, chemicals and chemical products 18.8%, road vehicles 15.1%, mineral fuels 4.7%). *Major import sources:* Brazil 34.4%; U.S. 12.6%; China 9.1%; Germany 4.5%; Mexico 3.3%.
Exports (2006): U.S.$46,423,000,000 (soybeans [all forms] 19.2%, mineral fuels 14.6%, road vehicles 8.6%, chemicals and chemical products 8.1%, cereals 7.0%, copper 4.0%, fruits and vegetables 3.9%). *Major export destinations:* Brazil 17.3%; Chile 9.4%; U.S. 8.7%; China 7.5%; Spain 4.1%.

Transport and communications

Transport. Railroads: (2003) route length 35,753 km; (2004) passenger-km 7,526,000,000; (2001) metric ton-km cargo 11,603,000,000. Roads (2003): total length 144,779 mi, 233,000 km (paved 31%). Vehicles: passenger cars (2000) 5,386,700; commercial vehicles and buses (1998) 1,496,567. Air transport (2005): passenger-km 14,916,000,000; metric ton-km cargo 132,444,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	12,500	323	PCs	2005	3,500	90
Telephones				Dailies	2000	1,471[10]	40[10]
Cellular	2007	40,402[11]	1,022[11]	Internet users	2007	9,309	236
Landline	2007	9,500	240	Broadband	2007	2,600[11]	66[11]

Education and health

Educational attainment (2001). Percentage of population age 15 and over having: no formal schooling 3.7%; incomplete primary education 14.2%; complete primary 28.0%; secondary 37.1%; some higher 8.3%; complete higher 8.7%. *Literacy* (2001): percentage of total population age 10 and over literate 97.4%; males literate 97.4%; females literate 97.4%.

Education (2000–01)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–12)	22,283	306,210	4,668,006	15.2
Secondary (age 13–17)	21,114	182,863	3,419,901	18.7
Higher[12]	36	117,596	1,196,581	10.2

Health: physicians (2004) 122,706 (1 per 312 persons); hospital beds (2000) 150,813 (1 per 244 persons); infant mortality rate (2007) 12.1; undernourished population (2002–04) 1,200,000 (3% of total population based on the consumption of a minimum daily requirement of 1,940 calories).

Military

Total active duty personnel (November 2007): 76,000 (army 54.5%, navy 26.3%, air force 19.2%). *Military expenditure as percentage of GDP* (2005): 1.0%; per capita expenditure U.S.$50.

[1]Area of Tierra del Fuego excludes claims to British-held islands in the South Atlantic Ocean. [2]Less than 20% practicing. [3]Metropolitan area per official definition of Greater Buenos Aires. [4]Import duties and VAT less imputed bank service charges. [5]Includes 427,307 (2.8%) not defined and 4,351,596 (28.5%) unemployed. [6]Detail does not add to total given because of rounding. [7]Based on a survey of 31 urban agglomerations. [8]Import figures are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [9]Excludes December. [10]Circulation of daily newspapers. [11]Subscribers. [12]State universities only; 2001–02.

Internet resource for further information:
• **National Institute of Statistics and Censuses http://www.indec.mecon.ar**

Armenia

Official name: Hayastani Hanrapetut'yun (Republic of Armenia).
Form of government: unitary multiparty republic with a single legislative body (National Assembly [131]).
Head of state: President.
Head of government: Prime Minister.
Capital: Yerevan.
Official language: Armenian.
Official religion: none[1].
Monetary unit: dram (AMD); valuation (Sept. 8, 2008) 1 U.S.$ = AMD 300.25; 1 £ = AMD 530.45.

Area and population

Districts	Centres	area sq mi	area sq km	population 2007[2] estimate
Aragatsotn	Ashtarak	1,063	2,753	140,000
Ararat	Artashat	809	2,096	275,100
Armavir	Armavir	479	1,242	280,200
Gegharkunik	Gavar	2,065[3]	5,348[3]	239,600
Kotayk	Hrazdan	807	2,089	276,200
Lori	Vanadzor	1,463	3,789	282,700
Shirak	Gyumri	1,035	2,681	281,300
Syunik	Kapan	1,740	4,506	152,900
Tavush	Ijevan	1,044	2,704	134,200
Vayots-Dzor	Yeghegnadzor	891	2,308	55,800
City				
Yerevan	—	88	227	1,104,900
TOTAL		11,484[4]	29,743[4]	3,222,900

Demography

Population (2008)[5]: 2,996,000.
Density (2008): persons per sq mi 260.9, persons per sq km 100.7.
Urban-rural (2007[2]): urban 64.1%; rural 35.9%.
Sex distribution (2007[2]): male 48.32%; female 51.68%.
Age breakdown (2005): under 15, 20.9%; 15–29, 27.2%; 30–44, 19.5%; 45–59, 17.9%; 60–74, 10.2%; 75–84, 3.8%; 85 and over, 0.5%.
Population projection[5]: (2010) 2,987,000; (2020) 2,955,000.
Ethnic composition (2001): Armenian 97.9%; Kurdish 1.3%; Russian 0.5%; other 0.3%.
Religious affiliation (2005): Armenian Apostolic (Orthodox) 72.9%; Roman Catholic 4.0%; Sunnī Muslim 2.4%; other Christian 1.3%; Yazidi 1.3%; other/nonreligious 18.1%.
Major cities (2006[2]): Yerevan 1,103,800; Gyumri 148,300; Vanadzor 105,500; Vagharshapat 56,700; Hrazdan 52,800.

Vital statistics

Birth rate per 1,000 population (2006): 11.7 (world avg. 20.3); (2005) within marriage 88.5%; outside of marriage 11.5%.
Death rate per 1,000 population (2006): 8.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 3.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.33.
Marriage/divorce rates per 1,000 population (2006): 5.2/0.9.
Life expectancy at birth (2006): male 70.0 years; female 76.4 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 453.1; malignant neoplasms (cancers) 145.0; diabetes mellitus 48.8; diseases of the respiratory system 46.1; accidents and violence 34.8.

National economy

Budget (2005). Revenue: AMD 374,746,900,000 (tax revenue 81.2%, of which VAT 39.2%, tax on profits 12.4%, excise tax 10.3%, income tax 7.1%; non-tax revenue 18.8%). Expenditures: AMD 417,505,900,000 (defense 15.4%; education and science 14.6%; public administration 10.6%; social security 10.6%; police 8.4%; health 7.4%).
Public debt (external, outstanding; 2006): U.S.$1,037,000,000.
Household income and expenditure (2005). Average household size 3.8; money income per household AMD 1,720,195 (U.S.$3,758); sources of money income: rent, self-employment, and remittances 38.9%, wages and salaries 34.5%, transfers 7.1%, other 19.5%; expenditure: food and beverages 56.6%, services 24.0%, non-food goods 14.3%, tobacco 5.1%.
Land use as % of total land area (2003): in temporary crops 17.6%, in permanent crops 2.1%, in pasture 29.6%; overall forest area (2005) 10.0%.
Gross national income (GNI; 2007): U.S.$7,925,000,000 (U.S.$2,640 per capita); purchasing power parity GNI (U.S.$5,900 per capita).

Structure of net material product and labour force

	2004 in value AMD '000,000	2004 % of total value	2006 labour force	2006 % of labour force
Agriculture, forestry	431,110	22.6	504,500	42.7
Mining	370,200	19.4	7,600	0.6
Manufacturing			110,500	9.4
Public utilities	72,593	3.8	22,800	1.9
Construction	297,168	15.6	29,700	2.5
Transp. and commun.	113,785	6.0	48,600	4.1
Trade, hotels	213,733	11.2	113,600	9.6
Finance, real estate	87,300	4.6	29,900	2.5
Pub. admin., defense	53,741	2.8	34,900	3.0
Services	132,600	6.9	190,400	16.1
Other	135,716[6]	7.1[6]	88,900[7]	7.5[7]
TOTAL	1,907,946	100.0	1,181,300[8]	100.0[8]

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 540,000, tomatoes 250,000, grapes 200,000, wheat 150,000, watermelons 130,000, barley 96,000, apples 75,000, onions 55,000; livestock (number of live animals) 620,200 cattle, 587,200 sheep, 3,870,000 chickens; roundwood 41,000 cu m, of which fuelwood 10%; fisheries production (2005) 1,033 (from aquaculture 79%). Mining and quarrying (2005): copper concentrate (metal content) 16,256; molybdenum (metal content) 3,030; gold (metal content) 1,400 kg. Manufacturing (value of production in AMD '000,000; 2005): base and fabricated metals 259,305; food products and beverages 202,057; construction materials 23,648; wood and paper products 4,688; 320,000 carats of cut diamonds were processed in 2004. Energy production (consumption): electricity (kW-hr; 2007) 5,896,000,000 ([2005] 5,537,000,000); coal (metric tons; 2005), none (negligible); crude petroleum, none (none); petroleum products (metric tons; 2005) none (320,000); natural gas (cu m; 2005) none (1,596,000,000).
Population economically active: total (2006) 1,181,300; activity rate of total population (2001) 49.5% (participation rates: ages 15–64 [2001] 72.1%; female 45.7%; officially unemployed 7.5%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.1	104.2	109.2	116.8	117.5	120.9	126.7
Monthly earnings index	110.7	124.2	157.4	194.7	241.2	296.4	358.3

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 271; remittances (2006) 1,175; foreign direct investment (FDI; 2004–06 avg.) 273; official development assistance (2006) 213. Disbursements for (U.S.$'000,000): tourism (2006) 286; remittances (2006) 148; FDI (2004–06 avg.) 4.

Foreign trade[9]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−536	−482	−593	−627	−755	−1,190
% of total	43.9%	32.3%	30.2%	30.2%	28.7%	37.2%

Imports (2006): U.S.$2,194,000,000 (machinery and apparatus 14.0%, food products 10.6%, diamonds 10.2%, chemicals and chemical products 8.6%, refined petroleum 7.9%, natural gas 7.2%, road vehicles 4.8%, gold 3.9%). *Major import sources:* Russia 13.7%; Turkmenistan 7.7%; Ukraine 7.5%; Belgium 5.5%; Iran 5.1%.
Exports (2006): U.S.$1,004,000,000 (cut diamonds 23.6%, ferroalloys 16.0%, copper 14.4%, grape brandy 7.2%, gold 3.7%, precious metals jewelry [excl. watches] 3.5%). *Major export destinations:* Germany 14.7%; The Netherlands 12.6%; Russia 11.6%; Belgium 10.8%; Israel 10.6%.

Transport and communications

Transport (2005). Railroads: length 732 km; passenger-km 26,600,000; metric ton-km cargo 654,100,000. Roads: length 7,515 km (paved 69%). Vehicles: n.a. Air transport: passenger-km 959,500,000; metric ton-km cargo 10,700,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	687	229	PCs	2004	200	67
Telephones				Dailies	2004	27[10]	9.0[10]
Cellular	2006	318[11]	105[11]	Internet users	2006	173	57
Landline	2005	537	180	Broadband	2006	2.0[11]	0.3[11]

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 0.7%; primary education 13.0%; completed secondary and some postsecondary 66.0%; higher 20.3%. *Literacy* (2006): total population age 15 and over literate 99.4%; male 99.7%; female 99.2%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13) and Secondary (age 14–17)[12]	1,467	42,700	536,900	12.6
Voc., teacher tr.	83	2,984	27,800	9.3
Higher	89	8,574	97,800	11.4

Health (2005): physicians 12,307 (1 per 242 persons); hospital beds 14,353 (1 per 208 persons); infant mortality rate per 1,000 live births (2006) 13.9; undernourished population (2002–04) 700,000 (24% of total population based on the consumption of a minimum daily requirement of 1,980 calories).

Military

Total active duty personnel (November 2007): 42,080 (army 94.7%, air force 5.3%); Russian troops (November 2007) 3,170. *Military expenditure as percentage of GDP* (2005): 2.7%; per capita expenditure U.S.$46.

[1]The Armenian Apostolic Church (Armenian Orthodox Church) has special status per 1991 religious law. [2]January 1 de jure estimate. [3]Includes the 485 sq mi (1,256 sq km) area of Lake Sevan. [4]In addition, about 16% of neighbouring Azerbaijan (including the 4,400 sq km geographic region of Nagorno-Karabakh [Armenian: Artsakh]) has been occupied by Armenian forces since 1993. [5]De facto population. [6]Taxes less subsidies and less imputed bank service charges. [7]Officially registered unemployed. [8]Detail does not add to total given because of rounding. [9]Imports c.i.f.; exports f.o.b. [10]Circulation. [11]Subscribers. [12]Public schools only.

Internet resources for further information:
- **National Statistical Service http://www.armstat.am**
- **Central Bank of Armenia http://www.cba.am/index.html**

Aruba

Official name: Aruba.
Political status: nonmetropolitan territory of The Netherlands with one legislative house (States of Aruba [21]).
Chief of state: Dutch Monarch represented by Governor.
Head of government: Prime Minister.
Capital: Oranjestad.
Official language: Dutch.
Official religion: none.
Monetary unit: Aruban florin[1] (Af.); valuation (Sept. 8, 2008) 1 U.S.$ = Af. 1.79; 1 £ = Af. 3.16.

Area and population

Census region	area[2] sq mi	area[2] sq km	population 2000 census
Noord/Tanki Leendert	14	37	16,944
Oranjestad East	5	13	14,224
Oranjestad West	4	10	12,131
Paradera	10	25	9,037
San Nicolas North	9	23	10,118
San Nicolas South	4	10	5,730
Santa Cruz	18	47	12,326
Savaneta	11	28	9,996
TOTAL	75	193	90,506

Demography

Population (2008): 105,000.
Density (2008): persons per sq mi 1,400.0, persons per sq km 544.0.
Urban-rural (2003): urban 45.4%; rural 54.6%.
Sex distribution (2007): male 47.70%; female 52.30%.
Age breakdown (2005): under 15, 21.2%; 15–29, 18.9%; 30–44, 26.1%; 45–59, 21.3%; 60–74, 9.6%; 75–84, 2.2%; 85 and over, 0.7%.
Population projection: (2010) 107,000; (2020) 120,000.
Linguistic composition (2000): Papiamento 69.4%; Spanish 13.2%; English 8.1%; Dutch 6.1%; Portuguese 0.3%; other 2.0%; unknown 0.9%.[3]
Religious affiliation (2005): Roman Catholic 82.7%, Protestant 10.2%, other/nonreligious 7.1%.
Major urban areas (2000): Oranjestad 26,355[4]; San Nicolas 15,848[5].

Vital statistics

Birth rate per 1,000 population (2007): 11.9 (world avg. 20.3); within marriage 43.7%; outside of marriage 56.3%.
Death rate per 1,000 population (2007): 5.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 6.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.79.
Marriage/divorce rates per 1,000 population (2007): 5.1[6]/4.0.
Life expectancy at birth (2006): male 76.0 years; female 82.8 years.
Major causes of death per 100,000 population (2001–04): diseases of the circulatory system 177.7, malignant neoplasms (cancers) 129.2, communicable diseases 36.2, diabetes mellitus 32.5, suicide, accidents 31.5, violence 13.2.

National economy

Budget (2005). Revenue: Af. 907,300,000 (tax revenue 85.7%, of which taxes on income and profits 40.0%, sales tax 29.2%; nontax revenue 11.2%; grants 3.1%). Expenditures: Af. 1,032,200,000 (wages 29.5%, goods and services 14.8%, social security contributions 13.1%, interest 8.1%).
Public debt (external, outstanding; 2005): U.S.$478,700,000.
Production (metric tons except as noted). Agriculture, forestry, fishing: aloes are cultivated for export; small amounts of tomatoes, beans, cucumbers, gherkins, watermelons, and lettuce are grown on hydroponic farms; divi-divi pods, sour orange fruit, sorghum, and peanuts (groundnuts) are nonhydroponic crops of limited value; livestock (number of live animals) Aruba has very few livestock; roundwood, n.a.; fisheries production (2005) 162 (from aquaculture, none). Mining and quarrying: excavation of sand for local use. Manufacturing[7]: refined petroleum, rum, cigarettes, aloe products, and soaps. Energy production (consumption): electricity (kW-hr; 2006) 910,000,000 (762,000,000); coal, none (none); crude petroleum (barrels; 2005) 880,000 (3,335,000); petroleum products (metric tons; 2005) 10,000,000 (252,000); natural gas, none (none).
Gross national income (2006): U.S.$2,244,000,000 (U.S.$21,625 per capita).

Structure of gross domestic product and labour force

	2000 in value Af. '000,000	2000 % of total value	2000 labour force	2000 % of labour force
Agriculture } Mining	14	0.4	212 38	0.5 0.1
Manufacturing	91[8]	2.7[8]	2,440	5.4
Construction	202	6.1	3,892	8.6
Public utilities	212[9]	6.4[9]	500	1.1
Transp. and commun.	287	8.6	2,905	6.5
Trade, restaurants	796	23.9	14,763	32.8
Finance, real estate	877	26.4	5,206	11.6
Pub. admin., defense	390	11.7	3,528	7.8
Services	365	11.0	8,129	18.1
Other	92[10]	2.8[10]	3,423[11]	7.6[11]
TOTAL	3,326	100.0	45,036	100.0[12]

Population economically active (2004): total 41,500; activity rate of total population 42.6% (participation rates: ages 15–64 [2000] 70.9%; female [2000] 46.6%; unemployed [2005] 6.9%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.1	106.7	110.2	113.0	116.9	121.3	128.3
Monthly earnings index[13]	100.0	107.9	107.9	111.2	111.2	..	..

Household income and expenditure: average household size (2000) 3.1; average annual income per household (1999) Af. 39,000 (U.S.$21,800); sources of income: n.a.; expenditure (September 2000)[14]: housing 23.0%, transportation and communications 19.7%, food 14.7%, clothing and footwear 10.9%, household furnishings 10.0%, recreation and education 8.0%.
Land use as % of total land area (2003): in temporary crops *c.* 11%, in permanent crops, none, in pasture, negligible; overall forest area (2005) *c.* 2%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,076; remittances (2006) 13; foreign direct investment (2004–06 avg.) 202. Disbursements for (U.S.$'000,000): tourism (2006) 233; remittances (2006) 69.

Foreign trade[15]

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
Af. '000,000	–834	–317	–1,101	–923	–522	+216
% of total	14.9%	5.0%	21.1%	12.5%	4.7%	1.4%

Imports (2005): Af. 7,614,000,000 (crude petroleum 77.6%, electrical and nonelectrical machinery 4.1%, food products 2.3%). *Major import sources*[16]: United States 60.4%; The Netherlands 11.7%; Venezuela 2.8%; Netherlands Antilles 2.8%.
Exports (2005): Af. 7,830,000,000 (refined petroleum 99.4%, remainder 0.6%). *Major export destinations*[16]: United States 48.5%; Netherlands Antilles 21.3%; The Netherlands 15.4%; Venezuela 4.1%.

Transport and communications

Transport. Railroads: none. Roads (1995): total length 497 mi, 800 km (paved 64%). Vehicles (2007): passenger cars 50,211; trucks and buses 1,121. Air transport (2001)[17]: passenger-km 800,000,000; metric ton-km cargo, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	20	218	PCs	..	..	..
Telephones				Dailies	2004	33.9[18]	348[18]
Cellular	2006	106[19]	1,049[19]	Internet users	2007	24	231
Landline	2006	39	384	Broadband	2005	12[19]	123[19]

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling or incomplete primary education 9.7%; primary education 33.9%; secondary/vocational 39.2%; advanced vocational/higher 16.2%; unknown status 1.0%. *Literacy* (2000): percentage of total population age 13 and over literate 97.3%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	37	478	9,806	20.5
Secondary (age 12–17)	12	495	7,087	14.3
Vocational	1	118	1,480	12.5
Higher	3	78	552	7.1

Health (2007): physicians 156 (1 per 681 persons); hospital beds 310[20] (1 per 335 persons); infant mortality rate per 1,000 live births (2003–05) 6.0; undernourished population, n.a.

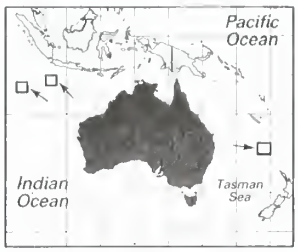
Military

Total active duty personnel (2005): more than 1,000 Dutch naval personnel (including 400 marines) are stationed in the Aruba/Netherlands Antilles vicinity.

[1]The Aruban florin (Af.) is pegged to the U.S. dollar at a fixed rate of Af. 1.79 = 1 U.S.$. [2]Areas for census regions are approximate. [3]Most Arubans are racially and ethnically mixed; the 4 major ethnic groups are Amerindian, Dutch, Spanish, and black. [4]Combined population of Oranjestad East and Oranjestad West. [5]Combined population of San Nicolas North and San Nicolas South. [6]Excludes tourists. [7]Service facilities include a free zone, offshore corporate banking facilities, casino/resort complexes, a petroleum transshipment terminal, a cruise ship terminal, and ship repair and bunkering facilities. [8]Excludes refined petroleum. [9]Includes refined petroleum. [10]Taxes less subsidies and imputed bank service charges. [11]Includes 3,118 unemployed. [12]Detail does not add to total given because of rounding. [13]Minimum wage for the manufacturing and service industries. [14]Weights of consumer price index components. [15]Includes crude petroleum imports and refined petroleum exports; excludes imports and exports of Aruban free zone totaling (in 2004) Af. 89,000,000 (of which 93% food products) and Af. 102,000,000 (of which 95% food products), respectively. [16]Excludes petroleum imports and exports. [17]Air Aruba only. [18]Circulation of *Amigoe de Aruba, Diario,* and *The News* only. [19]Subscribers. [20]Excludes hospital beds in geriatric homes.

Internet resources for further information:
- **Centrale Bank van Aruba http://www.cbaruba.org**
- **Central Bureau of Statistics http://www.chs.aw/chs/home.do**

Australia



Official name: Commonwealth of Australia.
Form of government: federal parliamentary state (formally a constitutional monarchy) with two legislative houses (Senate [76]; House of Representatives [150]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Canberra.
Official language: English.
Official religion: none.
Monetary unit: Australian dollar ($A); valuation (Sept. 8, 2008) 1 U.S.$ = $A 1.24; 1 £ = $A 2.19.

Area and population

States	Capitals	area[1] sq mi	area[1] sq km	population 2007[2] estimate[3]
New South Wales	Sydney	309,130	800,642	6,854,848
Queensland	Brisbane	668,207	1,730,648	4,132,015
South Australia	Adelaide	379,725	983,482	1,575,714
Tasmania	Hobart	26,410	68,401	491,666
Victoria	Melbourne	87,806	227,416	5,165,404
Western Australia	Perth	976,790	2,529,875	2,080,966
Territories[4]				
Australian Capital Territory	Canberra	910	2,358	336,444
Christmas Island	The Settlement	52	135	1,408
Cocos (Keeling) Islands	West Island	5	14	591
Jervis Bay	—	28	73	390
Norfolk Island	Kingston	13	35	[5]
Northern Territory	Darwin	520,902	1,349,129	212,551
TOTAL		2,969,978	7,692,208	20,851,997[5]

Demography

Population (2008): 21,338,000.
Density (2008): persons per sq mi 7.2, persons per sq km 2.8.
Urban-rural (2005): urban 88.2%; rural 11.8%.
Sex distribution (2006): male 49.35%; female 50.65%.
Age breakdown (2006): under 15, 19.8%; 15–29, 20.1%; 30–44, 21.9%; 45–59, 20.1%; 60–74, 11.7%; 75–84, 4.8%; 85 and over, 1.6%.
Population projection: (2010) 21,994,000; (2020) 24,110,000.
Ethnic composition (2001): white *c.* 92%; Asian *c.* 6%; aboriginal *c.* 2%.
Religious affiliation (2006): Christian 63.9%, of which Roman Catholic 25.6%, Anglican Church of Australia 18.7%, other Christian 19.6% (Uniting Church 5.7%, Presbyterian 2.9%, Orthodox 2.6%, Baptist 1.6%, Lutheran 1.3%); Buddhist 2.1%; Muslim 1.7%; Hindu 0.7%; Jewish 0.4%; no religion 18.7%; other 12.5%.
Major urban centres/urban agglomerations (2001/2006): Sydney 3,502,301/4,293,105; Melbourne 3,160,171/3,684,461; Brisbane 1,508,161/1,820,375; Perth 1,176,542/1,507,949; Adelaide 1,002,127/1,138,833; Gold Coast 421,557/(2005) 482,000; Canberra 339,727/328,441; Newcastle 279,975/512,131; Gosford (Central Coast) 255,429/n.a.; Wollongong 228,846/276,155; Sunshine Coast 169,931/220,199; Geelong 130,194/167,781; Hobart 126,048/205,510; Townsville 119,504/153,631; Cairns 98,981/127,856; Toowomba 89,338/121,612.
Place of birth (2006): 70.9% native-born; 29.1% foreign-born, of which Europe 10.5% (United Kingdom 5.2%, Italy 1.0%, Greece 0.6%, Germany 0.5%, The Netherlands 0.4%, Poland 0.3%), Asia and Middle East 7.3% (China [including Hong Kong] 1.4%, Vietnam 0.8%, India 0.7%), New Zealand 2.0%, Africa, the Americas, and other 9.3%.
Mobility (1999). Population age 15 and over living in the same residence as in 1998: 84.4%; different residence between states, regions, and neighbourhoods 15.6%.
Households (2006). Total number of households 8,058,248. Average household size 2.6; 1 person (2003–04) 25.4%, 2 persons (2003–04) 33.9%, 3 or more persons (2003–04) 40.7%. Family households 5,665,000 (70.3%), nonfamily 2,393,000 (29.7%), of which 1-person 26.5%.
Immigration (2004–05): permanent immigrants admitted 123,400, from United Kingdom 14.7%, New Zealand 14.0%, China 9.0%, India 7.6%, Sudan 4.6%, South Africa 3.7%, Philippines 3.4%, Malaysia 2.4%, Singapore 2.4%, Sri Lanka 1.9%, Vietnam 1.8%, Iraq 1.5%. Refugee arrivals: 13,200. Emigration 59,200.

Vital statistics

Birth rate per 1,000 population (2006): 12.8 (world avg. 20.3); (2005) within marriage 67.8%; outside of marriage 32.2%.
Death rate per 1,000 population (2006): 6.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 6.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.81.
Marriage/divorce rates per 1,000 population (2005): 5.4/2.6.
Life expectancy at birth (2005): male 78.5 years; female 83.3 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 229.4; malignant neoplasms (cancers) 188.8; respiratory diseases 53.2; accidents and violence 26.9; diabetes 17.4; suicides 10.3.

Social indicators

Quality of working life. Average workweek (2006): 33.2 hours. Working 50 hours a week or more (2006) 22.5%. Annual rate per 100,000 workers for: accidental injury and industrial disease (2004): 1,220; death (2004) 1.0. Proportion of employed persons insured for damages or income loss resulting from: injury 100%; permanent disability 100%; death 100%. Working days lost to industrial disputes per 1,000 employees (2006): 22. Means of transportation to work (2003): private automobile 74.5%; public transportation 12.0%; motorcycle, bicycle, and foot 5.7%. Discouraged job seekers (2006): 52,900 (0.5% of labour force).

Distribution of household income (2003–04)

percentage of household income by quintile[6]

lowest	second	third	fourth	highest
8.2%	13.1%	17.9%	23.3%	37.4%

Educational attainment (2005). Percentage of population age 15–64 having: no formal schooling and incomplete secondary education 48.5%; completed secondary and postsecondary, technical, or other certificate/diploma 28.9%; bachelor's degree 14.2%; incomplete graduate and graduate degree or diploma 5.4%; unknown 3.0%.
Social participation. Eligible voters participating in last national election (2004): 94%; voting is compulsory. Trade union membership in total workforce (2006): 20.3%.
Social deviance (2005). Offense rate per 100,000 population for: murder 1.3; sexual assault (2003) 92; assault (2003) 798; auto theft 419; burglary and housebreaking (2004) 1,534; robbery 69. Incidence per 100,000 in general population of: prisoners 124; suicide 10.3.
Material well-being (2005). Households possessing: refrigerator 99.9%; washing machine 96.4%; dishwasher 41.5%; automobiles per 1,000 population (2006) 544.

National economy

Gross national income (GNI; 2007): U.S.$755,795,000,000 (U.S.$35,960 per capita); purchasing power parity GNI (U.S.$33,340 per capita).

Structure of gross domestic product and labour force

	2005–06 in value $A '000,000	2005–06 % of total value	2005 labour force	2005 % of labour force
Agriculture, forestry, fishing	28,328	3.1	362,900	3.4
Mining and quarrying	45,241	4.9	92,100	0.9
Manufacturing	96,008	10.4	1,069,700	10.2
Construction	62,405	6.8	856,700	8.2
Public utilities	20,471	2.2	81,900	0.8
Transp. and commun.	67,420	7.3	640,300	6.1
Trade, restaurants	118,498	12.8	2,452,800	23.4
Finance, real estate	247,433	26.8	1,571,400	15.0
Pub. admin., defense	35,241	3.8	583,300	5.5
Services	125,237	13.6	2,222,500	21.2
Other	76,487[7]	8.3[7]	558,800[8]	5.3[8]
TOTAL	922,772[6]	100.0	10,492,300[6]	100.0

Budget (2005–06). Revenue: $A 225,513,000,000 (tax revenue 91.6%, of which individual 50.7%, corporate 21.7%, excise duties and sales tax 15.3%; non-tax revenue 8.4%). Expenditures: $A 209,797,000,000 (social security and welfare 41.2%; health 17.9%; economic services 8.0%; public services 8.0%; education 7.9%; defense 7.5%; interest on public debt 2.6%).
Public debt (2002–03): $A 69,926,000,000.

Retail and service enterprises

	no. of establishments	no. of employees	total wages and salaries ($A '000,000)	annual turnover ($A '000,000)
Retail[9]				
Motor vehicle dealers, gasoline and tire dealers	37,305	220,661	..	44,954
Food stores	53,166	406,299	...	63,340[10]
Department and general stores	459	87,148	..	13,714[10]
Clothing, fabric, and furniture stores	21,688	91,138	...	11,005[10]
Household appliances and hardware stores	14,268	75,355	629	20,554[10]
Recreational goods	.	.	..	7,393[10]
Services				
Real estate agents[11]	7,589	52,079	1,847.5	3,902.7
Pubs, taverns, and bars	4,792[12]	81,724[12]	...	9,007.2[10]
Dental services[12]	5,257	24,108	568.4	1,685.2
Consulting engineering services[13]	5,514	30,736	1,242	3,233.3
Legal services[11]	10,819	73,186	2,181.0	7,034.3
Accounting services[13]	8,389	66,792	...	4,939.1
Computing services[11]	14,731	74,395	4,065.0	10,474.0
Travel agency services[14]	3,266	24,451	647.9	1,979.5
Market research services[11]	272	10,744	203.4	455.8
Private security services[11]	1,714	31,752	756.2	1,394.8

Production (gross value in $A '000 except as noted). Agriculture, forestry, fishing (2006–07): livestock[15] 12,339,100 (cattle 7,987,900, sheep and lambs 2,055,900, poultry 1,301,500, pigs 943,600); wheat 2,522,300, wool 2,278,400, sugarcane 1,182,700, grapes 1,140,800, barley 1,012,800, seed cotton 514,400, potatoes 513,700, apples 475,000, bananas (2004–05) 327,000, oranges (2004–05) 310,000, tomatoes 293,800, sorghum 291,700, canola 201,600, oats 174,200, carrots (2004–05) 166,000, peaches (2004–05) 99,000, pears (2004–05) 89,000, corn (maize; 2004–05) 81,000, rice 51,400, tobacco (2004–05) 28,000; livestock (number of live animals; 2006) 92,728,000 sheep, 28,846,000 cattle, 2,755,000 pigs, 93,600,000 chickens; roundwood (2005) 30,529,000 cu m, of

which fuelwood 10%; fisheries production (2005) 293,022 (from aquaculture 16%); aquatic plants production 14,167 (from aquaculture, none). Mining and quarrying (metric tons except as noted; 2006): iron ore (metal content) 170,933,000 (world rank: 2), bauxite 62,307,000 (world rank: 1), ilmenite 2,377,000 (world rank: 1), zinc (metal content) 1,362,000 (world rank: 2), copper (metal content) 879,000 (world rank: 5), lead (metal content) 686,000 (world rank: 2), rutile 232,000 (world rank: 1), nickel (metal content) 185,000 (world rank: 3), cobalt (metal content) 7,400 (world rank: 3), opal (value of production) $A 50,000,000 (world rank: 1), diamonds 21,915,000 carats (world rank by volume: 2), gold 247,000 kilograms (world rank: 4). Manufacturing (gross value added in $A '000,000; 2004–05): food, beverages, and tobacco 19,076; machinery and apparatus 18,185; fabricated metal products 17,483; mineral fuels 12,817; printing and publishing 10,095; wood and paper products 6,924; cement, bricks, and ceramics 4,852; textiles and wearing apparel 2,621.

Population economically active (July 2007): total 10,952,000; activity rate of total population 52.5% (participation rates: ages 15 and over, 65.0%; female [2006] 45.0%; unemployed [June 2008] 4.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104 4	107.5	110.5	113.1	116.1	120.2	123.0
Weekly earnings index	104.9	110.3	116.5	120.9	127.6	132.4	138.6

Household income and expenditure (2003–04). Average household size (2006) 2.6; average annual disposable income per household $A 47,528 (U.S.$33,745); sources of income: wages and salaries 57.5%, transfer payments 27.7%, self-employment 6.0%, other 8.8%; expenditure: food and non-alcoholic beverages 17.1%, housing 16.1%, transportation and communications 15.6%, recreation 12.8%, household services and operation 6.1%.

Financial aggregates

	2001	2002	2003	2004	2005	2006	2007
Exchange rate, $A 1.00 per[16]:							
U.S. dollar	0 51	0.57	0.75	0.78	0.73	0.79	0 88
£	0.35	0.35	0.42	0.40	0.42	0.40	0.44
SDR	0.41	0.42	0.50	0.50	0.51	0.53	0.56
International reserves (U.S.$)[16]							
Total (excl. gold; '000,000)	17,955	20,689	32,189	35,803	41,941	53,448	24,768
SDRs ('000,000)	109	136	170	195	193	200	193
Reserve pos. in IMF ('000,000)	1,412	1,934	2,053	1,706	776	428	339
Foreign exchange ('000,000)	16,434	18,618	29,966	33,901	40,972	52,821	24,237
Gold ('000,000 fine troy oz)	2.56	2.56	2.56	2.56	2.57	2.57	2.57
% world reserves	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Interest and prices							
Govt. bond yield (short-term; %)	4.97	5.30	4 90	5.30	5.27	5.71	6 33
Industrial share prices (2000 = 100)	103.2	100.2	96.1	111.7	135.5	161.5	194 9
Balance of payments[16] (U.S.$'000,000)							
Balance of visible trade	+1,736	−5,513	−15,344	−18,069	−13,372	−9,684	−17,914
Imports, f.o.b.	61,890	70,527	85,861	105,230	120,383	134,492	160,047
Exports, f.o.b.	63,626	65,014	70,517	87,161	107,011	124,808	142,133
Balance of invisibles	−9,170	−10,310	−13,301	−20,712	−27,560	−31,460	−38,869
Balance of payments, current account	−7,433	−15,824	−28,645	−38,781	−40,932	−41,144	−56,783

Energy production (consumption): electricity (kW-hr; 2007) 227,496,000,000 ([2005] 251,120,000,000); hard coal (metric tons; 2005) 265,426,000 (35,830,000); lignite (metric tons; 2005) 110,160,000 (108,617,000); crude petroleum (barrels; 2006–07) 171,900,000 ([2005] 224,000,000); petroleum products (metric tons; 2005) 32,306,000 (36,423,000); natural gas (cu m; 2007) 37,211,000,000 ([2005] 28,779,000,000).

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 17,854; remittances (2006) 3,064; foreign direct investment (FDI) (2004–06 avg.) 8,290. Disbursements for (U.S.$'000,000): tourism (2006) 11,690; remittances (2006) 2,681; FDI (2004–06 avg.) –4.

Land use as % of total land area (2003): in temporary crops 6.1%, in permanent crops 0.04%, in pasture 51.0%; overall forest area (2005) 21.3%.

Foreign trade[17]

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−4,862	+1,736	−5,513	−15,344	−18,069	−13,372	−9,684
% of total	3.7%	1.4%	4 1%	9.8%	9 4%	5.9%	3.7%

Trade by commodity group (2003–04)

		imports		exports	
SITC Group		U.S.$'000,000	%	U.S.$'000,000	%
00	Food and live animals	3,762	3.8	13,666	16.7
01	Beverages and tobacco	675	0.7	2,025	2.5
02	Crude materials, excluding fuels	1,448	1.5	15,592	19 1
03	Mineral fuels, lubricants, and related materials	7,569	7.7	15,326	18.8
04	Animal and vegetable oils, fat, and waxes	276	0.3	269	0.3
05	Chemicals and related products, n.e.s.	11,306	11.5	3,974	4.9
06	Basic manufactures	11,819	12.0	8,518	10.4
07	Machinery and transport equipment	45,266	46 1	8,957	11.0
08	Miscellaneous manufactured articles	14,030	14 3	3,209	3.9
09	Goods not classified by kind	2,113	2.1	10,146	12.4
TOTAL		98,265[6]	100.0	81,680[6]	100.0

Imports (2005–06): $A 167,603,000,000 (machinery and apparatus 29.3%, of which telecommunications equipment 5.8%, office machines and automatic data-processing equipment 5.3%, electrical machinery 4.8%; transportation equipment 15.8%, of which motor vehicles 12.2%; crude and refined petroleum 12.7%; chemicals and related products 6.1%, of which medicines and pharmaceuticals 4.3%; textiles and wearing apparel 3.9%). *Major import sources* (2006–07): China 15.0%; U.S. 13.8%; Japan 9.6%; Singapore 5.6%; Germany 5.1%; U.K. 4.1%; Thailand 4.0%; Malaysia 3.7%; South Korea 3.3%; New Zealand 3.1%; Italy 2.7%.

Exports (2005–06): $A 151,792,000,000 (mineral fuels 24.9%, of which coal [all forms] 16.0%, petroleum products and natural gas 8.9%; food and beverages 12.0%, of which meat and meat preparations 4.4%, cereals and cereal preparations 3.2%; iron ore 8.2%; aluminum and aluminum ore 6.9%; gold 4.8%; machinery and apparatus 4.1%; transportation equipment 3.5%). *Major export destinations* (2006–07): Japan 19.4%; China 13.6%; South Korea 7.8%; U.S. 5.8%; New Zealand 5.6%; U.K. 3.7%; Taiwan 3.7%; Singapore 2.7%; Indonesia 2.5%; Thailand 2.5%.

Direction of trade (2003–04)

	imports		exports	
	U.S.$'000,000	%	U.S.$'000,000	%
Africa	962	1.0	1,559	1.9
Asia	48,176	49 0	49,846	61.0
Japan	12,076	12 3	14,849	18.2
South America	371	0 4	383	0.5
North and Central America	16,775	17 1	8,699	10.7
United States	14,959	15.2	7,090	8.7
Europe	23,528	23 9	9,763	11.9
European Union	22,439	22 8	9,419	11.5
United Kingdom	4,073	4 1	3,849	4 7
Other Europe	1,089	1 1	344	0.4
Oceania	5,012	5 1	6,988	8.6
New Zealand	3,792	3.9	6,060	7.4
Other	3,442	3 5	4,442	5.4
TOTAL	98,265[6]	100.0	81,680	100.0

Transport and communications

Transport. Railroads (2006): route length 23,954 mi, 38,550 km; passengers carried (2004–05) 616,270,000; passenger-km (2004–05) 11,200,000,000; metric ton-km cargo (2004–05) 182,990,000,000. Roads (2004): total length 503,709 mi, 810,641 km (paved 42%). Vehicles (2006): passenger cars 11,189,000; trucks and buses 2,665,000. Merchant marine (2006): vessels (1,000 gross tons and over) 53; total deadweight tonnage 1,532,874. Air transport (2006)[18]: passenger-km 88,173,000,000; metric ton-km cargo 2,633,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	14,371	722	PCs	2005	14,007	689
Telephones				Dailies	2004	2,934[19]	146[19]
Cellular	2007	21,260[20]	1,025[20]	Internet users	2007	11,200	540
Landline	2007	9,760	471	Broadband	2007	4,830[20]	232[20]

Education and health

Literacy (2006): total population literate, virtually 100%[21].

Education (2006)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–12)	6,558[22]	121,215	1,936,118	16.0
Secondary (age 13–17)	1,478[22]	118,424	1,431,918	12 1
Vocational[23]	1,950	26,500	1,888,700	71.3
Higher[23]	74	90,407	957,176	10.6

Health (2005–06): physicians 63,300 (1 per 322 persons); hospital beds (2005) 83,349 (1 per 244 persons); infant mortality rate per 1,000 live births 5.0; undernourished population (2002–04) less than 2.5% of total population.

Military

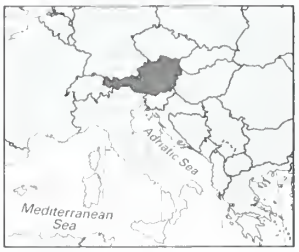
Total active duty personnel (November 2007): 51,293 (army 49.2%, navy 24.9%, air force 25.9%). *Military expenditure as percentage of GDP* (2005): 1.8%; per capita expenditure U.S.$645.

[1]Mainland and island areas only; excludes coastal water. [2]January 1. [3]Based on preliminary 2006 census results. [4]With permanent civilian population only. [5]Total excludes population for Norfolk Island ([2001 census] 2,037). [6]Detail does not add to total given because of rounding. [7]Taxes on products less subsidies ($A 77,042,000,000) less statistical discrepancy ($A 555,000,000). [8]Includes 535,000 unemployed. [9]1991–92. [10]2001–02. [11]1998–99. [12]1997–98. [13]1995–96. [14]1996–97. [15]Slaughtered value. [16]At end of year. [17]Imports and exports f.o.b. [18]Domestic carriers only. [19]Circulation of daily newspapers. [20]Subscribers. [21]A national survey conducted in 1996 put the number of persons who had very poor literacy and numeracy skills at about 17% of the total population (age 15 to 64). [22]Excludes 1,181 combined primary and secondary schools. [23]2005.

Internet resources for further information:

- **Australian Bureau of Statistics http://www.abs.gov.au**
- **Reserve Bank of Australia http://www.rba.gov.au**

Austria



Official name: Republik Osterreich (Republic of Austria).
Form of government: federal state with two legislative houses (Federal Council [62]; National Council [183]).
Chief of state: President.
Head of government: Chancellor.
Capital: Vienna.
Official language: German.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

States	Capitals	area sq mi	area sq km	population 2007[1] estimate
Burgenland	Eisenstadt	1,531	3,965	280,257
Karnten	Klagenfurt	3,682	9,536	560,407
Niederosterreich	Sankt Pölten	7,404	19,178	1,589,580
Oberosterreich	Linz	4,626	11,982	1,405,674
Salzburg	Salzburg	2,762	7,154	529,574
Steiermark	Graz	6,329	16,392	1,203,918
Tirol	Innsbruck	4,883	12,648	700,427
Vorarlberg	Bregenz	1,004	2,601	364,940
Wien (Vienna)	—	160	415	1,664,146
TOTAL		32,383[2]	83,871	8,298,923

Demography

Population (2008): 8,338,000.
Density (2008): persons per sq mi 257.5, persons per sq km 99.4.
Urban-rural (2003): urban 65.8%; rural 34.2%.
Sex distribution (2008[1]): male 48.66%; female 51.34%.
Age breakdown (2005): under 15, 16.0%; 15–29, 18.5%; 30–44, 24.1%; 45–59, 19.4%; 60–74, 14.3%; 75–84, 6.1%; 85 and over, 1.6%.
Population projection: (2010) 8,395,000; (2020) 8,689,000.
Ethnic composition (2000): Austrian 86.5%; German Swiss 4.0%; German 3.5%; Bosniac 0.9%; Turkish 0.9%; Polish 0.5%; other 3.7%.
Religious affiliation (2001): Christian 81.5%, of which Roman Catholic 73.7%, Protestant (mostly Lutheran) 4.7%, Orthodox 2.2%; Muslim 4.2%; nonreligious 12.0%; other 0.3%; unknown 2.0%.
Major cities (2007[1]): Vienna 1,664,146 (urban agglomeration 1,954,964); Graz 247,698; Linz 188,894; Salzburg 149,018; Innsbruck 117,693.

Vital statistics

Birth rate per 1,000 population (2007): 9.2 (world avg. 20.3); within marriage 61.8%; outside of marriage 38.2%.
Death rate per 1,000 population (2007): 9.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 0.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.38.
Marriage/divorce rates per 1,000 population (2007): 4.3/2.5.
Life expectancy at birth (2007): male 77.3 years; female 82.9 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 396.4; malignant neoplasms (cancers) 239.0; diseases of the respiratory system 56.7; endocrine and metabolic disorders 55.1.

National economy

Budget (2004). Revenue: €59,237,000,000 (tax revenue 97.3%, of which turnover tax 32.0%, individual income taxes 29.2%, corporate income tax 7.3%, other taxes 28.8%; nontax revenue 2.7%). Expenditures: €62,667,000,000 (social security, health, and welfare 34.4%; education 14.3%; interest 13.3%; transportation 9.6%; public safety 3.8%; defense 2.8%).
Public debt (December 2006): U.S.$194,118,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2006): sugar beets 2,493,097, corn (maize) 1,471,668, wheat 1,396,300, barley 914,052, potatoes 654,621, apples 509,139, grapes 300,840, triticale 110,060, rye 93,786, currants 19,290; livestock (number of live animals) 3,160,382 pigs, 2,002,143 cattle; roundwood (2004) 16,483,000 cu m, of which fuelwood 21%; fisheries production (2005) 2,790 (from aquaculture 87%). Mining and quarrying (2006): iron ore (metal content) 650,000; manganese (metal content) 16,000; tungsten 1,300. Manufacturing (value added in €'000,000; 2004): nonelectrical machinery and apparatus 5,034; electrical machinery and electronics 4,060; fabricated metals 3,979; food products and beverages 3,767; motor vehicles 2,767; chemicals and chemical products 2,476. Energy production (consumption): electricity (kW-hr; 2007) 63,744,000,000 ([2005] 68,346,000,000); hard coal (metric tons; 2005) none (4,039,000); lignite (metric tons; 2005) none (1,270,000); crude petroleum (barrels; 2006) 6,500,000 ([2005] 64,100,000); petroleum products (metric tons; 2005) 7,776,000 (12,450,000); natural gas (cu m; 2006) 1,700,000,000 ([2005] 10,531,000,000).
Population economically active (2005)[3]: total 4,032,200; activity rate of total population 49.7% (participation rates: ages 15–64, 72.4%; female 45.4%; unemployed 7.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.7	104.5	105.9	108.1	110.6	112.2	114.6
Net annual income index	99.7	100.8	101.9	..	...	...	...

Gross national income (GNI; 2007): U.S.$355,088,000,000 (U.S.$42,700 per capita); purchasing power parity GNI (U.S.$38,140 per capita).

Structure of gross domestic product and labour force

	2004 in value €'000,000	2004 % of total value	2005 labour force[3]	2005 % of labour force
Agriculture, forestry	4,000	1.7	210,400	5.2
Mining	883	0.4	8,600	0.2
Manufacturing	42,392	17.9	699,900	17.4
Construction	15,996	6.7	313,600	7.8
Public utilities	5,179	2.2	31,200	0.8
Transp. and commun.	15,356	6.5	241,300	6.0
Trade, restaurants	37,384	15.8	837,700	20.8
Finance, real estate	47,860	20.2	477,500	11.8
Pub. admin., defense	12,392	5.2	238,600	5.9
Services	31,146	13.1	756,500	18.8
Other	24,452	10.3	216,900[4]	5.4[4]
TOTAL	237,039[2]	100.0	4,032,200	100.0[2]

Household income and expenditure. Average household size (2005) 2.3; average annual disposable income per household (2003) €28,709 (U.S.$32,403); sources of income (1995): wages and salaries 54.8%, transfer payments 25.9%; expenditure (2004–05): housing and energy 22.3%, transportation 16.1%, recreation and culture 12.6%, food 11.7%.
Land use as % of total land area (2003): in temporary crops 16.8%, in permanent crops 0.9%, in pasture 23.3%; overall forest area (2005) 46.7%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 17,854; remittances (2006) 2,941; foreign direct investment (FDI) (2004–06 avg.) 4,394. Disbursements for (U.S.$'000,000): tourism (2006) 11,690; remittances (2006) 2,543; FDI (2004–06 avg.) 7,470.

Foreign trade[5]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007[6]
€'000,000,000	+0.30	−2.09	−1.25	−1.79	−0.16	+0.68
% of total	0.2%	1.3%	0.7%	0.9%	0.1%	0.3%

Imports (2005): €96,499,000,000 (machinery and transport equipment 36.8%, of which nonelectrical machinery and apparatus 11.5%, road vehicles 11.5%; mineral fuels 12.2%; chemicals and related products 10.9%; food products 5.2%). *Major import sources:* Germany 42.2%; Italy 6.6%; France 4.0%; Switzerland 3.3%; Czech Republic 3.3%.
Exports (2005): €94,705,000,000 (machinery and transport equipment 41.6%, of which nonelectrical machinery and apparatus 17.2%, road vehicles 11.8%, electrical machinery and apparatus 7.3%; chemicals and chemical products 9.8%; iron and steel 5.7%). *Major export destinations:* Germany 31.8%; Italy 8.6%; United States 5.6%; Switzerland 4.5%; France 4.2%.

Transport and communications

Transport. Railroads[7]: (2004) route length 5,629 km; (2003) passenger-km 8,248,700,000; (2004) metric ton-km cargo 17,931,100,000. Roads (2003): total length 133,718 km (paved 100%). Vehicles (2004): passenger cars 4,109,129; trucks and buses 342,384. Air transport (2007): passenger-km 17,412,000,000; metric ton-km cargo 453,756,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	2,570	315	PCs	2005	4,000	489
Telephones				Dailies	2004	2,570[8]	314[8]
Cellular	2007	9,768[9]	1,168[9]	Internet users	2007	4,277	512
Landline	2007	3,374	404	Broadband	2007	1,577[9]	190[9]

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling through lower-secondary education 22%; upper secondary/higher vocational 63%; university 14%. *Literacy:* virtually 100%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary/lower secondary (age 6–13)	4,305	63,632	620,826	9.8
Upper secondary/voc.	1,438	75,404	493,601	6.5
Higher	19[10]	16,099[11]	310,915	15.1[11]

Health: physicians (2006[1]) 39,750 (1 per 208 persons); hospital beds (2005[1,12]) 65,053 (1 per 133 persons); infant mortality rate per 1,000 live births (2007) 3.7; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 39,600 (army 83.1%; air force 16.9%). *Military expenditure as percentage of GDP* (2005): 0.9%; per capita expenditure U.S.$329.

[1]January 1. [2]Detail does not add to total given because of rounding. [3]Excludes conscripts not employed before their military service. [4]Includes 207,700 unemployed. [5]Imports c.i.f., exports f.o.b. [6]Excludes December. [7]Federal railways only. [8]Circulation of daily newspapers. [9]Subscribers. [10]2003–04. [11]2002–03. [12]Excludes hospital beds in nursing homes.

Internet resources for further information:
- **Austrian Central Office of Statistics http://www.statistik.at**

Azerbaijan

Official name: Azərbaycan Respublikası (Republic of Azerbaijan).
Form of government: unitary multiparty republic with a single legislative body (National Assembly [125]).
Head of state and government: President assisted by Prime Minister.
Capital: Baku (Bakı).
Official language: Azerbaijanian.
Official religion: none.
Monetary unit: (new) manat (AZN)[2]; (Sept. 8, 2008) 1 U.S.$ = AZN 0.82; 1 £ = AZN 1.45.

Area and population

Economic regions[4]	area sq km	population 2006[3] estimate	Economic regions[4]	area sq km	population 2006[3] estimate
Abşeron	3,290	401,800	Yuxarı Qarabağ (parts)[5]	3,830	476,900
Aran	21,430	1,731,000	**Autonomous area**		
Bakı (Baku)	2,130	1,873,600	Nagorno Karabakh[6]	4,400	137,737[7]
Dağlıq Şirvan	6,060	270,200	**Autonomous republic**		
Gäncä-Qazax	12,480	1,133,400	Naxçıvan	5,500	376,400
Kälbäcär-Laçın (part)[5]	5,420	215,600	TOTAL	86,530[8]	8,426,837[9]
Länkäran	6,070	790,700			
Quba-Xaçmaz	6,960	471,000			
Şäki-Zagatala	8,960	548,500			

Demography

Population (2008): 8,178,000[10].
Density (2008): persons per sq mi 244.8, persons per sq km 94.5.
Urban-rural (2008[11]): urban 51.7%; rural 48.3%.
Sex distribution (2006): male 49.16%; female 50.84%.
Age breakdown (2006): under 15, 26.3%; 15–29, 27.9%; 30–44, 22.7%; 45–59, 14.1%; 60–74, 6.7%; 75–84, 1.9%; 85 and over, 0.4%.
Population projection: (2010) 8,304,000[10]; (2020) 9,058,000[10].
Doubling time: 59 years.
Ethnic composition (1999): Azerbaijani 90.6%; Lezgian (Dagestani) 2.2%; Russian 1.8%; Armenian 1.5%; other 3.9%.
Religious affiliation (2005): Muslim 87.0%[12], of which Shi'ī 52.8%[12], Sunnī 34.2%[12]; nonreligious/other 13.0%[12].
Major cities (2006[11]): Baku 1,132,800 (urban agglomeration [2005] 1,856,000); Gäncä 305,600; Sumqayıt (Sumgait) 266,600; Mingäçevir (Mingechaur) 95,300; Ali Bayramlı 68,700.

Vital statistics

Birth rate per 1,000 population (2006): 17.8 (world avg. 20.3); within marriage 85.2%; outside of marriage 14.8%.
Death rate per 1,000 population (2006): 6.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 11.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.33.
Marriage/divorce rates per 1,000 population (2006): 9.5/0.9.
Life expectancy at birth (2006): male 69.6 years; female 75.1 years.
Major causes of death per 100,000 population (2007): diseases of the circulatory system 365.3; malignant neoplasms (cancers) 79.8; diseases of the respiratory system 39.4; accidents, poisoning, and violence 35.9.

National economy

Budget (2005). Revenue: AZN 2,055,200,000 (tax revenue 86.0%, of which VAT 29.2%, taxes on profits 17.3%, personal income tax 15.5%, taxes on international trade 10.0%; nontax revenue 14.0%). Expenditures: AZN 2,140,700,000 (national economy 21.6%; education 18.1%; social security/welfare 14.8%; defense/police 10.0%; health 5.6%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2006): wheat 1,460,303, potatoes 999,343, barley 399,737, apples 178,350, seed cotton 130,123, persimmons 124,485, grapes 94,142, hazelnuts 24,625, tobacco leaves 4,845; livestock (number of live animals) 7,304,431 sheep, 2,148,108 cattle; roundwood 13,500 cu m, of which fuelwood 47%; fisheries production (2005) 9,016 (from aquaculture, negligible). Mining and quarrying (2004): limestone 800,000. Manufacturing (value added in U.S.$'000,000; 2005): food, beverages, and tobacco products 301; petroleum products 251; base metals, fabricated metals, and machinery 126. Energy production (consumption): electricity (kW-hr; 2007) 20,337,000,000 ([2005] 24,074,000,000); coal, none (none); crude petroleum (barrels; 2007) 303,000,000 ([2005] 56,800,000); petroleum products (metric tons; 2005) 7,152,000 (4,898,000); natural gas (cu m; 2007) 9,606,000,000 ([2005] 9,687,000,000).
Household income and expenditure (2003). Average household size 4.4; annual income per household AZM 2,254,450[2] (U.S.$459); sources of income: wages and salaries 30.5%, self-employment 22.8%, agriculture 15.5%; expenditure: food 54.7%, household furnishings 7.1%, clothing 6.8%.
Population economically active (2005): total 3,906,500; activity rate of total population 46.3% (participation rates: ages 15–61 [male], 15–56 [female] 71.8%; female 47.7%; officially unemployed 1.4%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.5	104.4	106.7	113.9	124.7	135.1	157.6

Gross national income (GNI; 2007): U.S.$21,872,000,000 (U.S.$2,550 per capita); purchasing power parity GNI (U.S.$6,260 per capita).

Structure of gross domestic product and labour force

	2005 in value AZN '000,000	% of total value	labour force	% of labour force
Agriculture	1,098	9.3	1,513,800	38.8
Petroleum and natural gas, other mining	5,538	46.6	42,200	1.1
Manufacturing			188,700	4.8
Public utilities	100	0.9	39,700	1.0
Construction	1,192	10.0	194,400	5.0
Transp. and commun	954	8.0	191,500	4.9
Trade, hotels	821	6.9	653,000	16.7
Finance, real estate	123	1.0	113,800	2.9
Pub. admin., defense	356	3.0	270,500	6.9
Services	1,693[13]	14.3[13]	642,000	16.4
Other			56,900[14]	1.5[14]
TOTAL	11,875	100.0	3,906,500	100.0

Public debt (external, outstanding; 2006): U.S.$1,359,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 117; remittances (2007) 1,287; foreign direct investment (FDI; 2004–06 avg.) 1,537; official development assistance (2006) 206. Disbursements for (U.S.$'000,000): tourism (2006) 201; remittances (2007) 435; FDI (2004–06 avg.) 1,044.
Land use as % of total land area (2003): in temporary crops 22.2%, in permanent crops 2.7%, in pasture 32.5%; overall forest area (2005) 11.3%.

Foreign trade[15]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+883	+502	−35	+100	+136	+1,104
% of total	23.6%	13.1%	0.7%	1.4%	1.6%	9.5%

Imports (2006): U.S.$5,268,000,000 (machinery and apparatus 29.8%, natural gas 8.8%, iron and steel 7.7%, food and live animals 7.6%, road vehicles 7.5%, drilling/production platforms 5.0%). *Major import sources:* Russia 22.4%; United Kingdom 8.6%; Germany 7.7%; Turkey 7.3%; Turkmenistan 7.0%; Ukraine 6.0%.
Exports (2006): U.S.$6,372,000,000 (crude petroleum 60.4%, refined petroleum 23.6%, aluminum oxide 2.4%, fruits and nuts 1.5%, ships and boats 1.1%). *Major export destinations:* Italy 44.7%; Israel 10.7%; Turkey 6.1%; France 5.5%; Russia 5.4%.

Transport and communications

Transport. Railroads (2005): length 2,122 km; passenger-km 881,000,000; metric ton-km cargo 9,524,000,000. Roads (2004): total length 59,141 km (paved 49%). Vehicles (2005): passenger cars 479,447; trucks and buses 117,587. Air transport (2007): passenger-km 1,764,000,000; metric ton-km cargo 11,892,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	2,750	334	PCs	2005	195	23
Telephones				Dailies	2001	132[16]	16[16]
Cellular	2007	4,300[17]	508[17]	Internet users	2007	1,036	122
Landline	2007	1,254	148	Broadband	2006	2.2[17]	0.3[17]

Education and health

Educational attainment (1999). Percentage of population age 25 and over having: primary education 4.1%; some secondary 9.3%; secondary 50.1%; vocational 4.2%; some higher 0.9%; higher 13.3%. *Literacy* (1999): 98.8%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13)	4,559	175,154	1,586,222	9.1
Secondary (age 14–17)				
Voc., teacher tr	60	6,813	57,896	8.5
Higher	42	14,442	129,948	9.0

Health (2007): physicians 30,800[11] (1 per 264 persons); hospital beds 68,400[11] (1 per 119 persons); infant mortality rate per 1,000 live births (2006) 10.1; undernourished population (2002–04) 600,000 (7% of total population based on the consumption of a minimum daily requirement of 1,940 calories).

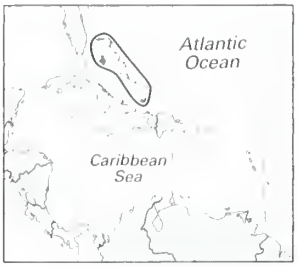
Military

Total active duty personnel (November 2007): 66,740 (army 85.2%, navy 3.0%, air force 11.8%). *Military expenditure as percentage of GDP* (2005): 2.5%; per capita expenditure U.S.$37.

[1]Statutory number. [2]The (new) manat was introduced on Jan. 1, 2006, at a rate of 4,500 (old) manats (AZM) to 1 (new) manat (AZN). [3]January 1; official government de jure figures. [4]Administratively, Azerbaijan is divided into 59 rayons, 11 cities, and 1 autonomous republic (Naxçıvan). [5]Occupied by Armenian forces (in part) since 1992/93. [6]Self-proclaimed republic (from 1991) from parts of Kälbäcär-Laçın and Yuxarı Qarabağ that is supported by Armenia. [7]Final 2005 census results. [8]Summed total; reported total is 86,600 sq km. [9]Summed total including 2005 census results for Nagorno Karabakh. [10]De facto estimate of the U.S. Bureau of the Census International Database (updated August 2006). [11]January 1. [12]The percentage of actual practicing adherents is much lower. [13]Includes taxes less subsidies and imputed bank service charges. [14]Includes 56,300 unemployed. [15]Imports c.i.f.; exports f.o.b. [16]Circulation. [17]Subscribers.

Internet resources for further information:
- **The State Statistical Committee of Azerbaijan Republic**
  http://www.azstat.org

Bahamas, The



Official name: The Commonwealth of The Bahamas.
Form of government: constitutional monarchy with two legislative houses (Senate [16]; House of Assembly [41]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Nassau.
Official language: English.
Official religion: none.
Monetary unit: Bahamian dollar (B$); valuation (Sept. 8, 2008) 1 U.S.$ = B$1.00; 1 £ = B$1.77.

Area and population

Islands and Island Groups[2]	area[1] sq mi	area[1] sq km	population 2000 census
Abaco, Great and Little	649	1,681	13,170
Acklins	192	497	428
Andros	2,300	5,957	7,686
Berry Islands	12	31	709
Bimini Islands	9	23	1,717
Cat Island	150	388	1,647
Crooked and Long Cay	93	241	350
Eleuthera	187	484	7,999
Exuma, Great, and Exuma Cays	112	290	3,571
Grand Bahama	530	1,373	46,994
Harbour Island	3	8	1,639
Inagua, Great and Little	599	1,551	969
Long Island	230	596	2,992
Mayaguana	110	285	259
New Providence Island	80	207	210,832
Ragged Island	14	36	72
Rum Cay	30	78	80
San Salvador	63	163	970
Spanish Wells	10	26	1,527
Other uninhabited cays and rocks	9	23	—
TOTAL	5,382	13,939[3]	303,611

Demography

Population (2008): 335,000.
Density (2008)[4]: persons per sq mi 86.1, persons per sq km 33.3.
Urban-rural (2003): urban 89.5%; rural 10.5%.
Sex distribution (2007): male 48.62%; female 51.38%.
Age breakdown (2006): under 15, 27.6%; 15–29, 26.0%; 30–44, 22.2%; 45–59, 14.9%; 60–74, 7.1%; 75 and over, 2.2%.
Population projection: (2010) 343,000; (2020) 381,000.
Doubling time: 82 years.
Ethnic composition (2000): local black 67.5%; mulatto 14.2%; British 12.0%; Haitian black 3.0%; U.S. white 2.4%; other 0.9%.
Religious affiliation (2000): Baptist 35.4%; Anglican 15.1%; Roman Catholic 13.5%; other Protestant/independent Christian 32.3%; other/nonreligious 3.7%.
Major cities (2002): Nassau 179,300; Freeport 42,600; West End 7,800; Cooper's Town 5,700; Marsh Harbour 3,600.

Vital statistics

Birth rate per 1,000 population (2006): 13.9 (world avg. 20.3); (2000) within marriage 43.2%; outside of marriage 56.8%.
Death rate per 1,000 population (2006): 5.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 8.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.18.
Marriage/divorce rates per 1,000 population (2006): 16.3/2.1.
Life expectancy at birth (2006): male 62.2 years; female 69.0 years.
Major causes of death per 100,000 population (2000): diseases of the circulatory system 145.0; HIV/AIDS 80.7; malignant neoplasms (cancers) 73.8; accidents and violence 71.8; diabetes 34.6.
Adult population (ages 15–49) *living with HIV* (2007): 3.0%[6] (world avg. 0.8%).

National economy

Budget (2004–05). Revenue: B$1,039,376,000 (tax revenue 89.0%, of which import taxes 39.7%, stamp taxes from imports 10.8%, departure taxes 6.7%, business and professional licenses 5.8%; nontax revenue 11.0%). Expenditures: B$1,143,469,000 (education 18.7%, health 16.9%, public order 12.3%, interest on public debt 10.3%, tourism 6.0%, defense 3.1%).
Public debt (external, outstanding; 2007): U.S.$324,300,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2006): sugarcane 55,500, fruits 33,472; livestock (number of live animals; 2005) 3,000,000 chickens; roundwood (2005) 17,000 cu m, of which fuelwood, none; fisheries production (2005) 11,357 (mainly lobsters, crayfish, and conch; from aquaculture, negligible). Mining and quarrying (2006): salt 1,150,000; aragonite 1,100. Manufacturing (value of export production in B$'000; 2004): rum 31,344; chemical products (2001) 13,842. Energy production (consumption): electricity (kW-hr; 2006–07[7]) 2,149,000,000 ([2005] 2,090,000,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (684,000).
Household income and expenditure. Average household size (2000) 3.5; income per household (2007) B$45,220 (U.S.$45,220); sources of income: n.a.; expenditure (1995)[8]: housing 32.8%, transportation and communications 14.8%, food and beverages 13.8%, household furnishings 8.9%.
Land use as % of total land area (2003): in temporary crops 0.8%, in permanent crops 0.4%, in pasture 0.2%; overall forest area (2005) 51.5%.
Gross national income (2006): U.S.$6,077,000,000 (U.S.$18,570 per capita).

Structure of gross domestic product and labour force

	2005 in value B$'000	2005 % of total value	2004 labour force	2004 % of labour force
Agriculture, fishing	123,090	2.1	7,010	4.0
Manufacturing	292,642	4.9	6,175	3.5
Mining	60,439	1.0	2,575	1.5
Public utilities	209,278	3.5		
Construction	499,346	8.3	16,670	9.5
Transp. and commun.	596,863	10.0	10,335	5.9
Trade, hotels, restaurants	1,443,889	24.1	50,670	28.7
Finance, real estate	1,939,250	32.4	17,575	10.0
Pub. admin., defense	374,165	6.3	47,160	26.7
Services	864,409	14.4		
Other	−417,218[9]	−7.0[9]	18,160[10]	10.3[10]
TOTAL	5,986,153	100.0	176,330	100.0[3]

Population economically active (2007): total 186,105; activity rate of total population 56.2% (participation rates: ages 15–64, 76.2%; female [2004] 48.8%; unemployed 7.9%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.0	104.3	107.4	108.5	110.2	112.8	115.6

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 2,069; remittances, n.a.; foreign direct investment (2004–06 avg.) 571. Disbursements for (U.S.$'000,000): tourism (2006) 385; remittances (2007) 164.

Foreign trade[11]

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
B$'000,000	−1,447	−1,551	−1,450	−1,509	−1,575	−2,138
% of total	56.6%	67.4%	65.1%	67.4%	66.2%	70.9%

Imports (2005): B$2,567,000,000 (machinery and transport equipment 22.1%; mineral fuels 19.8%; food products 13.2%; chemicals and chemical products 7.0%). *Major import sources* (2005): U.S. 83.9%; Curaçao 7.1%; Puerto Rico 1.9%; Japan 1.2%.
Exports (2005): B$450,800,000 (domestic exports 60.1%, of which plastics 25.7%, fish, crustaceans, and mollusks [mainly crayfish] 17.2%, alcoholic beverages [mainly rum] 3.7%; reexports 39.9%, of which petroleum 9.0%, nonelectrical machinery 5.1%). *Major export destinations* (2005): U.S. 68.9%; France 8.3%; Germany 7.0%; U.K. 4.6%; Canada 4.5%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 1,673 mi, 2,693 km (paved 57%). Vehicles: passenger cars (2002) 90,000; trucks and buses (2001) 25,000. Air transport (2001)[12]: passenger-mi 232,000,000, passenger-km 374,000,000; short ton-mi cargo 1,208,000, metric ton-km cargo 1,764,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	77	247	PCs	..	...	...
Telephones				Dailies	2004	39[13]	122[13]
Cellular	2007	374[14]	1,129[14]	Internet users	2007	120	362
Landline	2007	133	401	Broadband	2007	13[14]	39[14]

Education and health

Educational attainment (2000). Percentage of population age 15 and over having: no formal schooling 1.5%; primary education 8.7%; incomplete secondary 19.9%; complete secondary 53.7%; incomplete higher 8.1%; complete higher 7.1%; not stated 1.0%. *Literacy* (2005): total percentage age 15 and over literate 95.8%; males literate 95.0%; females literate 96.7%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 5–10)	113[15]	2,029	34,079	16.8
Secondary (age 11–16)	.	2,135	31,975	15.0
Higher[16]	1	160	3,463	21.6

Health (2001): physicians 458 (1 per 672 persons); hospital beds 1,540 (1 per 200 persons); infant mortality rate per 1,000 live births (2006) 16.3; undernourished population (2002–04) 25,000 (8% of total population based on the consumption of a minimum daily requirement of 1,940 calories).

Military

Total active duty personnel (November 2007): 860 (paramilitary coast guard 100%). *Military expenditure as percentage of GDP* (2005): 0.7%; per capita expenditure U.S.$121.

[1]Includes areas of lakes and ponds, as well as lagoons and sounds almost entirely surrounded by land; area of land only is about 3,890 sq mi (10,070 sq km). [2]For local administrative purposes, The Out Islands of the Bahamas are divided into 31 districts; New Providence Island is administered directly by the national government. [3]Detail does not add to total given because of rounding. [4]Land area only. [5]Includes nonresident marriages. [6]Statistically derived midpoint within range. [7]Ending September 30. [8]Weights of retail price index components. [9]Indirect taxes less subsidies and less financial intermediation services indirectly measured. [10]Includes 170 not adequately defined and 17,990 unemployed. [11]Imports c.i.f.; exports f.o.b. [12]Bahamasair only. [13]Circulation of daily newspapers. [14]Subscribers. [15]1996–97. [16]College of The Bahamas only; 1997–98.

Internet resources for further information:
- **The Central Bank of The Bahamas http://www.bahamascentralbank.com**
- **Department of Statistics http://statistics.bahamas.gov.bs**

Bahrain

Official name: Mamlakat al-Baḥrayn (Kingdom of Bahrain).
Form of government: constitutional monarchy with a parliament comprising two bodies (Council of Representatives [40]; Shura Council [40])[1].
Chief of state: Monarch.
Head of government: Prime Minister.
Capital: Manama.
Official language: Arabic.
Official religion: Islam.
Monetary unit: Bahraini dinar (BD); valuation (Sept. 8, 2008) 1 BD = U.S.$2.66 = £1.51.

Area and population

Municipalities[2]	Principal cities	area sq mi	area sq km	population 2001 census
Capital	Manama	13	34	163,696
Central	Ar-Rifā'	35	90	167,691
Muharraq[3]	Muharraq[3]	14	36	103,576
Northern	Madīnat Ḥamad	50	130	166,824
Southern[4]	'Awālī	166	430	44,764
TOTAL		278[5]	720[5]	650,604[6]

Demography

Population (2008): 1,084,000.
Density (2008): persons per sq mi 3,857.7, persons per sq km 1,489.0.
Urban-rural (2005): urban 96.4%; rural 3.6%.
Sex distribution (2005): male 57.52%; female 42.48%.
Age breakdown (2005): under 15, 27.2%; 15–29, 23.2%; 30–44, 29.9%; 45–59, 15.2%; 60–74, 3.6%; 75–84, 0.8%; 85 and over, 0.1%.
Population projection: (2010) 1,166,000; (2020) 1,350,000.
Doubling time: 39 years.
Ethnic composition (2000): Bahraini Arab 63.9%; Indo-Pakistani 14.8%, of which Urdu 4.5%, Malayali 3.5%; Persian 13.0%; Filipino 4.5%; British 2.1%; other 1.7%.
Religious affiliation (2000): Muslim 82.4%, of which Shī'ī *c.* 58%, Sunnī *c.* 24%; Christian 10.5%; Hindu 6.3%; other 0.8%.
Major urban areas (2001): Manama 143,035; Muharraq 91,307; Ar-Rifā' 79,550; Madīnat Ḥamad 52,718; Al-'Alī 47,529; Madīnat 'Īsā 36,833.

Vital statistics

Birth rate per 1,000 population (2005): 21.0 (world avg. 20.3).
Death rate per 1,000 population (2005): 3.1 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 17.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.63.
Marriage/divorce rates per 1,000 population (2005): 6.4/1.5.
Life expectancy at birth (2005): male 71.7 years; female 76.8 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 86.6; malignant neoplasms (cancers) 39.3; injury and poisoning 26.5; metabolic and immunity diseases 24.4; diseases of the respiratory system 20.7; diseases of the digestive system 13.8; infectious and parasitic diseases 11.9; ill-defined conditions 39.3.

National economy

Budget (2005). Revenue: BD 1,671,400,000 (petroleum and natural gas revenue 75.7%; other 24.3%). Expenditures: BD 1,289,200,000 (current expenditure 79.4%; development expenditure 20.6%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2005): dates 15,000, cow's milk 10,500, vegetables 7,703 (of which tomatoes 2,100, onions 1,149), fruit (excluding dates) 5,010, number of hens eggs (2004) 49,350,000; livestock (number of live animals) 40,000 sheep, 26,000 goats, 470,000 chickens; roundwood, n.a.; fisheries production 11,857 (from aquaculture, negligible). Manufacturing (barrels; 2005): jet fuel 19,956,000; distillate fuel oil 19,278,000; gasoline 7,309,000; naphtha 1,783,000; aluminum 750,710 metric tons; methanol 375,609 metric tons; cement 191,400 metric tons. Energy production (consumption): electricity (kW-hr; 2005–06) 9,567,000,000 ([2005] 8,698,000,000); coal, none (none); crude petroleum (barrels; 2005–06) 66,400,000[7] ([2005] 97,300,000); petroleum products (metric tons; 2005) 11,437,000 (1,192,000); natural gas (cu m; 2006) 10,700,000,000 ([2005] 7,447,000,000).
Gross national income (2007): U.S.$14,022,000,000 (U.S.$12,935 per capita).

Structure of gross domestic product and labour force

	2006 value in BD '000,000	2006 % of total value	2001 labour force[8]	2001 % of labour force[8]
Agriculture, fishing	19.8	0.3	4,483	1.5
Crude petroleum, nat. gas	1,550.3	26.0	2,780	0.9
Quarrying	25.7	0.4		
Manufacturing	733.7	12.3	49,979	16.2
Construction	284.5	4.8	26,416	8.6
Public utilities	53.0	0.9	2,515	0.8
Transp. and commun.	356.9	6.0	13,769	4.5
Trade, restaurants	772.9	13.0	47,570	15.5
Finance, real estate	1,791.7	30.2	24,797	8.1
Pub. admin., defense	702.7	11.8	52,389	17.0
Services	205.4[9]	3.5[9]	61,256	19.9
Other	–545.1[10]	–9.2[10]	21,560[11]	7.0[11]
TOTAL	5,951.3[12]	100.0	307,514	100.0[13]

Population economically active (2005): total 350,000; activity rate of total population 48.3% (participation rates: ages 15 and over *c.* 67%; female 23.2%; unemployed [citizens only; early 2006] 16–18%).

Price and earnings indexes (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	98.8	98.3	100.0	102.3	104.9	107.0
Monthly earnings index	100.0	96.7	97.5	94.2	92.1	88.0	...

Public debt (December 2004): U.S.$3,866,000,000[14].
Household income and expenditure. Average household size (2001) 5.9; income per household: n.a.; sources of income: n.a.; expenditure (1984): food and tobacco 33.3%, housing 21.2%, household durable goods 9.8%, transportation and communications 8.5%.
Land use as % of total land area (2003): in temporary crops *c.* 3%, in permanent crops *c.* 6%, in pasture *c.* 6%; overall forest area (2005) *c.* 1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,048; remittances, n.a.; foreign direct investment (FDI; 2004–06 avg.) 1,609. Disbursements for (U.S.$'000,000): tourism (2006) 455; remittances (2007) 1,531; FDI (2004–06 avg.) 1,046.

Foreign trade[15]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+1,272	+798	+974	+932	+899	+2,705
% of total	12.9%	7.4%	7.9%	6.6%	4.6%	13.1%

Imports (2006): U.S.$8,957,000,000 (crude petroleum 54.7%, machinery and apparatus 9.3%, road vehicles 7.0%, metal and metal scrap 4.6%, food and live animals 4.5%). *Major import sources* (2004): Saudi Arabia 47.7%; Japan 6.2%; U.K. 3.7%; Germany 3.6%; France 3.6%.
Exports (2006): U.S.$11,662,000,000 (refined petroleum 79.1%, aluminum [all forms] 12.1%, iron ore agglomerates 1.2%, urea 1.1%). *Major export destinations* (2004): unknown destinations for petroleum exports 76.5%; Saudi Arabia 6.4%; U.S. 3.2%; Taiwan 2.7%.

Transport and communications

Transport. Railroads: none. Roads (2003): total length 3,498 km (paved 79%). Vehicles (2005)[16]: passenger cars 241,813; trucks and buses 44,811. Air transport (2007)[17]: passenger-km 13,999,000,000; metric ton-km cargo 498,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	273	411	PCs	2004	121	164
Telephones				Dailies	2004	198[18]	284[18]
Cellular	2007	1,116[19]	1,483[19]	Internet users	2007	250	332
Landline	2006	190	262	Broadband	2006	39[19]	52[19]

Education and health

Educational attainment (2001). Percentage of population age 15 and over having: no formal education 24.0%; primary education 37.1%; secondary 26.4%; higher 12.5%. *Literacy* (2005): percentage of population age 15 and over literate 90.0%; males literate 92.6%; females literate 86.4%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	259[20]	4,953	81,887	16.5
Secondary (age 12–17)		5,198	67,160	12.9
Higher[21]	2	.	18,872	..

Health (2005): physicians 1,973 (1 per 362 persons); hospital beds 2,033 (1 per 352 persons); infant mortality rate per 1,000 live births 17.3; undernourished population, n.a.

Military

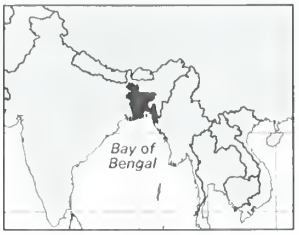
Total active duty personnel (November 2007): 8,200 (army 73.2%, navy 8.5%, air force 18.2%)[22]. *Military expenditure as percentage of GDP* (2005): 3.6%; per capita expenditure U.S.$675.

[1]Seats of Council of Representatives are elected, and seats of the Shura (consultative) Council are appointed by the monarch. [2]As of the administrative reorganization announced July 2002. [3]Official name is Al-Muharraq. [4]Includes the area of Ḥawār island and other nearby islets awarded to Bahrain by the International Court of Justice in 2001. [5]Area per more recent survey is 281 sq mi (728 sq km). [6]Includes 4,053 living abroad. [7]Includes offshore production totaling 53,200,000 barrels. [8]Excludes small number of unemployed non-Bahrainis. [9]Private services only. [10]Includes import duties less imputed bank service charges. [11]Includes 5,424 inadequately defined and 16,136 unemployed Bahrainis. [12]Detail does not add to total given because of rounding. [13]Of which *c.* 59% non-Bahrainis; non-Bahrainis constituted *c.* 70% of labour force in 2006. [14]Includes both foreign and domestic debt. [15]Imports c.i.f.; exports f.o.b. [16]Private vehicles only excluding taxis. [17]Total air transport data for Gulf Air, the national airline of both Bahrain and Oman. [18]Circulation of daily newspapers. [19]Subscribers. [20]2005–06. [21]2003–04; Bahrain University and Arabian Gulf University only. [22]U.S. troops in Bahrain (March 2006): 3,000.

Internet resources for further information:

- **Central Bank of Bahrain**
  http://www.cbb.gov.bh
- **Central Informatics Organization**
  http://www.cio.gov.bh/en

Bangladesh



Official name: Gana Prajatantri Bangladesh (People's Republic of Bangladesh).
Form of government: unitary multiparty republic[1] with one legislative house (Parliament [300[2]]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Dhaka.
Official language: Bengali (Bangla).
Official religion: Islam.
Monetary unit: Bangladesh taka (Tk); valuation (Sept. 8, 2008) 1 U.S.$ = Tk 68.50; 1 £ = Tk 121.02.

Area and population

Divisions	Administrative centres	area sq mi	area sq km	population 2001 census[2]
Barisal	Barisal	5,134	13,297	8,514,000
Chittagong	Chittagong	7,906	20,476	23,796,682
Dhaka	Dhaka	12,015	31,119	40,592,431
Khulna	Khulna	8,600	22,274	15,185,026
Rajshahi	Rajshahi	13,326	34,513	31,477,606
Sylhet	Sylhet	4,863	12,596	8,290,857
Tribal region				
Chittagong Hill Tracts[3]	Rangamati	5,133	13,295	1,390,631
TOTAL		56,977[4]	147,570[4]	129,247,233

Demography

Population (2008): 142,547,000.
Density (2008)[5]: persons per sq mi 2,649.7, persons per sq km 1,023.1.
Urban-rural (2006): urban 24.6%; rural 75.4%.
Sex distribution (2006): male 51.21%; female 48.79%.
Age breakdown (2005): under 15, 35.5%; 15–29, 28.6%; 30–44, 19.5%; 45–59, 10.8%; 60–74, 4.6%; 75–84, 0.9%; 85 and over, 0.1%.
Population projection: (2010) 146,394,000; (2020) 167,247,000.
Ethnic composition (1997): Bengali 97.7%; tribal 1.9%, of which Chakma 0.4%, Saontal 0.2%, Marma 0.1%; other 0.4%.
Religious affiliation (2005): Muslim (nearly all Sunnī) 88.3%; Hindu 10.5%; Buddhist 0.6%; Christian (mostly Roman Catholic) 0.3%; other 0.3%.
Major cities/metropolitan areas (2006): Dhaka 6,479,751/11,813,728; Chittagong 2,438,403/4,090,809; Khulna 830,454/1,323,071; Rajshahi 447,031/737,336; Comilla 404,200; Tungi 352,900.

Vital statistics

Birth rate per 1,000 population (2006): 29.8 (world avg. 20.3).
Death rate per 1,000 population (2006): 8.3 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 3.11.
Marriage/divorce rates per 1,000 population (2002): 9.5/n.a.
Life expectancy at birth (2006): male 64.4 years; female 66.0 years.
Major causes of death per 100,000 population (2002)[6]: infectious and parasitic diseases 122.0; old age 79.0; diseases of the respiratory system 71.0; high blood pressure, heart disease, and stroke 54.0; suicide, accidents, and poisoning 35.0; malignant neoplasms (cancers) 21.0.

National economy

Budget (2005–06). Revenue: Tk 448,700,000,000 (tax revenue 80.6%, of which value-added tax 27.6%, import duties 18.4%, taxes on income and profits 15.5%; nontax revenue 19.4%). Expenditures: Tk 610,600,000,000 (current expenditure 57.0%, of which education 10.4%, domestic interest payments 10.2%, defense 5.5%, health 3.3%; development expenditure 35.2%; other 7.8%).
Public debt (external, outstanding; 2006): U.S.$18,866,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): paddy rice 43,729,000, sugarcane 6,423,440, potatoes 4,160,890, bananas 898,710, jute 801,000, wheat 772,000, spices 283,040, rapeseed 234,865, tea 57,580, sesame seeds 50,000, ginger 49,405, tobacco leaves 39,000; livestock (number of live animals) 36,900,000 goats, 24,500,000 cattle, 142,000,000 chickens; roundwood (2005) 27,944,000 cu m, of which fuelwood 99%; fisheries production (2005) 2,215,957 (from aquaculture 40%). Mining and quarrying (2005–06): marine salt 350,000; kaolin 8,500. Manufacturing (value added in U.S.$'000,000; 1998): wearing apparel 839; tobacco products 634; textiles 567; industrial chemicals 499; food products 382; footwear 315; iron and steel 153. Energy production (consumption): electricity (kW-hr; 2007) 22,572,000,000 ([2005] 22,643,000,000); coal (metric tons; 2005) n.a.[7] (700,000); crude petroleum (barrels; 2006) 2,000,000 ([2005] 10,100,000); petroleum products (metric tons; 2005) 884,000 (3,617,000); natural gas (cu m; 2007) 15,225,000,000 ([2005] 14,340,000,000).
Household income. Average household size (2004) 5.3; average annual income per household (2000) Tk 70,103 (U.S.$1,344); sources of income: self-employment 56.9%, wages and salaries 28.1%, transfer payments 9.1%, other 5.9%; expenditure (2000): food and beverages 54.6%, housing 9.0%, energy 6.8%, clothing and footwear 6.3%.
Population economically active (2002–03): total 46,324,000; activity rate of total population 34.7% (participation rates: ages 15–64, 58.6%; female 22.3%; officially unemployed 4.3%).

Price and earnings indexes (2000–01 = 100)

	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06
Consumer price index	100.0	103.0	107.6	113.6	122.1	129.6
Average wage index	100.0	106.0	117.6	125.0	132.3	145.3

Gross national income (GNI; 2007): U.S.$75,047,000,000 (U.S.$470 per capita); purchasing power parity GNI (U.S.$1,340 per capita).

Structure of gross domestic product and labour force

	2007–08 in value Tk '000,000,000[8]	2007–08 % of total value	2002–03 labour force	2002–03 % of labour force
Agriculture, forestry	504	15.7	21,887,000	47.2
Fishing	144	4.5	1,044,000	2.3
Mining	37	1.1	82,000	0.2
Manufacturing	552	17.2	4,343,000	9.4
Construction	284	8.8	1,541,000	3.3
Public utilities	48	1.5	98,000	0.2
Transp. and commun.	324	10.1	3,015,000	6.5
Trade, hotels	469	14.6	6,671,000	14.4
Finance, real estate	232	7.2	417,000	0.9
Public admin., defense	86	2.7	988,000	2.1
Services	456	14.2	4,238,000	9.1
Other	82	2.5	2,002,000	4.3
TOTAL	3,218	100.0[9]	46,324,000[9]	100.0[9]

Land use as % of total land area (2003): in temporary crops 61.3%, in permanent crops 3.4%, in pasture 4.6%; overall forest area (2005) 6.7%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 80; remittances (2007) 6,560; foreign direct investment (FDI; 2004–06 avg.) 592; official development assistance (2006) 1,223. Disbursements for (U.S.$'000,000): tourism (2006) 140; remittances (2007) 6.

Foreign trade[10]

Balance of trade (current prices)

	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06
U.S.$'000,000	–1,963	–1,711	–2,159	–2,237	–3,216	–2,879
% of total	13.2%	12.5%	14.2%	13.1%	15.7%	12.1%

Imports (2005–06): U.S.$14,746,000,000 (textile yarn, fabrics, and made-up articles 15.1%; capital machinery 10.4%; imports for export processing zone 7.2%; base metals 6.6%; cotton 5.0%). *Major import sources* (2004): India 18.5%; China 13.1%; Singapore 10.5%; Japan 5.4%; Hong Kong 5.0%.
Exports (2005–06): U.S.$10,526,300,000 (woven garments 38.8%; hosiery and knitwear 36.3%; frozen fish and shrimp 4.4%; jute manufactures 3.4%). *Major export destinations* (2004): U.S. 25.6%; Germany 17.6%; U.K. 12.0%; France 7.5%; Italy 4.6%.

Transport and communications

Transport. Railroads (2002): route length 1,720 mi, 2,768 km; passenger-km 3,970,000,000; metric ton-km cargo 908,000,000. Roads (2003): total length 148,648 mi, 239,226 km (paved 10%). Vehicles (2004): passenger cars 185,000; trucks and buses 88,000. Air transport (2005)[11]: passenger-km 5,163,000,000; metric ton-km cargo 181,034,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	11,531	85	PCs	2004	1,650	12
Telephones				Dailies	2004	913[12]	6.8[12]
Cellular	2007	34,370[13]	217[13]	Internet users	2007	500	3.2
Landline	2007	1,187	7.5	Broadband	2006	...	...

Education and health

Educational attainment (2004)[14]. Percentage of population age 25 and over having: no formal schooling 48.8%; incomplete primary education 17.9%; complete primary 7.7%; incomplete secondary 15.1%; complete secondary[15] or higher 10.5%. *Literacy* (2002): total population age 15 and over literate 41.1%; males literate 50.3%; females literate 31.4%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)[16]	86,737	354,285	18,431,000	52.0
Secondary (age 11–17)	...	320,779	11,024,326	34.4
Voc., teacher tr.				
Higher	...	61,321	877,335	14.3

Health (2002): physicians 32,498 (1 per 4,049 persons); hospital beds 45,607 (1 per 2,886 persons); infant mortality rate (2006) 60.8; undernourished population (2002–04) 44,000,000 (30% of total population based on the consumption of a minimum daily requirement of 1,780 calories).

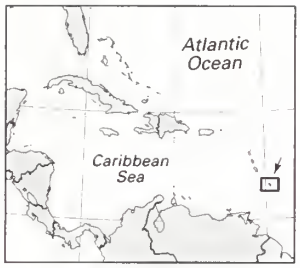
Military

Total active duty personnel (November 2007): 150,000 (army 80.0%, navy 10.7%, air force 9.3%). *Military expenditure as percentage of GDP* (2005): 1.0%; per capita expenditure U.S.$5.

[1]Reinstated Jan. 6, 2009; replaced interim caretaker government from October 2006. [2]Status of 45 potentially reserved seats for women was unclear in January 2009. [3]Autonomous region for non-Bengali tribal people was created by accord signed in December 1997, formally established in May 1999, but mostly not implemented by the government as of mid-2008. [4]The total area excluding the river area equals 53,797 sq mi (139,334 sq km). [5]Based on the total area excluding the river area. [6]Based on national sample registration system. [7]Commercial coal production began in April 2003. [8]At constant prices of 1995–96. [9]Detail does not add to total given because of rounding. [10]Import figures are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [11]Biman Bangladesh only. [12]Circulation of daily newspapers. [13]Subscribers. [14]Sample survey based on 21,405 people. [15]Through 5th year of secondary education (out of 7 years). [16]2003–04.

Internet resource for further information:
- **Bangladesh Bank http://www.bangladesh-bank.org**

Barbados



Official name: Barbados.
Form of government: constitutional monarchy with two legislative houses (Senate [21]; House of Assembly [30]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Bridgetown.
Official language: English.
Official religion: none.
Monetary unit: Barbados dollar (Bds$); valuation (Sept. 8, 2008) 1 U.S.$ = Bds$2.00; 1 £ = Bds$3.53.

Area and population

Parishes[1]	area sq mi	area sq km	population 2000 census
Christ Church	22	57	49,498
St. Andrew	14	36	5,254
St. George	17	44	17,868
St. James	12	31	22,741
St. John	13	34	8,873
St. Joseph	10	26	6,805
St. Lucy	14	36	9,328
St. Michael[2]	15	39	83,684
St. Peter	13	34	10,699
St. Philip	23	60	11,883
St. Thomas	13	34	12,397
TOTAL	166	430[3]	239,030[4]

Demography

Population (2008): 282,000.
Density (2008): persons per sq mi 1,698.8, persons per sq km 655.8.
Urban-rural (2005): urban 52.6%; rural 47.4%.
Sex distribution (2005): male 48.26%; female 51.74%.
Age breakdown (2005): under 15, 19.0%; 15–29, 22.8%; 30–44, 26.1%; 45–59, 19.0%; 60–74, 8.2%; 75–84, 3.8%; 85 and over, 1.1%.
Population projection: (2010) 284,000; (2020) 292,000.
Ethnic composition (2000): local black 87.1%; mulatto 6.0%; British expatriates 4.3%; U.S. white 1.2%; Indo-Pakistani 1.1%; other 0.3%.
Religious affiliation (2000): Christian 72.5%, of which Anglican 28.3%, Pentecostal 18.7%, Adventist 5.5%, Methodist 5.1%; Rastafarian 1.1%; Muslim 0.7%; Hindu 0.3%; nonreligious 17.3%; other/unknown 8.1%.
Major urban areas (2004): Bridgetown 99,100; Speightstown 3,600; Oistins (2000) 1,203; Holetown (2000) 1,087.

Vital statistics

Birth rate per 1,000 population (2006): 12.7 (world avg. 20.3).
Death rate per 1,000 population (2006): 8.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 4.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.65.
Marriage/divorce rates per 1,000 population: (2000) 13.1/(1995) 1.5.
Life expectancy at birth (2006): male 70.8 years; female 74.8 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 270.5; malignant neoplasms (cancers) 165.0; communicable diseases 84.1; diabetes mellitus 70.0; accidents, poisonings, and violence 29.3.

National economy

Budget (2005–06). Revenue: Bds$2,145,000,000 (tax revenue 95.2%, of which VAT 31.8%, corporate taxes 16.8%, personal income taxes 14.3%; nontax revenue 4.8%). Expenditures: Bds$2,328,500,000 (current expenditure 85.2%, of which education 18.3%, general public service 14.6%, debt payments 12.8%, health 11.3%, defense 2.2%; development expenditure 14.8%).
Public debt (external, outstanding; December 2005): U.S.$763,500,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2006): raw sugar 33,701, sweet potatoes 2,000, coconuts 1,950, cucumbers and gherkins 1,800, okra 1,550, chilies and green peppers 1,250, yams 1,150; livestock (number of live animals) 19,000 pigs, 10,800 sheep, 3,400,000 chickens; roundwood (2005) 6,000 cu m, of which fuelwood, none; fisheries production (2005) 1,869 (from aquaculture, none). Manufacturing (value added in U.S.$'000,000; 1997): industrial chemicals 87; food products 63; beverages (significantly rum and beer) 58; paper and paper products 32; fabricated metal products 23. Energy production (consumption): electricity (kW-hr; 2007) 924,000,000 (924,000,000); coal, none (none); crude petroleum (barrels; 2007) 303,000 ([2005] negligible); petroleum products (metric tons; 2005) 1,000 (360,000); natural gas (cu m; 2007) 21,100,000 ([2005] 26,300,000).
Household income and expenditure. Average household size (2004) 2.8; income per household: n.a.; expenditure (2001): food 33.8%, medical and personal care 17.0%, housing 12.3%, household furnishings and operations 10.1%, education and recreation 7.4%, energy 6.3%.
Population economically active (December 2005): total 145,800; activity rate of total population 53.1% (participation rates: ages 15 and over, 69.0%; female 49.5%; unemployed [January–March 2008] 7.9%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.6	102.7	104.4	105.8	112.3	120.5	125.3

Gross national income (2006): U.S.$3,307,000,000 (U.S.$11,291 per capita).

Structure of gross domestic product and labour force

	2005 in value Bds$'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	184.6	3.0	3,700	2.5
Mining	44.0	0.7	[5]	[5]
Manufacturing	357.4	5.8	7,200	4.9
Construction	328.8	5.4	13,900[5]	9.5[5]
Public utilities	171.1	2.8	1,900	1.3
Transp. and commun.	327.6	5.3	5,900	4.1
Trade, tourism	1,455.4	23.8	32,700	22.4
Finance, real estate	1,004.0	16.4	10,000	6.9
Pub. admin., defense	819.6	13.4	27,200	18.7
Services	321.9	5.3	30,200	20.7
Other	1,107.7[6]	18.1[6]	13,100	9.0
TOTAL	6,122.1	100.0	145,800	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 978; remittances (2007) 140; foreign direct investment (FDI; 2004–06 avg.) 29. Disbursements for (U.S.$'000,000): tourism (2005) 96; remittances (2007) 40; FDI (2004–06 avg.) 6.
Land use as % of total land area (2003): in temporary crops *c.* 37%, in permanent crops *c.* 2%, in pasture *c.* 5%; overall forest area (2005) *c.* 4%.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
Bds$'000,000	−1,659	−1,891	−2,269	−2,490	−2,375	−2,582
% of total	63.2%	65.4%	67.1%	63.4%	57.4%	60.7%

Imports (2006): Bds$3,257,000,000 (machinery and apparatus 19.8%; refined petroleum 17.4%; food 11.5%; chemicals and chemical products 9.5%). *Major import sources:* U.S. 37.6%; Trinidad and Tobago 22.5%; U.K. 5.8%; Japan 3.7%; Canada 3.7%.
Exports (2006): Bds$882,000,000 (refined petroleum 25.9%; food 10.2%, of which raw sugar 4.4%; crude petroleum 5.2%; rum 5.0%; medicines 4.9%; telecommunications equipment 4.5%). *Major export destinations:* U.S. 20.1%; Trinidad and Tobago 11.0%; U.K. 7.5%; St. Lucia 5.1%; ships' stores and bunkers 25.9%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 994 mi, 1,600 km (paved 100%). Vehicles (2004): passenger cars 92,195; trucks and buses 8,597. Air transport: passenger-km, n.a.; (2003) metric ton-km cargo 200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	78	291	PCs	2005	40	148
Telephones				Dailies	2004	35[8]	130[8]
Cellular	2005	206[9]	766[9]	Internet users	2007	280	953
Landline	2005	135	501	Broadband	2005	32[9]	118[9]

Education and health

Educational attainment (2003). Percentage of employed labour force[10] having: no formal schooling 0.5%; primary education 14.9%; secondary 58.7%; technical/vocational 5.4%; university 19.6%; other/unknown 0.9%. *Literacy* (2002): total population age 15 and over literate 99.7%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 5–10)	109[11]	1,372	22,327	16.3
Secondary (age 11–15)	32[11]	1,264	21,300	16.9
Higher[11]	4	339	11,226	33.1

Health (2002): physicians 376 (1 per 721 persons); hospital beds 501 (1 per 541 persons); infant mortality rate per 1,000 live births (2006) 11.8; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 610 (army 82.0%, navy 18.0%).
Military expenditure as percentage of GDP (2005): 0.5%; per capita expenditure U.S.$52.

[1]Parishes and city of Bridgetown have no local administrative function. [2]Includes city of Bridgetown. [3]Detail does not add to total given because of rounding. [4]The incomplete summed total of 2000 census by parish is 239,030; the unadjusted de jure census total is 250,010; the adjusted de jure census total including non-enumerated persons (16,172) and institutionalized persons (2,610) is 268,792. [5]Construction includes Mining. [6]Net indirect taxes. [7]Imports c.i.f.; exports f.o.b. [8]Circulation. [9]Subscribers. [10]Represents about 129,300 people. [11]2002.

Internet resources for further information:
- **Central Bank of Barbados http://www.centralbank.org.bb**
- **Barbados Statistical Service http://www.barstats.gov.bb**

Belarus

Official name: Respublika Belarus (Republic of Belarus).
Form of government: republic with two legislative bodies (Council of the Republic [64[1]]; House of Representatives [110[1]]).
Head of state and government: President assisted by Prime Minister.
Capital: Minsk.
Official languages: Belarusian; Russian.
Official religion: none.
Monetary unit: Belarusian ruble (Br)[2]; valuation (Sept. 8, 2008)
1 U.S.$ = Br 2,112;
1 £ = Br 3,731.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2008[3] estimate
Brest	Brest	12,500	32,300	1,435,100
Homyel (Gomel)	Homyel	15,600	40,400	1,468,600
Hrodna (Grodno)	Hrodna	9,650	25,000	1,106,600
Mahilyow (Mogilyov)	Mahilyow	11,200	29,000	1,129,600
Minsk (Myensk)	Minsk	14,800	38,300	1,461,800
Vitsyebsk (Vilebsk)	Vitsyebsk	15,500	40,100	1,273,300
City				
Minsk (Myensk)	—	950	2,500	1,814,800
TOTAL		80,200[4]	207,600[4]	9,689,800

Demography

Population (2008): 9,675,000.
Density (2008): persons per sq mi 120.7, persons per sq km 46.6.
Urban-rural (2007[3]): urban 72.8%; rural 27.2%.
Sex distribution (2007[3]): male 46.69%; female 53.31%.
Age breakdown (2005): under 15, 15.2%; 15–29, 24.1%; 30–44, 22.0%; 45–59, 20.2%; 60–74, 12.8%; 75–84, 5.0%; 85 and over, 0.7%.
Population projection: (2010) 9,614,000; (2020) 9,316,000.
Ethnic composition (1999): Belarusian 81.2%; Russian 11.4%; Polish 3.9%; Ukrainian 2.4%; Jewish 0.3%; other 0.8%.
Religious affiliation (2000): Belarusian Orthodox 48.7%; Roman Catholic 13.2%; unaffiliated Christian 5.9%; other Christian 2.4%; Jewish 0.6%; Muslim 0.3%; nonreligious 24.0%; atheist 4.9%.
Major cities (2005[3]): Minsk 1,765,800; Homyel 481,200; Mahilyow 366,900; Vitsyebsk 342,700; Hrodna 316,700.

Vital statistics

Birth rate per 1,000 population (2005): 9.2 (world avg. 20.3); within marriage 75.9%; outside marriage 24.1%.
Death rate per 1,000 population (2005): 14.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): –5.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.21.
Marriage/divorce rates per 1,000 population (2005): 7.5/3.1.
Life expectancy at birth (2005): male 62.9 years; female 75.1 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 693.5; malignant neoplasms (cancers) 171.2; accidents, poisoning, and violence 161.6; diseases of the respiratory system 45.0.

National economy

Budget (2004). Revenue: Br 17,417,000,000 (tax revenue 72.7%, of which value-added tax 21.9%, tax on profits 9.3%, personal income tax 8.1%, excise tax 6.4%; nontax revenue 5.7%; other 21.6%). Expenditures: Br 17,595,000,000 (current expenditure 75.1%; development expenditure 4.6%; other 20.3%).
Public debt (external, outstanding; 2006): U.S.$846,000,000.
Household income and expenditure (2004). Average household size 3.1; income per household, n.a.; sources of money income: wages and salaries 49.2%, transfers 18.1%, other 32.7%; expenditure (2001): food and nonalcoholic beverages 53.6%, clothing and footwear 9.4%, housing and energy 7.2%, transport 6.3%, alcoholic beverages and tobacco products 5.9%.
Population economically active (2005): 4,426,300[5]; activity rate of total population 45.4% (participation rate [1999]: ages 15–64, 69.7%; female 53.1%; officially unemployed [December 2006] 1.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	161.1	229.6	294.8	348.1	384.0	409.9	455.8
Annual earnings index	208.8	321.1	425.5	589.7	786.7	.	.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 8,744,000, corn (maize) 5,410,000, sugar beets 3,624,000, barley 1,911,000, wheat 1,397,000, rye 1,305,000, cabbages 563,000, carrots and turnips 316,000, flax fibre and tow 39,000; livestock (number of live animals) 3,988,900 cattle, 3,641,800 pigs, 27,900,000 chickens; roundwood (2006) 8,716,000 cu m, of which fuelwood 13%; fisheries production (2006) 5,050 (from aquaculture 82%). Mining and quarrying (2005): potash 4,844,000; peat 2,408,000. Manufacturing (2006): fertilizers 5,469,000; cement 3,495,000; steel 1,607,000[6]; sausages 274,900; beer 3,320,000 hectolitres; footwear 10,900,000 pairs; refrigerators and freezers 1,050,000 units; tractors 49,200 units. Energy production (consumption): electricity (kW-hr; 2006) 31,800,000,000 ([2005] 34,999,000,000); coal (metric tons; 2005) none (168,000); crude petroleum (barrels; 2007) 12,800,000 ([2005] 145,400,000); petroleum products (metric tons; 2005) 17,137,000 (4,850,000); natural gas (cu m; 2005) 228,000,000 (20,407,000,000).
Gross national income (GNI; 2007): U.S.$40,897,000,000 (U.S.$4,220 per capita); purchasing power parity GNI (U.S.$10,740 per capita).

Structure of gross domestic product and labour force

	2006 in value Br '000,000	2006 % of total value	2003 labour force[7]	2003 % of labour force[7]
Agriculture, forestry	6,317	8.0	493,000	11.1
Mining	21,865	27.6	987,000	22.2
Manufacturing				
Construction	6,271	7.9	231,000	5.2
Transp. and commun.	7,318	9.2	265,000	5.9
Trade	8,131	10.3	257,000	5.8
Finance	29,329	37.0	57,000	1.3
Public admin., defense			84,000	1.9
Services			1,033,000	23.2
Other			1,039,000[8]	23.4[8]
TOTAL	79,231	100.0	4,446,000	100.0

Land use as % of total land area (2003)[9]: in temporary crops 26.8%, in permanent crops 0.6%, in pasture 15.4%; overall forest area (2005) 38.0%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 272; remittances (2007) 363; foreign direct investment (2004–06 avg.) 274. Disbursements for (U.S.$'000,000): tourism (2006) 735; remittances (2007) 111.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–1,071	–1,612	–2,717	–729	–2,584	–4,335
% of total	6.3%	7.5%	9.0%	2.2%	6.1%	8.2%

Imports (2006): U.S.$22,323,000,000 (crude petroleum 25.1%, nonelectrical machinery 10.6%, chemicals and chemical products 9.9%, food 6.7%, iron and steel 6.5%). *Major import sources:* Russia 58.6%; Germany 7.5%; Ukraine 5.5%; Poland 3.4%; China 2.5%.
Exports (2006): U.S.$19,739,000,000 (refined petroleum 34.1%; machinery and apparatus 11.4%; road vehicles 7.2%; food 6.9%, of which dairy products 3.2%; potassium chloride 5.1%; iron and steel 4.4%). *Major export destinations:* Russia 34.7%; The Netherlands 17.7%; U.K. 7.5%; Ukraine 6.3%; Poland 5.2%.

Transport and communications

Transport. Railroads (2007): length (2002) 5,533 km; passenger-km 9,366,000,000; metric ton-km cargo 47,933,000,000. Roads (2005): total length 94,797 km (paved 89%). Vehicles: passenger cars (2005) 1,771,398; trucks and buses (2001) 85,791. Air transport (2007): passenger-km 975,000,000; metric ton-km cargo 66,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,809	386	PCs	...	...	...
Telephones				Dailies	2004	887[11]	90[11]
Cellular	2006	5,960[12]	614[12]	Internet users	2007	6,000	619
Landline	2007	3,672	379	Broadband	2008	11[12]	1.2[12]

Education and health

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13)	4,187	138,744[13]	1,240,900	9.9[13]
Secondary (age 14–17)				
Voc., teacher tr	204	14,772[14]	154,100	9.4[14]
Higher	55	21,684[13]	383,000	15.5[13]

Literacy (2001): total population age 15 and over literate 99.7%; males literate 99.8%; females literate 99.6%.
Health (2007): physicians 46,900 (1 per 207 persons); hospital beds 108,900 (1 per 89 persons); infant mortality rate per 1,000 live births (2005) 6.3; undernourished population (2002–04) 400,000 (4% of total population based on the consumption of a minimum daily requirement of 1,970 calories).

Military

Total active duty personnel (November 2007): 72,940 (army 40.6%, air force and air defense 24.9%, centrally controlled units 34.5%). *Military expenditure as percentage of GDP* (2005): 7.2%[15]; per capita expenditure U.S.$38[15].

[1]Statutory number. [2]Currency re-denominated Jan. 1, 2000; 1,000 (old) rubles = 1 (new) ruble. [3]January 1. [4]Rounded area figures; exact area figures are 80,153 sq mi (207,595 sq km). [5]Based on official estimate of de jure population excluding armed forces. [6]2002. [7]Based on annual survey. [8]Includes 136,000 registered unemployed and 799,000 undistributed self-employed and unregistered unemployed. [9]25% of Belarusian territory severely affected by radioactive fallout from Chernobyl. [10]Imports c.i.f.; exports f.o.b. [11]Circulation of daily newspapers. [12]Subscribers. [13]2003–04. [14]2000–01. [15]Excludes expenditures on military pensions and paramilitary.

Internet resources for further information:
- **Ministry of Statistics and Analysis**
  http://www.belstat.gov.by/homep/en/main.html
- **Ministry of Foreign Affairs**
  http://www.mfa.gov.by

Belgium

Official name: Koninkrijk België (Dutch); Royaume de Belgique (French); Königreich Belgien (German) (Kingdom of Belgium).
Form of government: federal constitutional monarchy with two legislative bodies (Senate [71[1]]; House of Representatives [150]).
Chief of state: Monarch.
Head of government: Prime Minister.
Capital: Brussels.
Official languages: Dutch; French; German.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1£ = €1.24.

Area and population

Regions[2] / Provinces	Capitals	area sq mi	area sq km	population 2007 estimate
Brussels[3]	Brussels	63	162	1,031,215
Flanders	Brussels[4]	5,221[5]	13,522	6,117,440
Antwerp	Antwerp	1,107	2,867	1,700,570
East Flanders	Gent (Ghent)	1,151	2,982	1,398,253
Flemish Brabant	Leuven	813	2,106	1,052,467
Limburg	Hasselt	935	2,422	820,272
West Flanders	Brugge	1,214	3,145	1,145,878
Wallonia[6]	Namur[7]/Brussels[8]	6,504[5]	16,844[5]	3,435,879
Hainaut	Mons	1,462	3,786	1,294,844
Liège	Liège	1,491	3,862	1,047,414
Luxembourg	Arlon	1,714	4,440	261,178
Namur	Namur	1,415	3,666	461,983
Walloon Brabant	Wavre	421	1,091	370,460
TOTAL		11,787[5]	30,528	10,584,534

Demography

Population (2008): 10,697,000.
Density (2008): persons per sq mi 907.5, persons per sq km 350.4.
Urban-rural (2005): urban 97.2%; rural 2.8%.
Sex distribution (2005): male 48.94%; female 51.06%.
Age breakdown (2005): under 15, 16.8%; 15–29, 18.1%; 30–44, 21.9%; 45–59, 20.8%; 60–74, 14.1%; 75–84, 6.5%; 85 and over, 1.8%.
Population projection: (2010) 10,843,000; (2020) 11,353,000.
Ethnic composition (2000): Flemish 53.7%; Walloon (French) 31.6%; Italian 2.6%; French 2.0%; Arab 1.8%; German 1.5%; Berber 0.9%; other 5.9%.
Religious affiliation (2001): self-identified Roman Catholic 46.7%; other Christian 2.6%; Muslim 3.9%; nonreligious/secular/other 46.8%.
Major cities (2007): Brussels 1,809,242[9]; Antwerp 466,203; Gent (Ghent) 235,143; Charleroi 201,550; Liège 188,907; Mons 91,196.

Vital statistics

Birth rate per 1,000 population (2007): 11.4 (world avg. 20.3); within marriage 61.0%; outside of marriage 39.0%.
Death rate per 1,000 population (2007): 9.7 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2005): 1.72.
Marriage/divorce rates per 1,000 population (2006): 4.3/2.8.
Life expectancy at birth (2006): male 76.6 years; female 82.3 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 359.6, of which ischemic heart disease 145.5, cerebrovascular disease 89.7; malignant neoplasms (cancers) 275.3.

National economy

Budget (2005). Revenue: €149,218,000,000 (social security contributions 28.2%, personal income tax 24.3%, taxes on goods and services 23.0%). Expenditures: €149,504,000,000 (social insurance benefits 46.3%, of which health 12.6%; wages 24.1%; interest on debt 9.1%; capital expenditure 5.4%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugar beets 5,746,892, potatoes 2,877,685, wheat 1,480,710, corn (maize) 602,642, barley 365,049, chicory roots 361,305, apples 330,000, pears 218,000; livestock (number of live animals) 6,270,000 pigs, 2,639,700 cattle; roundwood 5,075,000 cu m, of which fuelwood 13%; fisheries production (2005) 25,767 (from aquaculture 5%). Mining and quarrying (2005): Belgian bluestone 1,200,000 cu m. Manufacturing (value added in €'000,000; 2005): chemicals and chemical products 8,903; base and fabricated metals 7,116; food/beverages/tobacco 6,046; transport equipment 3,331; electrical and optical equipment 3,264; value of traded polished diamonds handled in Antwerp (2005) U.S.$15,900,000,000[10]. Energy production (consumption): electricity (kW-hr; 2007) 88,278,000,000 (93,248,000,000[11]); hard coal (metric tons; 2005) none (7,474,000); lignite (metric tons; 2005) 109,000 (283,000); crude petroleum (barrels; 2005) none (235,000,000); petroleum products (metric tons; 2005) 27,934,000 (17,176,000); natural gas (cu m; 2005) none, (16,825,000,000).
Household income and expenditure. Avg. household size (2005) 2.4; average net income per household (2003) €24,455 (U.S.$27,602); sources of income (2003): wages and transfer payments 69.3%, property income 11.1%; expenditure (2004): housing 21.0%, food, beverages, tobacco 15.8%, transportation 13.4%, recreation and culture 8.6%.
Land use as % of total land area (2003): in temporary crops 27.6%, in permanent crops 0.8%, in pasture 17.7%; overall forest area (2005) 22.0%.
Population economically active (2006): total 4,647,200; activity rate 44.2% (participation rates: ages 15–64, 58.8%; female 44.4%; unemployed [2007] 6.9%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.5	104.2	105.8	108.0	111.0	113.0	115.1
Annual earnings index	102.8	105.4	107.4	109.8	112.5	115.0	116.9

Gross national income (GNI; 2007): U.S.$432,540,000,000 (U.S.$40,710 per capita); purchasing power parity GNI (U.S.$35,110 per capita).

Structure of gross domestic product and labour force

	2005 in value €'000,000	2005 % of total value	2006 labour force	2006 % of labour force
Agriculture	2,925	1.0	83,300	1.8
Mining	310	0.1	9,400	0.2
Manufacturing	45,351	15.2	715,200	15.4
Construction	12,911	4.3	292,900	6.3
Public utilities	5,418	1.8	35,100	0.8
Transp. and commun.	22,403	7.5	320,000	6.9
Trade, restaurants	38,825	13.0	699,500	15.1
Finance, real estate	74,349	24.9	560,000	12.1
Pub. admin., defense	19,344	6.5	422,100	9.1
Services	43,717	14.6	1,125,000	24.2
Other	32,989[12]	11.1[12]	384,700[13]	8.3[13]
TOTAL	298,541[5]	100.0	4,647,200	100.0[5]

Public debt (December 2006): U.S.$357,000,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 10,242; remittances (2007) 8,027; foreign direct investment (FDI; 2004–06 avg.) 49,824. Disbursements for (U.S.$'000,000): tourism (2006) 15,482; remittances (2007) 3,156; FDI (2004–06 avg.) 42,918.

Foreign trade[14]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007[15]
U.S.$'000,000	+17,709	+20,680	+20,893	+13,976	+15,466	+17,667
% of total	4.3%	4.2%	3.4%	2.1%	2.1%	2.3%

Imports (2006): U.S.$353,790,000,000 (mineral fuels 13.5%, road vehicles 10.6%, medicine and pharmaceuticals 8.9%, organic chemicals 7.6%, non-electrical machinery 6.3%). *Major import sources* (2006): The Netherlands 18.4%; Germany 17.5%; France 11.3%; U.K. 6.6%; Ireland 5.8%.
Exports (2006): U.S.$369,256,000,000 (road vehicles 11.9%, medicines and pharmaceuticals 8.9%, mineral fuels 7.7%, food 6.9%, organic chemicals 6.8%, plastics 5.2%, diamonds 4.2%). *Major export destinations* (2006): Germany 19.9%; France 17.0%; The Netherlands 12.0%; U.K. 8.0%.

Transport and communications

Transport. Railroads (2005): route length 3,536 km; (2005) passenger-km 9,117,000,000; metric ton-km cargo 8,130,000,000. Roads (2004): total length 150,567 km (paved 78%). Vehicles (2006): passenger cars 4,976,286; trucks and buses 638,579. Air transport (2007)[16]: passenger-km 7,069,000,000; metric ton-km cargo 80,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	5,800	557	PCs	2004	3,627	351
Telephones				Dailies	2004	1,706[17]	164[17]
Cellular	2006	9,660[18]	926[18]	Internet users	2005	4,800	458
Landline	2006	4,719	452	Broadband	2005	2,005[18]	191[18]

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling through lower-secondary education 39%; upper secondary/higher vocational 33%; university 28%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	4,596	64,125[19]	761,730[19]	11.9[19]
Secondary (age 12–17)	1,911	112,487	795,590	7.1
Higher	226	26,454	298,387	11.3

Health: physicians (2005) 42,176 (1 per 248 persons); hospital beds (2004) 70,865 (1 per 147 persons); infant mortality rate (2007) 3.1; undernourished population (2002–04) less than 2.5% of total population.

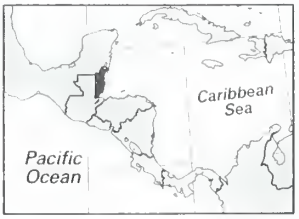
Military

Total active duty personnel (November 2007): 39,690 (army 31.7%, navy 4.0%, air force 18.8%, medical service 4.6%, joint service 40.9%). *Military expenditure as percentage of GDP* (2005): 1.1%; per capita expenditure U.S.$403.

[1]Excludes children of the monarch serving ex officio from age 18. [2]Belgium has a complex division of responsibilities between 3 administrative regions and 3 linguistic communities. [3]Officially, Brussels Capital Region. [4]Dual capital of Flemish region and community. [5]Detail does not add to total given because of rounding. [6]The German community (within Wallonia [2005 pop. est. 71,000; capital at Eupen]) lacks expression as an administrative region. [7]Capital of Walloon Region. [8]Capital of French Community. [9]Pop. of capital region; city proper pop. is 145,917. [10]Combined import/export value; excludes December. [11]2005. [12]Taxes less subsidies. [13]Unemployed. [14]Imports c.i.f.; exports f.o.b. [15]Excludes December. [16]Brussels Airlines only. [17]Circulation. [18]Subscribers. [19]2004.

Internet resources for further information:
- **National Bank of Belgium http://www.nbb.be**
- **Statistics Belgium http://www.statbel.fgov.be**

Belize



Official name: Belize.
Form of government: constitutional monarchy with two legislative houses (Senate [12[1, 2]]; House of Representatives [31[2]]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Belmopan.
Official language: English.
Official religion: none.
Monetary unit: Belize dollar (BZ$); valuation (Sept. 8, 2008)
1 U.S.$ = BZ$2.00;
1 £ = BZ$3.53.

Area and population

Districts	Capitals	area sq mi	area sq km	population 2007 estimate
Belize	Belize City	1,663	4,307	93,215
Cayo	San Ignacio/Santa Elena	2,006	5,196	73,325
Corozal	Corozal	718	1,860	36,365
Orange Walk	Orange Walk	1,790	4,636	47,145
Stann Creek	Dangriga	986	2,554	32,180
Toledo	Punta Gorda	1,704	4,413	29,250
TOTAL		8,867[3]	22,965[3, 4]	311,480

Demography

Population (2008): 323,000.
Density (2008): persons per sq mi 36.4, persons per sq km 14.1.
Urban-rural (2005): urban 50.2%; rural 49.8%.
Sex distribution (2007): male 50.66%; female 49.34%.
Age breakdown (2007): under 15, 38.9%; 15–29, 29.4%; 30–44, 17.7%; 45–59, 8.9%; 60–74, 3.8%; 75–84, 1.1%; 85 and over, 0.2%.
Population projection: (2010) 340,000; (2020) 411,000.
Doubling time: 31 years.
Ethnic composition (2000): mestizo (Spanish-Indian) 48.7%; Creole (predominantly black) 24.9%; Mayan Indian 10.6%; Garifuna (black-Carib Indian) 6.1%; white 4.3%; East Indian 3.0%; other or not stated 2.4%.
Religious affiliation (2000): Roman Catholic 49.6%; Protestant 31.8%, of which Pentecostal 7.4%, Anglican 5.3%, Seventh-day Adventist 5.2%, Mennonite 4.1%; other Christian 1.9%; nonreligious 9.4%; other 7.3%.
Major cities (2007): Belize City 63,670; San Ignacio/Santa Elena 18,265; Belmopan 16,435; Orange Walk 15,990; Dangriga 11,600.

Vital statistics

Birth rate per 1,000 population (2007): 28.3 (world avg. 20.3); (1997) within marriage 40.3%; outside of marriage 59.7%.
Death rate per 1,000 population (2007): 5.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 22.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 3.52.
Marriage/divorce rates per 1,000 population (2003): 6.3/0.6.
Life expectancy at birth (2007): male 66.4 years; female 70.1 years.
Major causes of death per 100,000 population (2001): diseases of the circulatory system 115.8; accidents 64.1; malignant neoplasms (cancers) 60.6; diseases of the respiratory system 47.0; violence and suicide 28.4.

National economy

Budget (2006–07). Revenue: BZ$598,048,000 (tax revenue 85.9%, of which taxes on goods and services 33.8%, taxes on international trade 28.5%, taxes on income and profits 22.6%; other revenue 14.1%). Expenditures: BZ$667,943,000 (current expenditure 84.1%; capital expenditure 15.9%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 1,250,000, oranges 225,000, bananas 90,000, grapefruit and pomelos 57,000, plantain 41,000, corn (maize) 34,000, papayas 29,300; livestock (number of live animals) 58,500 cattle, 1,600,000 chickens; roundwood (2006) 188,000 cu m, of which fuelwood 67%; fisheries production (2005) 14,548 (from aquaculture 73%). Mining and quarrying (2005): limestone 600,000; sand and gravel 160,000. Manufacturing (value added in U.S.$'000,000; 2004): food products and beverages (significantly citrus concentrate, flour, sugar, and beer) 69.2; textiles, clothing, and footwear 7.2; other (incl. cigarettes) 11.5. Energy production (consumption): electricity (kW-hr; 2005) 174,000,000 (204,000,000); coal, none (none); crude petroleum (barrels; 2007) 1,100,000[5] (n.a.); petroleum products (metric tons; 2005) none (266,000); natural gas, none (none).
Household income and expenditure. Average household size (2004) 4.4; average annual income of employed head of household (1993) BZ$6,450[6] (U.S.$3,225[6]); sources of income, n.a.; expenditure[7]: food, beverages, and tobacco 34.7%, transportation 17.0%, housing and energy 16.8%, clothing and footwear 9.2%.
Land use as % of total land area (2003): in temporary crops 3.1%, in permanent crops 1.4%, in pasture 2.2%; overall forest area (2005) 72.5%.
Population economically active (2005): total 110,786; activity rate of total population 38.2% (participation rates: ages 14 and over 59.4%; female 36.7%; unemployed 11.0%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.2	103.4	106.1	109.4	113.3	118.1	120.9

Gross national income (GNI; 2007): U.S.$1,157,000,000 (U.S.$3,800 per capita); purchasing power parity GNI (U.S.$6,030 per capita).

Structure of gross domestic product and labour force

	2005 in value BZ$'000	% of total value	labour force	% of labour force
Agriculture, fishing, forestry	269,600	12.2	19,250	17.4
Mining	10,300	0.5	211	0.2
Manufacturing	173,100	7.8	9,575	8.6
Construction	82,800	3.7	6,884	6.2
Public utilities	70,900	3.2	934	0.8
Transp. and commun.	246,700	11.2	6,365	5.7
Trade, restaurants	433,200	19.6	25,668	23.2
Finance, real estate, insurance	348,500	15.8	3,708	3.3
Pub. admin., defense	229,600	10.4	6,771	6.1
Services	146,000	6.6	18,523	16.7
Other	199,200[8]	9.0[8]	12,897[9]	11.6[9]
TOTAL	2,209,900	100.0	110,786	100.0[4]

Public debt (external, outstanding; September 2006): U.S.$929,600,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 253; remittances (2007) 75; foreign direct investment (2004–06 avg.) 104; official development assistance (2006) 7.6. Disbursements for (U.S.$'000,000): tourism (2006) 41; remittances (2007) 22.

Foreign trade[10]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
BZ$'000,000	–418.0	–374.4	–413.6	–344.6	–462.0	–370.8
% of total	28.0%	23.2%	24.7%	21.8%	26.2%	17.9%

Imports (2005): BZ$1,226,200,000 (mineral fuels and electricity 19.2%; machinery and transport equipment 16.3%; direct imports to commercial free zone 15.0%; food and live animals 9.8%; chemicals and chemical products 7.2%). *Major import sources:* U.S. *c.* 39%; Central American countries *c.* 19%; Mexico *c.* 9%; EU *c.* 7%; Caricom *c.* 2%.
Exports (2005): BZ$643,800,000 (domestic exports 60.4%, of which seafood products [significantly shrimp] 14.1%, citrus [mostly oranges] concentrate 11.9%, raw sugar 10.8%, bananas 7.9%, garments 5.3%; reexports [principally to Mexico] 39.6%). *Major export destinations*[11]: U.S. *c.* 52%; U.K. *c.* 22%; other EU *c.* 7%; Caricom *c.* 11%; Mexico *c.* 4%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 1,854 mi, 2,984 km (paved 14%). Vehicles (2003): passenger cars 36,952; trucks and buses 7,380. Air transport (2001)[12]: passenger arrivals 256,564, passenger departures 240,900; cargo loaded 186 metric tons, cargo unloaded 1,272 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	52	190	PCs	2002	35	132
Telephones				Dailies	2005	0[13]	0[13]
Cellular	2007	118[14]	411[14]	Internet users	2007	32	111
Landline	2007	34	118	Broadband	2007	6.5[14]	21[14]

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling 36.6%; primary education 40.9%; secondary 11.7%; postsecondary/advanced vocational 6.4%; university 3.8%; other/unknown 0.6%. *Literacy* (2001): total population age 14 and over literate 93.4%; males 93.6%; females 93.3%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 5–12)	275	2,618	62,074	23.7
Secondary (age 13–16)	43	1,074	15,344	14.3
Higher	...	97	722	7.4

Health (2004): physicians 221 (1 per 1,279 persons); hospital beds 650 (1 per 435 persons); infant mortality rate per 1,000 live births (2007) 21.2; undernourished population (2002–04) 10,000 (4% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2007)[15]: 1,050 (army 100%). *Military expenditure as percentage of GDP* (2004): 1.4%; per capita expenditure U.S.$55.

[1]All seats nonelected. [2]Excludes speaker, who may be elected from outside either legislative houses. [3]Includes offshore cays totaling 266 sq mi (689 sq km). [4]Detail does not add to total given because of rounding. [5]Crude petroleum production began in late 2005. [6]Estimated figure for about 33,000 employed heads of household. [7]Weights of consumer price index published by central bank in 2006. [8]Taxes less subsidies on products and less financial services indirectly measured. [9]Includes 146 not adequately defined and 12,197 unemployed. [10]Imports are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [11]Domestic exports only. [12]Belize international airport only. [13]Circulation. [14]Subscribers. [15]Foreign forces (2006): British army 30.

Internet resources for further information:
- **Central Bank of Belize http://www.centralbank.org.bz**
- **Statistical Institute of Belize http://statisticsbelize.org.bz**

Benin

Official name: République du Bénin (Republic of Benin).
Form of government: multiparty republic with one legislative house (National Assembly [83]).
Head of state and government: President, assisted by Prime Minister[1].
Capital[2]: Porto-Novo.
Official language: French.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Departments	Capitals	area sq mi	area sq km	population 2006 estimate
Alibori	Kandi	9,916	25,683	619,900
Atakora	Natitingou	7,899	20,459	634,600
Atlantique	Ouidah	1,248	3,233	982,300
Borgou	Parakou	9,772	25,310	861,900
Collines	Savalou	5,236	13,561	625,700
Donga	Djougou	4,128	10,691	400,200
Kouffo	Dogbo	928	2,404	621,800
Littoral	Cotonou	31	79	719,900
Mono	Lokossa	539	1,396	403,000
Ouémé	Porto-Novo	1,095	2,835	836,400
Plateau	Sakété	720	1,865	461,700
Zou	Abomey	1,971	5,106	673,500
TOTAL		43,484[3]	112,622	7,840,900

Demography

Population (2008): 8,295,000.
Density (2008): persons per sq mi 190.8, persons per sq km 73.7.
Urban-rural (2005): urban 38.8%; rural 61.2%.
Sex distribution (2007): male 49.90%; female 50.10%.
Age breakdown (2007): under 15, 45.7%; 15–29, 27.3%; 30–44, 15.5%; 45–59, 7.4%; 60–74, 3.4%; 75–84, 0.6%; 85 and over 0.1%.
Population projection: (2010) 8,731,000; (2020) 10,886,000.
Doubling time: 23 years.
Ethnic composition (2002)[4]: Fon 39.2%; Adjara 15.2%; Yoruba (Nago) 12.3%; Bariba 9.2%; Fulani 7.0%; Somba (Otomary) 6.1%; Yoa-Lokpa 4.0%; other 7.0%.
Religious affiliation (2002): Christian 42.8%, of which Roman Catholic 27.1%, Protestant 5.4%, indigenous Christian 5.3%; Muslim 24.4%; traditional beliefs 23.3%, of which voodoo 17.3%; nonreligious 6.5%; other 3.0%.
Major cities (2004): Cotonou 818,100; Porto-Novo 234,300; Parakou 227,900; Djougou 206,500; Abomey 126,800.

Vital statistics

Birth rate per 1,000 population (2007): 40.4 (world avg. 20.3).
Death rate per 1,000 population (2007): 10.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 30.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 5.66.
Marriage rate per 1,000 population (2002): n.a.[5]
Life expectancy at birth (2007): male 57.0 years; female 59.2 years.

National economy

Budget (2005). Revenue: CFAF 422,100,000,000 (tax revenue 79.2%; nontax revenue 11.7%; grants 9.1%). Expenditures: CFAF 455,300,000,000 (current expenditures 73.4%, of which interest on public debt 1.5%; development expenditure 26.8%; net lending –0.2%).
Public debt (external, outstanding; 2005): U.S.$1,762,000,000.
Gross national income (GNI; 2007): U.S.$5,120,000,000 (U.S.$570 per capita); purchasing power parity GNI (U.S.$1,310 per capita).

Structure of gross domestic product and labour force

	2005 in value CFAF '000,000,000	2005 % of total value	2002 labour force[6, 7]	2002 % of labour force[6, 7]
Agriculture	751.4	32.6	1,324,000	46.8
Mining	5.3	0.2	39,400	1.4
Manufacturing	184.6	8.0	253,100	8.9
Public utilities	28.4	1.2	2,800	0.1
Construction	92.9	4.0	70,300	2.5
Transp. and commun.	173.9	7.5	95,600	3.4
Trade, restaurants	382.4	16.6	815,400	28.8
Finance			2,800	0.1
Pub. admin., defense	491.4	21.3		
Services			205,300	7.2
Other	193.7[8]	8.4[8]	22,200	0.8
TOTAL	2,304.0	100.0[3]	2,830,900	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 2,525,000, yams 2,240,000, corn (maize) 900,000, seed cotton 313,500, oil palm fruit 275,000, sorghum 200,000, peanuts (groundnuts) 130,000, tomatoes 114,000, dry beans 80,500, pineapples 80,100, okra 77,500; livestock (number of live animals) 1,900,000 cattle, 1,439,600 goats, 811,200 sheep, 344,300 pigs, 15,050,000 chickens; roundwood 6,433,000 cu m, of which fuelwood 95%; fisheries production (2005) 38,407 (from aquaculture, negligible). Mining (2006): insignificant production of clay and gold. Manufacturing (value added in U.S.$'000,000; 1999): food products 74; textiles 42; beverages 36; bricks, tiles, and cement 21. Energy production (consumption): electricity (kW-hr; 2005) 107,000,000 (702,000,000); coal, none (none); crude petroleum (barrels; 2005) 137,000 (negligible); petroleum products (metric tons; 2005) none (796,000); natural gas, none (none).
Population economically active (2002): total 2,830,900; activity rate of total population 41.4% (participation rates: ages 15–64 [1997] 84.3%; female [1998] 50.8%; unemployed in Cotonou [April 2003] 6.8%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.0	106.6	108.2	109.1	115.0	119.3	120.9

Household income and expenditure. Average household size (2002) 5.6; income per household: n.a.; sources of income: n.a.; expenditure (1996)[9]: food and nonalcoholic beverages 38.2%, transportation 10.1%, expenditures in cafés and hotels 9.8%, housing and energy 9.5%, clothing and footwear 6.9%.
Land use as % of total land area (2003): in temporary crops 24.0%, in permanent crops 2.4%, in pasture 5.0%; overall forest area (2005) 21.3%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 103; remittances (2007) 173; foreign direct investment (2004–06 avg.) 60; official development assistance (2006) 375. Disbursements for (U.S.$'000,000): tourism (2005) 27; remittances (2007) 40.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFAF '000,000,000	–161.0	–161.5	–144.5	–154.6	–162.2	–232.6
% of total	20.5%	20.4%	19.4%	20.5%	17.4%	21.7%

Imports (2005): CFAF 454,600,000,000 (food products 31.2%; petroleum products 14.7%; machinery and transport equipment 13.6%). *Major import sources* (2004): China *c.* 32%; France *c.* 13%; Thailand *c.* 7%; Côte d'Ivoire *c.* 5%.
Exports (2005): CFAF 300,000,000,000 (domestic exports 59.5%, of which cotton 30.4%; reexports 40.5%). *Major export destinations* (2004): China *c.* 30%; India *c.* 19%; Ghana *c.* 6%; Niger *c.* 6%; Nigeria *c.* 4%; Indonesia *c.* 4%.

Transport and communications

Transport. Railroads (2004): length 359 mi, 578 km; (2002) passenger-km 62,194,000; (2002) metric ton-km cargo 88,832,000. Roads (2004): total length 11,800 mi, 19,000 km (paved 9.5%). Vehicles: passenger cars (2002) 103,000; trucks and buses (1996) 8,058. Air transport (2003): passengers carried 46,000; metric ton-km cargo 7,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	431	59	PCs	2005	32	4.2
Telephones				Dailies	2004	16[10]	2.2[10]
Cellular	2007	1,895[11]	210[11]	Internet users	2007	150	17
Landline	2007	110	12	Broadband	2007	2.0[11]	0.2[11]

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: no formal schooling 63.5%; primary education 18.7%; secondary 15.9%; postsecondary 1.9%. *Literacy* (2005): total percentage of population age 15 and over literate 43.2%; males literate 58.8%; females literate 28.4%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	4,682[12]	25,583	1,319,600	51.6
Secondary (age 12–18)	.	12,205	338,400	27.7
Voc., teacher tr.[13]	.	.	28,867	.
Higher[14]	2	678	21,553	31.8

Health (2001): physicians 923 (1 per 7,183 persons); hospital beds 590 (1 per 11,238 persons); infant mortality rate per 1,000 live births (2007) 67.8; undernourished population (2002–04) 800,000 (12% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2007): 4,750 (army 90.5%, navy 2.1%, air force 7.4%). *Military expenditure as percentage of GNP* (2005): 1.7%; per capita expenditure U.S.$10.

[1]Office of Prime Minister vacant from May 1998. [2]Porto-Novo, the official capital established under the constitution, is the seat of the legislature, but the president and most government ministers reside in Cotonou. [3]Detail does not add to total given because of rounding. [4]Data combine principal and related ethnic groups. [5]In 2002, 27% of all marriages were polygamous. [6]Age 10 years and over. [7]Based on census. [8]Import taxes and duties. [9]Weights of consumer price index components. [10]Circulation of daily newspapers. [11]Subscribers. [12]2001–02. [13]2002–03. [14]2003–04 data for Benin's 2 universities in Cotonou and Parakou only.

Internet resources for further information:

- **Institut National de la Statistique et de l'Analyse Economique**
  http://www.insae-bj.org
- **La Banque de France: La Zone Franc**
  http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm

Bermuda

Official name: Bermuda.
Political status: overseas territory (United Kingdom) with two legislative houses (Senate [11]; House of Assembly [36]).
Chief of state: British Monarch, represented by Governor.
Head of government: Premier.
Capital: Hamilton.
Official language: English.
Official religion: none.
Monetary unit: Bermuda dollar (Bd$); valuation (Sept. 8, 2008) 1 U.S.$ = Bd$1.00[1]; 1 £ = Bd$1.77.

Area and population

Municipalities	area sq mi	area sq km	population 2000 census
Hamilton	0.3	0.8	969
St. George	0.5	1.3	1,752
Parishes			
Devonshire	2.0	5.1	7,307
Hamilton	2.0	5.1	5,270
Paget	2.1	5.3	5,088
Pembroke[2]	1.8	4.6	10,337
St. George's[3]	3.5	8.0	3,699
Sandys	2.1	5.4	7,275
Smith's	1.8	4.7	5,658
Southampton	2.2	5.6	6,117
Warwick	2.0	5.1	8,587
TOTAL	20.5[4, 5]	53.1[4, 5]	62,059[6]

Demography

Population (2008): 65,100.
Density (2008): persons per sq mi 3,176, persons per sq km 1,226.
Urban-rural (2005): urban 100.0%; rural, none.
Sex distribution (2006): male 47.81%; female 52.19%.
Age breakdown (2006): under 15, 18.1%; 15–29, 17.6%; 30–44, 24.8%; 45–59, 22.7%; 60–74, 11.9%; 75–84, 3.9%; 85 and over, 1.0%.
Population projection: (2010) 65,000; (2020) 67,000.
Ethnic composition (2000): black 50.4%; British expatriates 29.0%; mulatto 10.0%; U.S. white 6.0%; Portuguese 4.5%; other 0.1%.
Religious affiliation (2000): Protestant 64.3%, of which Anglican 22.6%, Methodist 14.9%; Roman Catholic 14.9%; nonreligious 13.8%; other 6.0%; unknown 1.0%.
Major cities (2000): St. George 1,752; Hamilton 969.

Vital statistics

Birth rate per 1,000 population (2005): 13.1 (world avg. 20.3); (2002) within marriage 64.2%; outside of marriage 35.8%.
Death rate per 1,000 population (2005): 6.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 6.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.89.
Marriage/divorce rates per 1,000 population (2005): 12.9/3.8.
Life expectancy at birth (2006): male 75.8 years; female 80.1 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 209; malignant neoplasms (cancers) 185; diabetes mellitus 51; diseases of the respiratory system 41; diseases of the nervous system 33.

National economy

Budget (2004–05). Revenue: Bd$782,500,000 (payroll taxes 31.6%; customs duties 27.1%; taxes on international companies 6.3%; stamp duties 6.1%; taxes on land 5.4%; other 23.5%). Expenditures: Bd$809,000,000 (current expenditure 89.3%; development expenditure 10.7%).
Public debt (2004–05): U.S.$128,000,000.
Production (value in Bd$'000 except as noted). Agriculture, forestry, fishing (2006): vegetables 4,548, milk 1,880, eggs 337, fruits 333, flowers 193, honey 133; livestock (number of live animals; 2007) 900 horses, 600 cattle, 45,000 chickens; roundwood, n.a.; fisheries production (2005) 406 (from aquaculture, none). Mining and quarrying: crushed stone for local use. Manufacturing: industries include pharmaceuticals, cosmetics, electronics, fish processing, handicrafts, and small boat building[7]. Energy production (consumption): electricity (kW-hr; 2005) 665,000,000 (665,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (186,000); natural gas, none (none).
Household income and expenditure (2004). Average household size 2.3; average annual income per household Bd$106,233 (U.S.$106,233); sources of income: wages and salaries 65.1%, imputed income from owner occupancy 14.4%, self-employment 9.2%, net rental income 4.1%, other 7.2%; expenditure: housing 33.3%, household furnishings 13.8%, food and nonalcoholic beverages 13.7%, health and personal care 8.7%, transportation 8.0%, foreign travel 5.4%.
Population economically active (2000): total 37,879; activity rate of total population 61.0% (participation rates: ages 16–64, 84.8%; female 48.3%; unemployed [2005] 2.1%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.9	105.3	108.6	112.5	116.0	119.6	124.1

Gross national income (GNI; 2005): U.S.$5,056,000,000 (U.S.$78,538 per capita); purchasing power parity GNI, n.a.

Structure of gross domestic product and labour force

	2005 in value Bd$'000,000	% of total value	labour force[8]	% of labour force
Agriculture, fishing	39	0.8	649	1.7
Quarrying, Construction	331	6.8	3,494	9.0
Manufacturing	80	1.6	1,003	2.6
Public utilities	80	1.6	390	1.0
Transp. and commun.	302	6.2	2,782	7.1
Trade, restaurants	650	13.4	9,761	25.1
Finance, real estate	1,801	37.1	7,265	18.7
International business	1,062	21.9	4,213	10.8
Pub. admin., defense	234	4.8	4,056	10.4
Services	417	8.6	5,334	13.7
Other	–139[9]	–2.9[9]	—	—
TOTAL	4,857	100.0[5]	38,947	100.0[5]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 508; remittances, n.a.; foreign direct investment (FDI; 2004–06 avg.) 7,872. Disbursements for (U.S.$'000,000): tourism (2006) 277; remittances, n.a.; FDI (2004–06 avg.) 1,231.
Land use as % of total land area (2003): in temporary crops *c.* 2%, in permanent crops, n.a., in pasture, n.a.; overall forest area (2005) *c.* 20%.

Foreign trade

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
Bd$'000,000	–668	–671	–696	–781	–930	–939
% of total	86.5%	87.0%	86.7%	88.2%	93.0%	94.9%

Imports (2002): Bd$746,000,000 (food, beverages, and tobacco 20.2%; machinery 16.5%; chemicals and chemical products 13.9%; mineral fuels 7.8%; transport equipment 6.0%). *Major import sources:* United States 76%; Canada 5%; United Kingdom 5%; Caribbean countries (mostly Netherlands Antilles) 3%.
Exports (2002): Bd$57,000,000 (nearly all reexports [including sales of fuel to aircraft and ships and pharmaceuticals]; diamond market was established in 1990s). *Major export destinations:* mostly United States, United Kingdom, Norway, and Spain.

Transport and communications

Transport. Railroads: none. Roads (2002): total length 140 mi, 225 km (paved 100%)[10]. Vehicles (2006): passenger cars 22,379; trucks and buses 4,867. Air transport: passenger arrivals and departures (2005) *c.* 900,000; cargo loaded (2001) 909 metric tons, cargo unloaded (2001) 4,862 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	68	1,077	PCs	2002	34	535
Telephones				Dailies	2003	17[11]	268[11]
Cellular	2006	60[12]	916[12]	Internet users	2007	48	744
Landline	2006	58	889	Broadband	2006	24[12]	360[12]

Education and health

Educational attainment (2000). Percentage of total population age 15 and over having: no formal schooling 0.4%; primary education 7.0%; secondary 39.3%; postsecondary technical 25.7%; higher 26.8%; not stated 0.8%. *Literacy* (1997): total population age 15 and over literate, 98%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 5–10)	..	548	4,910	9.0
Secondary (age 11–17)	...	651	4,565	7.0
Higher[13]	...	...	...	...

Health: physicians (2006) 137 (1 per 478 persons); hospital beds (2005–06) 351 (1 per 186 persons); infant mortality rate per 1,000 live births (2001–03) 2.0; undernourished population, n.a.

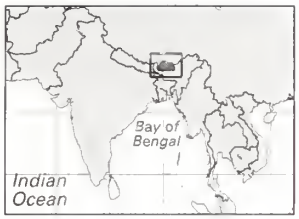
Military

Total active duty personnel (2006): 530; part-time defense force assists police and is drawn from Bermudian conscripts.

[1]The Bermuda dollar is at par with the U.S. dollar. [2]Excludes the area and population of the city of Hamilton. [3]Excludes the area and population of the town of St. George. [4]Includes 0.4 sq mi (1.1 sq km) of uninhabited islands. [5]Detail does not add to total given because of rounding. [6]Excludes 8,335 short-term visitors, 901 institutionalized persons, and 39 transients. [7]The economy of Bermuda is overwhelmingly based on service industries such as tourism, insurance companies, offshore financial centres, e-commerce companies, and ship repair facilities. [8]Employed only. [9]Taxes less imputed bank service charges. [10]Excludes 138 mi (222 km) of paved private roads. [11]Circulation. [12]Subscribers. [13]Many students attend universities abroad because Bermuda does not have a degree-conferring university, business school, or law school.

Internet resources for further information:
- **Bermuda Government, Department of Statistics**
  http://www.statistics.gov.bm
- **Bermuda Online: Economy**
  http://bermuda-online.org/economy.htm

Bhutan



Official name: Druk-Yul (Kingdom of Bhutan).
Form of government: constitutional monarchy[1] with two legislative houses (National Council [25[2]]; National Assembly [47]).
Chief of state: Monarch.
Head of government: Prime Minister.
Capital: Thimphu.
Official language: Dzongkha (a Tibetan dialect).
Official religion: Buddhism.
Monetary unit: ngultrum[3] (Nu); valuation (Sept. 8, 2008)
1 U.S.$ = Nu 44.65; 1 £ = Nu 78.88.

Area and population

Districts	Principal towns	area sq mi[4]	area sq km[4]	population 2005 census
Bumthang	Dekiling	1,008	2,611	16,116
Chhukha	Phuentsholing	667	1,728	74,387
Dagana	Dagana	519	1,344	18,222
Gasa	Gasa	1,616	4,185	3,116
Haa	Haa	637	1,651	11,648
Lhuntse	Autsho	1,067	2,764	15,395
Mongar (Monggar)	Mongar (Monggar)	726	1,881	37,069
Paro	Bondey	474	1,229	36,433
Pema Gatshel	Yalang	193	499	13,864
Punakha	Punakha	356	922	17,715
Samdrup Jongkhar	Samdrup Jongkhar	860	2,227	39,961
Samtse	Samtse	578	1,497	60,100
Sarpang	Gelaphu	845	2,188	41,549
Thimphu	Thimphu	712	1,843	98,676
Trashigang	Rangjung	845	2,188	51,134
Trashiyangtse	Trashiyangtse	534	1,382	17,740
Trongsa	Trongsa	667	1,728	13,419
Tsirang	Damphu	237	614	18,667
Wangdue Phodrang	Bajo	1,497	3,878	31,135
Zhemgang	Panbang	786	2,035	18,636
unallocated population				37,443
TOTAL		14,824	38,394	672,425[5]

Demography

Population (2008): 682,000.
Density (2008): persons per sq mi 46.0, persons per sq km 17.8.
Urban-rural (2005): urban 30.9%; rural 69.1%.
Sex distribution (2005): male 54.20%; female 45.80%.
Age breakdown (2005)[6]: under 15, 33.1%; 15–29, 32.0%; 30–44, 17.5%; 45–59, 10.4%; 60–74, 5.5%; 75–84, 1.3%; 85 and over, 0.2%.
Population projection: (2010) 700,000; (2020) 782,000.
Doubling time: 33 years.
Ethnic composition (2005): Bhutia (Ngalops) *c.* 50%; Nepalese (Gurung) *c.* 35%; Sharchops *c.* 15%.
Religious affiliation (2005): Buddhist *c.* 74%; Hindu *c.* 25%; Christian *c.* 1%.
Major towns (2001): Thimphu 50,510; Phuentsholing 13,292; Gedu 7,826; Gelaphu 6,384; Samtse 3,703.

Vital statistics

Birth rate per 1,000 population (2005): 20.5 (world avg. 20.3).
Death rate per 1,000 population (2005): 7.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 13.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.55.
Life expectancy at birth (2005): male 62.9 years; female 66.4 years.
Major causes of death per 100,000 population (2002): communicable, maternal, perinatal, and nutritional conditions 452; diseases of the circulatory system 227; malignant neoplasms 59; diseases of the respiratory system 48.

National economy

Budget (2005–06). Revenue: Nu 13,534,000,000 (grants 47.2%, tax revenue 27.8%, nontax revenue 22.5%, other 2.5%). Expenditures: Nu 16,151,000,000 (capital expenditures 55.1%, current expenditures 44.9%).
Public debt (external, outstanding; September 2007): U.S.$756,200,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 94,500, rice 69,000, potatoes 57,000, oranges 36,500, ginger 7,350, nutmeg, mace, and cardamom 5,800, green peppers and chilies 4,600, mustard seed 4,500; livestock (number of live animals) 385,000 cattle, 35,000 pigs, 26,000 horses; roundwood (2006) 4,679,000 cu m, of which fuelwood 97%; fisheries production (2005) 300 (from aquaculture, negligible). Mining and quarrying (2006): limestone 550,000; dolomite 410,000; gypsum 160,000; ferrosilicon 20,000. Manufacturing (value of sales in Nu '000,000; 2005): chemical products 857; cement 807; ferroalloys 651; wood board products 158. Energy production (consumption): electricity (kW-hr; 2005) 2,355,000,000 (739,000,000); coal (metric tons; 2005) 51,000 (65,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (51,000); natural gas, none (none).
Household income and expenditure. Average household size (2005) 4.6; income per household: n.a.[7]; sources of income: n.a.; expenditure (2003): food 35.6%, housing *c.* 27%, clothing *c.* 10%, education 2.9%, health care 1.3%.
Population economically active (2005): total 257,000; activity rate of total population 38.2% (participation rates: ages 15 and over, n.a.; female, n.a.; officially unemployed 3.1%).

Price index (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	103.4	106.0	108.2	113.2	119.1	125.1

Gross national income (GNI; 2007): U.S.$1,166,000,000 (U.S.$1,770 per capita); purchasing power parity GNI (U.S.$4,980 per capita).

Structure of gross domestic product and labour force

	2006 in value Nu '000,000	2006 % of total value	2005 labour force	2005 % of labour force
Agriculture, forestry	8,859	21 4	108,617	42.3
Mining	960	2 3	2,839	1.1
Manufacturing	2,924	7 1	4,882	1.9
Construction	6,020	14.5	30,887	12.0
Trade, restaurants	2,675	6.5	10,764	4 2
Public utilities	5,127	12.4	4,116	1 6
Transportation and communications	4,496	10.8	8,057	3.1
Finance and real estate	3,400	8 2	2,287	0.9
Pub. admin., defense	3,752	9.1	17,494	6.8
Services	1,450	3.5	10,353	4.0
Other	1,781[8]	4.3[8]	56,704[9]	22.1[9]
TOTAL	41,444	100.0[10]	257,000	100.0

Land use as % of total land area (2003): in temporary crops 3.2%, in permanent crops 0.4%, in pasture 8.8%; overall forest area (2005) 68.0%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 24; remittances (2005) 1.5; foreign direct investment (2004–06 avg.) 6; official development assistance (2006) 94. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.

Foreign trade[11]

Balance of trade (current prices)

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07
Nu '000,000	–4,796	–4,481	–4,766	–10,816	–5,103	+555.1
% of total	32.4%	29 3%	25.0%	39 5%	16.0%	1.2%

Imports (2005): Nu 17,035,000,000 (machinery, transport equipment, and base and fabricated metals 45.5%; mineral fuels 16.1%; food and beverages 14.9%; textiles 4.2%). *Major import sources:* India 75.1%; Japan 3.8%; Singapore 2.6%; Thailand 1.6%; South Korea 1.5%.
Exports (2005): Nu 11,386,000,000 (electricity 30.2%, copper wire and cable 9.6%, calcium carbide 6.2%, ferroalloys 6.0%, cement 5.4%, polyester yarn 4.2%). *Major export destinations:* India 87.6%; Hong Kong 6.0%; Bangladesh 4.9%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 2,581 mi, 4,153 km (paved 59%). Vehicles (2003): passenger cars 10,574; trucks and buses 3,852. Air transport (2002): passenger-km 61,000,000; metric ton-km cargo 5,700,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	25	33	PCs	2005	13	16
Telephones				Dailies	2008	. [12]	[12]
Cellular	2007	149[13]	172[13]	Internet users	2007	40	46
Landline	2007	30	34	Broadband	2007		

Education and health

Educational attainment: n.a. *Literacy* (2005): total population age 6 and over literate 59.5%; males literate 69.1%; females literate 48.7%.

Education (2004)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–12)	433	2,413	91,390	37.9
Secondary (age 13–16)		...	29,194	...
Higher[14]	3	113	1,045	9.2

Health (2003): physicians 140 (1 per 5,245 persons); hospital beds 1,093 (1 per 672 persons); infant mortality rate per 1,000 live births (2005) 48.8; undernourished population, n.a.

Military

Total active duty personnel (2002): about 6,000 (army 100%). *Military expenditure as percentage of GDP* (2005): *c.* 1.0%; per capita expenditure U.S.$11.

[1]Bhutan's first constitution was promulgated on July 18, 2008. [2]Includes 5 nonelected members. [3]Indian currency is also accepted legal tender; the ngultrum is at par with the Indian rupee. [4]Estimated district areas are derived from district area percentages of total national area as published in the *Statistical Yearbook of Bhutan* (2003). [5]Includes 634,972 residents and 37,453 temporary residents. [6]Based on 2005 census excluding temporary residents. [7]Bhutan reports household expenditure in lieu of income data; in 2003 average annual per-capita household expenditure was Nu 20,737 (U.S.$425). [8]Taxes less subsidies. [9]Includes 48,734 in ill-defined activities and 7,970 unemployed. [10]Detail does not add to total given because of rounding. [11]Imports c.i.f.; exports f.o.b. [12]Bhutan's first daily newspaper was launched on Oct. 30, 2008. [13]Subscribers. [14]National Institute of Education, Royal Institute of Management, and Sherubtse Degree College only.

Internet resources for further information:
- **Royal Monetary Authority of Bhutan http://www.rma.org.bt**

Bolivia

Official name: República de Bolivia (Republic of Bolivia).
Form of government: unitary multiparty republic with two legislative houses (Chamber of Senators [27]; Chamber of Deputies [130]).
Head of state and government: President.
Capitals: La Paz (administrative); Sucre (judicial).
Official languages: Spanish; Aymara; Quechua.
Official religion: Roman Catholicism.
Monetary unit: boliviano (Bs); valuation (Sept. 8, 2008) 1 U.S.$ = Bs 7.04; 1 £ = Bs 12.44.

Area and population

Departments	Capitals	area sq mi	area sq km	population 2001 census
Beni	Trinidad	82,458	213,564	362,521
Chuquisaca	Sucre	19,893	51,524	531,522
Cochabamba	Cochabamba	21,479	55,631	1,455,711
La Paz	La Paz	51,732[1]	133,985[1]	2,350,466
Oruro	Oruro	20,690	53,588	391,870
Pando	Cobija	24,644	63,827	52,525
Potosí	Potosí	45,644	118,218	709,013
Santa Cruz	Santa Cruz	143,098	370,621	2,029,471
Tarija	Tarija	14,526	37,623	391,226
TOTAL		424,164	1,098,581	8,274,325

Demography

Population (2008): 9,694,000[2].
Density (2008): persons per sq mi 22.9, persons per sq km 8.8.
Urban-rural (2005): urban 64.2%; rural 35.8%.
Sex distribution (2006): male 49.85%; female 50.15%.
Age breakdown (2005): under 15, 38.1%; 15–29, 27.1%; 30–44, 17.6%; 45–59, 10.4%; 60–74, 5.3%; 75–84, 1.3%; 85 and over, 0.2%.
Population projection: (2010) 10,031,000; (2020) 11,638,000.
Doubling time: 34 years.
Ethnic composition (2001): Amerindian *c.* 62%, of which Quechua *c.* 31%, Aymara *c.* 25%; mestizo *c.* 28%; white *c.* 10%, of which German *c.* 3%.
Religious affiliation (2001): Roman Catholic *c.* 78%; Protestant/independent Christian *c.* 16%; other Christian *c.* 3%, of which Mormon 1.8%; nonreligious 2.5%; other 0.5%.
Major cities (2001): Santa Cruz 1,116,059 (urban agglomeration [2005] 1,320,000); La Paz 789,585 (urban agglomeration [2005] 1,527,000); El Alto 647,350[3]; Cochabamba 516,683; Oruro 201,230; Sucre 193,873.

Vital statistics

Birth rate per 1,000 population (2007): 27.9 (world avg. 20.3).
Death rate per 1,000 population (2007): 7.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 20.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 3.54.
Life expectancy at birth (2007): male 63.3 years; female 67.5 years.
Major causes of death per 100,000 population (2000)[4]: circulatory system diseases 370.3; communicable diseases 122.6; external causes 109.7; malignant neoplasms (cancers) 73.5.

National economy

Budget (2006). Revenue: Bs 30,071,900,000 (taxes on hydrocarbons 35.4%; other tax income 49.5%; other 15.1%). Expenditures: Bs 26,876,500,000 (current expenditure 65.3%; capital expenditure 34.7%).
Public debt (external, outstanding; 2006): U.S.$3,203,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 6,200,000, soybeans 1,900,000, potatoes 755,000, corn (maize) 686,000, cassava 373,700, rice 276,000, bananas 188,000, sunflower seeds 170,000, sorghum 150,000, seed cotton 80,000, chestnuts (2006) 35,000, coffee 27,500[5]; livestock (number of live animals) 8,990,000 sheep, 7,515,000 cattle, 2,490,000 pigs, 1,925,000 goats, (2004) 1,900,000 llamas and alpacas, (2006) 717,000 asses, 456,000 horses; roundwood (2006) 3,080,060 cu m, of which fuelwood 74%; fisheries production (2006) 7,130 (from aquaculture 6%). Mining and quarrying (metal content; 2005): zinc 157,019; tin 18,694; silver 420; gold 8,906 kg. Manufacturing (value added in Bs '000,000; 2004)[6]: food products 1,545; beverages and tobacco products 581; petroleum products 497; textiles, clothing, and leather products 420; bricks, cement, and ceramics 314. Energy production (consumption): electricity (kW-hr; 2005) 5,230,000,000 (5,235,000,000); coal, none (none); crude petroleum (barrels; 2005) 16,600,000 (15,800,000); petroleum products (metric tons; 2005) 1,639,000 (1,849,000); natural gas (cu m; 2005) 11,875,000,000 (997,000,000).
Population economically active (2000): total 3,823,937; activity rate of total population 46.2% (participation rates: ages 15–64, 71.8%; female 44.6%; unemployed [2006] 8% in urban areas; underemployment widespread).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.6	102.5	106.0	110.7	116.6	121.6	132.2
Annual earnings index[7]	106.5	111.7		...	..	..	...

Gross national income (GNI; 2007): U.S.$11,964,000,000 (U.S.$1,260 per capita); purchasing power parity GNI (U.S.$4,140 per capita).

Structure of gross domestic product and labour force

	2004 in value Bs '000,000[6]	2004 % of total value	2002 labour force[8]	2002 % of labour force[8]
Agriculture	3,585	14.5	1,609,700	42.1
Mining	941	3.8	38,200	1.0
Crude petroleum, nat. gas	1,523	6.1		
Manufacturing	4,164	16.8	435,900	11.4
Construction	664	2.7	206,500	5.4
Public utilities	498	2.0	7,700	0.2
Transp. and commun	2,745	11.1	175,900	4.6
Trade, hotels	2,829	11.4	722,600	18.9
Finance, real estate	2,933	11.8	95,600	2.5
Pub. admin., defense	2,249	9.1	68,800	1.8
Services	1,125	4.5	462,600	12.1
Other	1,534[9]	6.2[9]	—	—
TOTAL	24,792[10]	100.0	3,823,500	100.0

Household income and expenditure. Average household size (2004) 4.3; annual income per household (1999): Bs 16,980 (U.S.$2,920); expenditure (2000): food 28.6%, transportation and communications 23.1%, rent and energy 10.3%, expenditures in cafés and hotels 9.5%, recreation and culture 7.1%, household furnishings 6.3%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 201; remittances (2007) 870; foreign direct investment (FDI; 2004–06 avg.) 22; official development assistance (2006) 581. Disbursements for (U.S.$'000,000): tourism (2006) 226; remittances (2007) 73; FDI (2004–06 avg.) 3.
Land use as % of total land area (2003): in temporary crops 2.8%, in permanent crops 0.2%, in pasture 31.2%; overall forest area (2005) 54.2%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−397.7	−33.8	+367.2	+456.1	+1,399.1	+707.9
% of total	12.7%	1.0%	8.9%	8.9%	19.9%	12.6%

Imports (2006): U.S.$2,824,200,000 (chemicals and chemical products 17.6%; road vehicles 10.5%; refined petroleum 9.4%; specialized industrial machinery 9.1%; iron and steel 7.1%). *Major import sources:* Brazil 20.4%; Argentina 15.8%; U.S. 12.1%; Chile 8.3%; Japan 7.9%; China 6.8%.
Exports (2006): U.S.$4,223,300,000 (natural gas 39.5%; zinc 13.0%; crude petroleum 8.2%; soybeans 8.2%; silver 3.9%; gold 3.0%). *Major export destinations:* Brazil 37.7%; U.S. 9.8%; Argentina 9.3%; Japan 9.0%; Peru 5.9%.

Transport and communications

Transport. Railroads (2004): route length 2,187 mi, 3,519 km; (1997) passenger-km 224,900,000; (1997) metric ton-km cargo 838,900,000. Roads (2004): total length 38,823 mi, 62,479 km (paved 7%). Vehicles (2004): passenger cars 171,642; trucks and buses 173,864. Air transport (2006): passenger-km 1,056,000,000; metric ton-km cargo 7,668,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,210	134	PCs	2004	210	23
Telephones				Dailies	2004	139[12]	16[12]
Cellular	2007	3,254[13]	342[13]	Internet users	2007	198	21
Landline	2007	678	71	Broadband	2007	34[13]	3.6[13]

Education and health

Educational attainment (2003). Percentage of population age 19 and over having: no formal schooling 14.6%; some to complete primary education 44.9%; some to complete secondary 24.8%; some to complete higher 15.5%; not specified 0.2%. *Literacy* (2003): total population age 15 and over literate 87.2%; males literate 93.1%; females literate 81.6%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	...	65,254	1,544,430	23.7
Secondary (age 12–17)	...	40,983	996,577	24.3
Higher	12[14]	16,262	311,015	19.1

Health: physicians (2002) 2,987 (1 per 2,827 persons); hospital beds (2005) 9,886 (1 per 954 persons); infant mortality rate (2007) 46.5; undernourished population (2002–04) 2,000,000 (23% of total population based on the consumption of a minimum daily requirement of 1,780 calories).

Military

Total active duty personnel (November 2007): 46,100 (army 75.5%, navy 10.4%, air force 14.1%). *Military expenditure as percentage of GDP* (2005): 1.6%; per capita expenditure U.S.$16.

[1]Includes the 1,425 sq mi (3,690 sq km) area of the Bolivian part of Lake Titicaca. [2]Estimate per *UN World Population Prospects (2006 Revision).* [3]Within La Paz urban agglomeration. [4]Based on a study of 10,744 deaths in the nine departmental capitals. [5]Bolivia was the third largest producer of coca in the world in 2005. [6]In 1990 prices. [7]Private sector only. [8]Population 10 years of age and over. [9]Import duties and indirect taxes less imputed bank service charges. [10]Detail does not add to total given because of rounding. [11]Imports c.i.f.; exports f.o.b. [12]Circulation of daily newspapers. [13]Subscribers. [14]2000.

Internet resources for further information:
- **Instituto Nacional de Estadística http://www.ine.gov.bo**
- **Banco Central de Bolivia http://www.bcb.gov.bo**

Bosnia and Herzegovina

Official name: Bosna i Hercegovina (Bosnia and Herzegovina).
Form of government: emerging republic with bicameral legislature (House of Peoples [15[1]]; House of Representatives [42]).
Chiefs of state: nominally a tripartite presidency.
International authority: [2].
Head of government: Prime Minister (Chairman of the Council of Ministers).
Capital: Sarajevo.
Official languages: Bosnian; Croatian; Serbian.
Official religion: none.
Monetary unit: convertible marka (KM[3, 4]); valuation (Sept. 8, 2008) 1 U.S.$ = KM 1.37; 1 £ = KM 2.42.

Area and population

Autonomous regions Cantons	area sq km	population 2005 estimate	Autonomous regions Cantons	area sq km	population 2005 estimate
Federation of Bosnia and Herzegovina (FBH)	26,110	2,328,434	Western Bosnia	4,934	84,157
Bosnia-Podrinje	505	35,214	Western Herzegovina	1,362	81,652
Central Bosnia	3,189	258,177	Zenica-Doboj	3,343	401,899
Herzegovina-Neretva	4,401	224,700	Republika Srpska (RS)	24,594	1,480,000
Posavina	325	44,548	**District**		
Sarajevo	1,277	403,028	Brčko	493	44,000
Tuzla-Podrinje	2,649	502,862	WATER	12	—
Una-Sava	4,125	292,197	TOTAL	51,209	3,852,000[5]

Demography

Population (2008): 3,858,000.
Density (2008): persons per sq mi 195.1, persons per sq km 75.3.
Urban-rural (2005): urban 45.7%; rural 54.3%.
Sex distribution (2005): male 48.63%; female 51.37%.
Age breakdown (2005): under 15, 17.6%; 15–29, 21.6%; 30–44, 22.8%; 45–59, 18.9%; 60–74, 15.5%; 75–84, 3.3%; 85 and over, 0.3%.
Population projection: (2010) 3,863,000; (2020) 3,756,000.
Ethnic composition (1999): Bosniac 44.0%; Serb 31.0%; Croat 17.0%; other 8.0%.
Religious affiliation (2002): Sunnī Muslim *c.* 40%; Serbian Orthodox *c.* 31%; Roman Catholic *c.* 15%; Protestant *c.* 4%; nonreligious/other *c.* 10%.
Major cities (2005): Sarajevo 380,000 (urban agglomeration [2004] 602,500); Banja Luka 165,100; Zenica 84,300; Tuzla 84,100; Mostar 63,500.

Vital statistics

Birth rate per 1,000 population (2007): 8.8 (world avg. 20.3); (2005) within marriage 88.8%; outside of marriage 11.2%.
Death rate per 1,000 population (2007): 8.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 0.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.19.
Marriage/divorce rates per 1,000 population (2007): 6.0/0.3.
Life expectancy at birth (2005): male 71[6] years; female 77[6] years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 466.2; malignant neoplasms (cancers) 162.8; endocrine and metabolic disorders 40.9; diseases of the respiratory system 32.3; accidents, murder, and suicide 30.6.

National economy

Budget (2004)[7]. Revenue: KM 6,191,000,000 (indirect taxes 42.1%, social security contributions 30.1%, taxes on trade 8.1%, other 19.7%). Expenditures: KM 6,601,000,000 (current expenditures 87.3%; development expenditures 12.3%).
Gross national income (GNI; 2007): U.S.$14,051,000,000 (U.S.$3,580 per capita); purchasing power parity GNI (U.S.$7,280 per capita).

Structure of gross domestic product and labour force

	2007 in value KM '000,000	2007 % of total value	1999 labour force	1999 % of labour force
Agriculture, forestry	1,716	7.9	21,000	2.0
Mining	439	2.0		
Manufacturing	2,307	10.7	224,000	21.6
Construction	1,040	4.8		
Public utilities	780	3.6	36,000	3.5
Transp. and commun.	1,546	7.1	45,000	4.3
Trade, restaurants	3,474	16.1	91,000	8.8
Finance, real estate	2,672	12.3	42,000	4.1
Pub. admin., defense	1,808	8.4	73,000	7.0
Services	2,248	10.4	96,000	9.3
Other	3,611[8]	16.7[8]	409,000[9]	39.4[9]
TOTAL	21,641	100.0	1,037,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 635,344, potatoes 387,239, wheat 257,112, plums and sloes 138,707, cabbages 82,410, apples 60,962, tobacco 3,265; livestock (number of live animals) 1,000,000 sheep, 712,000 pigs, 515,000 cattle, in addition, 285,000 beehives; roundwood (2006) 3,806,000 cu m, of which fuelwood 36%; fisheries production (2006) 9,626 (from aquaculture 79%). Mining (2005): bauxite 900,000; iron ore (metal content) 150,000; lime 120,000; barite (concentrate) 70. Manufacturing (value of exports in KM '000,000; 2003): base metals and fabricated metal products 498.3; wood and wood products 398.9; machinery and apparatus 286.1; textiles, wearing apparel, and footwear 228.0. Energy production (consumption): electricity (kW-hr; 2005) 12,718,000,000 (11,312,000,000); hard coal (metric tons; 2005) 3,550,000 (3,550,000); lignite (metric tons; 2005) 9,040,000 (9,380,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (1,165,000); natural gas (cu m; 2005) none (437,000,000).
Public debt (external, outstanding; 2006): U.S.$2,830,000,000.
Population economically active (2006): total 1,177,000; activity rate of total population 30.6% (participation rates: ages 15–64, 51.3%; female *c.* 36%; unemployed 31.1%).

Price index (2000 = 100)

	1999	2000	2001	2002	2003	2004	2005
Retail price index	99.0	100.0	98.4	95.8	96.0	95.8	98.1

Household income and expenditure. Average household size (2004) 3.6; income per household: n.a.; sources of income (1990): wages 53.2%, transfers 18.2%, self-employment 12.0%, other 16.6%; expenditure: n.a.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 592; remittances (2007) 2,514; foreign direct investment (2004–06 avg.) 537; official development assistance (2006) 494. Disbursements for (U.S.$'000,000): tourism (2006) 158; remittances (2007) 65.
Land use as % of total land area (2003): in temporary crops 19.6%, in permanent crops 1.9%, in pasture 20.4%; overall forest area (2005) 43.1%.

Foreign trade[10]

Balance of trade (current prices)

	2003	2004	2005	2006
U.S.$'000,000	−3,449	−4,084	−4,504	−4,131
% of total	55.0%	51.6%	49.4%	37.6%

Imports (2006): U.S.$7,559,000,000 (machinery and apparatus 16.2%, food 12.4%, petroleum 11.5%, chemicals and chemical products 10.7%, road vehicles 6.4%). *Major import sources:* Croatia 17.1%; Germany 12.4%; Serbia 9.8%; Italy 9.0%; Slovenia 7.6%.
Exports (2006): U.S.$3,428,000,000 (aluminum 10.2%, iron and steel 7.0%, metal manufactures 6.6%, parts for engines 6.1%, footwear 5.7%, sawn wood 5.5%). *Major export destinations:* Croatia 18.7%; Italy 13.8%; Serbia 13.2%; Germany 12.9%; Slovenia 12.2%.

Transport and communications

Transport. Railroads (2004): length 1,021 km; passenger-km (2005) 51,396,000; metric ton-km cargo (2005) 1,159,000,000. Roads (2005): total length 22,419 km (paved [2001] 64%). Vehicles (1996): passenger cars 96,182; trucks and buses 10,919. Air transport (2001): passenger-km 44,000,000; metric ton-km (2003) 1,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	950	248	PCs	...	...	.
Telephones				Dailies	2004	106[11]	28[11]
Cellular	2007	2,450[12]	623[12]	Internet users	2007	1,055	268
Landline	2007	1,065	271	Broadband	2007	85[12]	22[12]

Education and health

Educational attainment (2004)[13]. Percentage of population age 18 and over having: no formal schooling 8.0%; some to complete primary education 31.9%; lower secondary 24.4%; upper secondary 26.6%; higher 4.9%; advanced 4.2%. *Literacy* (2002): total population age 15 and over literate 94.6%; males literate 98.4%; females literate 91.1%.

Education (2002–03)

	schools	teachers	students	student/ teacher ratio
Primary (age 7–14)	1,862	20,874	363,072	17.4
Secondary (age 15–18)	301	10,792	169,497	15.7
Higher[13]	65	1,012	53,985	53.3

Health: physicians (2004) 5,004 (1 per 769 persons); hospital beds (2003) 11,981 (1 per 322 persons); infant mortality rate per 1,000 live births (2007) 5.3; undernourished population (2002–04) 350,000 (9% of total population based on the consumption of a minimum daily requirement of 2,000 calories).

Military

Total active duty personnel:[14, 15]. *Military expenditure as percentage of GDP* (2005): 1.9%; per capita expenditure U.S.$46.

[1]All seats are nonelective. [2]High Representative of the international community per the 1995 Dayton Peace Agreement/EU Special Representative. [3]The KM is pegged to the euro. [4]The euro also circulates as semiofficial legal tender. [5]Detail does not add to total given because of gross rounding. [6]Rough estimate. [7]Combined total for the separately constructed budgets of the FBH, RS, and Brčko District. [8]Taxes on products and imports less subsidies and imputed bank service charges. [9]Unemployed. [10]Imports c.i.f.; exports f.o.b. [11]Circulation. [12]Subscribers. [13]FBH only. [14]The FBH and RS had no combined military from 1995 through the end of 2005. A 9,000-person combined military was established in 2006. [15]EU-sponsored (EUFOR) peacekeeping troops (November 2007) 2,450.

Internet resources for further information:
- **Statistics of Bosnia and Herzegovina http://www.bhas.ba**
- **Central Bank http://www.cbbh.ba**

Botswana

Official name: Republic of Botswana.
Form of government: multiparty republic with one legislative body[1] (National Assembly [63[2]]).
Head of state and government: President.
Capital: Gaborone.
Official language: English[3].
Official religion: none.
Monetary unit: pula (P); valuation (Sept. 8, 2008) 1 U.S.$ = P 6.78; 1 £ = P 11.99.

Area and population

Districts	Capitals	area sq mi	area sq km	population 2001 census
Central	Serowe	57,039	147,730	501,381
Ghanzi	Ghanzi	45,525	117,910	33,170
Kgalagadi	Tsabong	41,290	106,940	42,049
Kgatleng	Mochudi	3,073	7,960	73,507
Kweneng	Molepolole	13,857	35,890	230,335
North East	Masunga	1,977	5,120	49,399
North West	Maun	50,166	129,930	142,970
South East	Ramotswa	687	1,780	60,623
Southern	Kanye	10,991	28,467	171,652
Cities				
Francistown	—	31	79	83,023
Gaborone	—	65	169	186,007
Towns				
Jwaneng	—	39	100	15,179
Lobatse	—	16	42	29,689
Selebi-Pikwe	—	23	60	49,849
Townships				
Orapa	—	7	17	9,151
Sowa	—	61	159	2,879
TOTAL		224,848[4]	582,356[4]	1,680,863

Demography

Population (2008): 1,842,000.
Density (2008): persons per sq mi 8.2, persons per sq km 3.2.
Urban-rural (2005): urban 53.6%; rural 46.4%.
Sex distribution (2007): male 50.07%; female 49.93%.
Age breakdown (2007): under 15, 35.8%; 15–29, 33.7%; 30–44, 16.3%; 45–59, 8.7%; 60–74, 3.9%; 75–84, 1.2%; 85 and over, 0.4%.
Population projection: (2010) 1,893,000; (2020) 2,098,000.
Ethnic composition (2000): Tswana 66.8%; Kalanga 14.8%; Ndebele 1.7%; Herero 1.4%; San (Bushman) 1.3%; Afrikaner 1.3%; other 12.7%.
Religious affiliation (2005): independent Christian 41.7%; traditional beliefs 35.0%; Protestant 12.8%; Muslim 0.3%; Hindu 0.2%; other 10.0%.
Major cities (2004): Gaborone 199,600; Francistown 89,100; Molepolole 58,600; Selebi-Pikwe 53,500; Maun 47,000.

Vital statistics

Birth rate per 1,000 population (2007): 23.2 (world avg. 20.3).
Death rate per 1,000 population (2007): 13.6 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 2.73.
Life expectancy at birth (2007): male 51.6 years; female 49.6 years.
Adult population (ages 15–49) *living with HIV* (2007): 23.9%[5] (world avg. 0.8%).

National economy

Budget (2005–06). Revenue: P 21,697,300,000 (tax revenue 88.2%, of which mineral royalties 50.2%, customs duties and excise tax 16.1%, general sales tax 8.9%; nontax revenue 10.8%; grants 1.0%). Expenditures: P 20,122,200,000 (general government services including defense 27.7%, education 24.5%, economic services 15.4%, health 12.4%, transfers 9.0%).
Public debt (external, outstanding; 2006): U.S.$384,000,000.
Population economically active (2001): total 587,882[6]; activity rate of total population 35.0%[6] (participation rates: ages 15–64, 57.6%[6]; female 43.8%[6]; unemployed [2004] more than 20%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	106.6	115.1	125.7	134.4	146.0	162.9	174.4
Monthly earnings index[7]	111.4	127.6	137.1	..	...	...	...

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): roots and tubers 93,000, sorghum 33,000, pulses 17,500, corn (maize) 12,000, sunflower seeds 7,000; livestock (number of live animals) 3,100,000 cattle, 1,960,000 goats, 300,000 sheep; roundwood (2005) 765,750 cu m, of which fuelwood 86%; fisheries production (2005) 132 (from aquaculture, none). Mining and quarrying (2006): soda ash 255,677; nickel ore (metal content) 38,000; copper ore (metal content) 24,300; diamonds 34,293,000 carats[8]. Manufacturing (value added in U.S.$'000,000; 2004): beverages 50; motor vehicles (1997) 33; textiles 12; tanned and processed leather 2. Energy production (consumption): electricity (kW-hr; 2005) 912,000,000 (2,602,000,000); hard coal (metric tons; 2006) 962,000 ([2004] 916,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (n.a.).
Land use as % of total land area (2003): in temporary crops 0.7%, in permanent crops 0.01%, in pasture 45.2%; overall forest area (2005) 21.1%.

Gross national income (GNI; 2007): U.S.$10,991,000,000 (U.S.$5,840 per capita); purchasing power parity GNI (U.S.$12,420 per capita).

Structure of gross domestic product and labour force

	2004–05 in value P '000,000	2004–05 % of total value	2001 labour force[9]	2001 % of labour force[9]
Agriculture	994	2.2	55,300	9.9
Mining	14,767	33.3	13,099	2.3
Manufacturing	1,787	4.0	38,968	7.0
Construction	2,356	5.3	58,572	10.5
Public utilities	1,214	2.7	3,837	0.7
Transp. and commun.	1,566	3.5	15,213	2.7
Trade, hotels	5,168	11.7	73,837	13.2
Finance, real estate	5,279	11.9	30,061	5.4
Pub. admin., defense	6,885	15.5	69,960	12.5
Services	1,711	3.9	86,299	15.4
Other	2,600[10]	5.9[10]	113,607[11]	20.3[11]
TOTAL	44,327	100.0[4]	558,753	100.0[4]

Household income and expenditure (2002–03). Average household size (2004) 4.3; average annual disposable income per household P 29,095 (U.S.$5,320), of which cash income P 25,519 (U.S.$4,670); expenditure: food and nonalcoholic beverages 23.7%, transportation 15.6%, housing and energy 12.9%, alcoholic beverages and tobacco 9.6%, household furnishings 8.0%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 537; remittances (2007) 117; foreign direct investment (FDI; 2004–06 avg.) 316; official development assistance (2006) 65. Disbursements for (U.S.$'000,000): tourism (2006) 277; remittances (2007) 118.

Foreign trade[12]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+588	+891	+878	+1,148	+1,452	+1,150
% of total	14.3%	17.3%	14.3%	15.0%	19.2%	12.1%

Imports (2005): U.S.$3,247,000,000 (machinery and apparatus 16.3%; food, beverages, and tobacco 13.7%; mineral fuels 13.3%; transport equipment 12.5%; chemical and rubber products 11.9%). *Major import sources:* Customs Union of Southern Africa (CUSA) 85.1%; Europe 6.5%; Zimbabwe 1.5%.
Exports (2005): U.S.$4,395,000,000 (diamonds 75.1%; copper-nickel matte 10.3%; textiles 5.0%; meat products 1.7%). *Major export destinations:* Europe 77.0%, of which U.K. 75.7%; CUSA 9.0%; Zimbabwe 4.1%.

Transport and communications

Transport. Railroads (2002): route length 552 mi, 888 km; (2001) passenger-km 106,000,000; (2001) metric ton-km cargo 747,000,000. Roads (2004): total length 24,455 km (paved 33%). Vehicles (2005): passenger cars 82,056; trucks and buses 74,387. Air transport (2002)[13]: passenger-km 96,000,000; metric ton-km cargo 300,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	78	44	PCs	2005	86	49
Telephones				Dailies	2004	80[14]	45[14]
Cellular	2007	1,427[15]	758[15]	Internet users	2007	80	43
Landline	2006	137	78	Broadband	2005	1.6[15]	—[15]

Education and health

Educational attainment (1993). Percentage of population age 25 and over having: no formal schooling 34.7%; primary education 44.1%; some secondary 19.8%; postsecondary 1.4%. *Literacy* (2005): total population over age 15 literate 81.4%; males literate 78.6%; females literate 84.1%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13)	773	12,717	328,692	25.8
Secondary (age 14–18)	278	10,620	225,526	21.2
Teacher training	6[16]	...	3,049	...
Higher[17]	1	796	15,720	19.7

Health (2006): physicians 526 (1 per 3,346 persons); hospital beds 3,911 (1 per 450 persons); infant mortality rate per 1,000 live births (2007) 44.0; undernourished population (2002–04) 600,000 (32% of total population based on the consumption of a minimum daily requirement of 1,860 calories).

Military

Total active duty personnel (November 2007): 9,000 (army 94.4%, navy, none [landlocked], air force 5.6%). *Military expenditure as percentage of GDP* (2005): 3.0%; per capita expenditure U.S.$177.

[1]In addition, the Ntlo ya Dikgosi (known as the House of Chiefs in English), a 35-member body consisting of chiefs, subchiefs, and associated members, serves in an advisory capacity to the government. [2]Includes 4 specially elected members and 2 ex officio members. [3]Tswana is the national language. [4]Detail does not add to total given because of rounding. [5]Statistically derived midpoint within range. [6]Includes military and paramilitary. [7]Citizens only. [8]About 70% gem and near-gem quality (Botswana is the world's leading producer of diamonds by value). [9]Excludes military and paramilitary. [10]Import duties and indirect taxes less subsidies and less imputed bank service charges. [11]Includes 109,518 unemployed. [12]Imports c.i.f.; exports f.o.b. [13]Air Botswana only. [14]Circulation of daily newspapers. [15]Subscribers. [16]2003. [17]University of Botswana only.

Internet resources for further information:
- **Central Statistical Office http://www.cso.gov.bw**
- **Bank of Botswana http://www.bankofbotswana.bw**

Brazil

Official name: República Federativa do Brasil (Federative Republic of Brazil).
Form of government: multiparty federal republic with 2 legislative houses (Federal Senate [81]; Chamber of Deputies [513]).
Chief of state and government: President.
Capital: Brasília.
Official language: Portuguese.
Official religion: none.
Monetary unit: real (R$, plural reais); valuation (Sept. 8, 2008) 1 U.S.$ = R$1.74; 1 £ = R$3.07.

Area and population

States	Capitals	area sq mi	area sq km	population 2007 census
Acre	Rio Branco	58,912	152,581	653,620
Alagoas	Maceió	10,721	27,768	3,014,979
Amapá	Macapá	55,141	142,815	585,073
Amazonas	Manaus	606,468	1,570,746	3,167,668
Bahia	Salvador	218,029	564,693	14,079,966
Ceará	Fortaleza	57,462	148,826	8,183,880
Espírito Santo	Vitória	17,791	46,078	3,351,327
Goiás	Goiânia	131,308	340,087	5,644,460
Maranhão	São Luís	128,179	331,983	6,117,996
Mato Grosso	Cuiabá	348,788	903,358	2,854,456
Mato Grosso do Sul	Campo Grande	137,887	357,125	2,265,021
Minas Gerais	Belo Horizonte	226,460	586,528	19,261,816
Pará	Belém	481,736	1,247,690	7,070,867
Paraíba	João Pessoa	21,792	56,440	3,640,538
Paraná	Curitiba	76,956	199,315	10,279,545
Pernambuco	Recife	37,958	98,312	8,487,072
Piauí	Teresina	97,116	251,529	3,029,916
Rio de Janeiro	Rio de Janeiro	16,871	43,696	15,406,488
Rio Grande do Norte	Natal	20,385	52,797	3,014,228
Rio Grande do Sul	Porto Alegre	108,784	281,749	10,582,324
Rondônia	Porto Velho	91,729	237,576	1,454,237
Roraima	Boa Vista	86,602	224,299	394,192
Santa Catarina	Florianópolis	36,813	95,346	5,868,014
São Paulo	São Paulo	95,834	248,209	39,838,127
Sergipe	Aracaju	8,459	21,910	1,938,970
Tocantins	Palmas	107,190	277,621	1,248,158
Federal District				
Distrito Federal	Brasília	2,240	5,802	2,455,903
TOTAL		3,287,612[1,2]	8,514,877[1,2]	183,888,841

Demography

Population (2008): 187,163,000.
Density (2008): persons per sq mi 56.9, persons per sq km 22.0.
Urban-rural (2005): urban 82.8%; rural 17.2%.
Sex distribution (2005): male 49.34%; female 50.66%.
Age breakdown (2005): under 15, 27.8%; 15–29, 27.6%; 30–44, 21.7%; 45–59, 14.1%; 60–74, 6.5%; 75–84, 1.8%; 85 and over, 0.5%.
Population projection: (2010) 192,013,000; (2020) 212,615,000.
Doubling time: 63 years.
Racial composition (2000): white 53.7%; mulatto and mestizo 39.1%; black and black/Amerindian 6.2%; Asian 0.5%; Amerindian 0.4%.
Religious affiliation (2005)[3]: Roman Catholic 65.1%; Protestant 12.7%, of which Assemblies of God 9.2%; independent Christian 10.7%, of which Universal Church of the Kingdom of God 2.2%; Spiritist (Kardecist) 1.3%; Jehovah's Witness 0.7%; African and syncretic religions 0.4%; Muslim 0.4%; nonreligious/other 8.7%.
Major cities[4] *and metropolitan areas* (2007): São Paulo 10,238,500 (19,226,426); Rio de Janeiro 6,093,500 (11,563,302); Belo Horizonte 2,412,900 (5,450,084); Porto Alegre 1,379,100 (3,896,515); Recife 1,533,600 (3,654,534); Salvador 2,891,400 (3,598,454); Brasília 2,348,600 (3,507,662); Fortaleza 2,431,400 (3,436,515); Curitiba 1,797,400 (3,124,596); Campinas 1,022,000 (2,635,261); Belém 1,399,800 (2,043,543); Goiânia 1,236,400 (1,973,892); Manaus 1,602,100 (1,612,475); Vitória 314,000 (1,609,532).

Other principal cities[4]/metropolitan areas (2007)

	population		population
Santos	416,100/1,606,143	Nova Iguaçu	830,700[5]
São Luis	922,200/1,210,027	Teresina	737,100/778,341
Guarulhos	1,209,600[6]	São Bernardo do Campo	767,800[6]
Natal	774,200/1,174,886	Campo Grande	716,200/724,638
Maceió	871,900/1,089,295	Londrina	482,600/711,611
Joinville	470,400/1,041,494	Osasco	701,000[6]
João Pessoa	675,000/1,004,580	Santo André	667,900[6]
São Gonçalo	960,800[6]	Jaboatão	650,400[7]
Florianópolis	385,000/940,518	Blumenau	270,700/617,462
Duque de Caxias	839,300[5]		

Families. Average family size (2005) 3.2; (1996) 1–2 persons 25.2%, 3 persons 20.3%, 4 persons 22.2%, 5–6 persons 23.3%, 7 or more persons 9.0%.
Emigration (2000): Brazilian emigrants living abroad 1,887,895; in the U.S. 42.3%, in Paraguay 23.4%, in Japan 12.0%.
Immigration (2000): foreign-born immigrants living in Brazil 683,830; from Europe 56.3%, of which Portugal 31.2%; South/Central America 21.0%; Asia 17.8%, of which Japan 10.4%.

Vital statistics

Birth rate per 1,000 population (2006): 17.3 (world avg. 20.3).
Death rate per 1,000 population (2006): 6.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 11.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.30.
Life expectancy at birth (2006): male 68.7 years; female 76.2 years.
Marriage/divorce rates per 1,000 population (2005): 6.3/1.3.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 151.6; malignant neoplasms (cancers) 72.7; diseases of the respiratory system 53.6; violence and suicide 32.5; accidents 31.0; diseases of the digestive system 26.0; infectious and parasitic diseases 25.6.
Adult population (ages 15–49) *living with HIV* (2007): 0.6%; (world avg. 0.8%).

Social indicators

Educational attainment (2005). Percentage of population age 25 and over having: no formal schooling or less than one year of primary education 15.0%; 1 to 3 years of primary education 13.7%; complete primary/incomplete secondary 40.2%; complete secondary 18.8%; 1 to 3 years of higher education 3.8%; 4 years or more of higher education 8.0%; unknown 0.5%.

Distribution of income (2003)

percentage of national income by decile/quintile

1	2	3	4	5	6	7	8	9	10 (highest)
0.8	1.8	— 6.2 —		— 10.7 —		— 18.4 —		16.3	45.8

Quality of working life. Proportion of employed population receiving minimum wage (2002): 53.5%. Number and percentage of children (age 5–17) working: 5,400,000 (12.6% of age group).
Access to services (1999)[8]. Proportion of households having access to: electricity (2002) 96.0%, of which urban households having access 98.8%, rural households having access 73.2%; safe public (piped) water supply 79.8%, of which urban households having access 92.3%, rural households having access 24.9%; public (piped) sewage system 43.6%, of which urban households having access 52.5%, rural households having access 4.5%; no sewage disposal 8.5%, of which urban households having no disposal 2.9%, rural households having no disposal 32.9%.
Social participation. Voter turnout at last (October 2006) national legislative election: 83.3%. Trade union membership in total workforce (2001): 19,500,000. Practicing Roman Catholic population in total affiliated Roman Catholic population (2000): large cities 10–15%; towns and rural areas 60–70%.
Social deviance. Annual murder rate per 100,000 population (2002): Brazil 28; Rio de Janeiro only, 56; São Paulo only, 54.
Leisure. Favourite leisure activities include: playing soccer, dancing, rehearsing all year in neighbourhood samba groups for celebrations of Carnival, and competing in water sports, volleyball, and basketball.
Material well-being (2003). Households possessing: television receiver 89.9%, of which urban 94.5%, rural 69.4%; refrigerator 86.7%, of which urban 91.7%, rural 60.0%; washing machine 34.0%, of which urban 38.1%, rural 10.0%.

National economy

Gross national income (GNI; 2007): U.S.$1,133,030,000,000 (U.S.$5,910 per capita); purchasing power parity GNI (U.S.$9,370 per capita).

Structure of gross domestic product and labour force

	2003 in value R$'000,000	2003 % of total value	2004 labour force[8]	2004 % of labour force
Agriculture, forestry	138,191	8.9	17,733,900	19.1
Mining	54,888	3.5	325,400	0.4
Public utilities	47,594	3.1	353,600	0.4
Manufacturing	337,457	21.7	11,723,600	12.6
Construction	100,951	6.5	5,354,400	5.8
Transportation and communications	78,337	5.0	3,994,200	4.3
Trade, hotels	107,501	6.9	17,676,300	19.0
Finance, real estate	240,003	15.4	5,719,400	6.2
Pub. admin., defense	144,884	9.3	4,203,900	4.5
Services	220,459	14.2	17,380,200	18.7
Other	85,917[9]	5.5[9]	8,495,300[10]	9.1[10]
TOTAL	1,556,182	100.0	92,860,100[11]	100.0[2]

Budget (2004). Revenue: R$422,450,000,000 (tax revenue 76.4%, of which income tax 24.3%, social security contributions 18.2%, value-added tax on industrial products 5.4%; social welfare contributions 22.2%; other 1.4%). Expenditures: R$372,730,000,000 (social security and welfare 33.8%; personnel 23.5%; transfers to state and local governments 18.1%; other 24.6%).
Public debt (external, outstanding; 2005): U.S.$94,497,000,000.
Production ('000 metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 514,080, soybeans 58,197, corn (maize) 51,590, cassava 27,313, oranges 18,279, rice 11,080, bananas 6,972, wheat 3,998, seed cotton 3,854, potatoes 3,394, tomatoes 3,364, dry beans 3,330, coconuts 2,771, pineapples 2,666, coffee 2,178, papayas 1,898, cashew apples (2006) 1,660, mangoes and guavas 1,546, sorghum 1,386, grapes 1,342, dry onions 1,302, apples 1,094, lemons and limes 1,060, tobacco 919, oil palm fruit 590, maté 435, peanuts (groundnuts) 225, cacao beans 221, cashews 176, natural rubber 106, garlic 93, Brazil nuts (2006) 30; livestock (number of live animals) 207,170,000 cattle, 34,080,000 pigs, 15,600,000 sheep, 5,800,000 horses; roundwood (2006) 239,550,000 cu m, of which fuelwood 58%; fisheries production (2005) 1,008,066 (from aquaculture 26%). Mining and quarrying (metric tons; 2004): iron ore (metal content) 169,300,000 (world rank: 1); columbium (niobium) 39,741 of pyrochlore in concentrates[12] (world rank: 1); bauxite 19,700,000 (world rank: 2); manganese (metal content in concentrate) 3,143,000 (world rank: 2); tantalum 277 (world rank: 2); asbestos fibre 231,115 (world rank: 4); tin (mine output, metal content) 12,468 (world rank: 5); kaolin (marketable product) 2,148,000; copper (metal content) 103,153; nickel (metal content in ore) 51,886; gold 47,596 kg; diamonds 300,000 carats.

Land use as % of total land area (2003): in temporary crops 7.0%, in permanent crops 0.9%, in pasture 23.3%; overall forest area (2005) 57.2%.

Manufacturing enterprises (2004)

	number of employees	wages of employers as a % of avg. of all mfg. wages	value added (in U.S.$'000,000)
Food products	1,124,100	68.1	21,279
Petroleum products	27,000	539.6	15,533
Motor vehicles and parts	350,500	179.0	12,598
Iron and steel	115,100	205.1	11,444
Paints, soaps, pharmaceuticals, and related products	240,000	188.5	10,006
Nonelectrical machinery and apparatus	409,400	128.3	9,395
Industrial chemicals	92,700	232.4	8,223
Electrical machinery and apparatus[13]	240,700	139.3	6,728
Paper and paper products	152,200	137.4	6,280
Fabricated metal products	360,300	88.0	5,307
Bricks, tiles, cement, and related products	275,900	72.6	4,424
Beverages	161,600	98.2	4,352
Plastics	239,500	87.9	3,683
Textiles	305,700	69.0	3,547
Publishing	126,000	143.7	3,424
Footwear, leather processing	449,600	49.6	3,261
Nonferrous base metals	44,000	192.8	3,071
Wood and wood products (excl. furniture)	257,400	52.0	2,674
Clothing	483,900	40.3	2,148
Rubber products	84,900	125.7	2,077

Population economically active (2004)[8]: total 92,860,100; activity rate of total population 51.1% (participation rates: ages 15–64, 73.2%; female 43.1%; unemployed [February 2006–January 2007] 10.0%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	106.8	115.9	132.9	141.7	151.4	157.8	163.5
Monthly earnings index	110.7	118.2	...	.	...	...	...

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 4,316; remittances (2007) 4,382; foreign direct investment (FDI; 2004–06 avg.) 17,331; official development assistance (2006) 82. Disbursements for (U.S.$'000,000): tourism (2006) 5,764; remittances (2007) 896; FDI (2004–06 avg.) 13,509.

Retail trade enterprises (1996)

	no. of businesses	total no. of employees	annual wage as a % of all trade wages	annual values of sales in R$'000,000
General merchandise stores (including food products)	10,382	437,452	131.2	35,766
Vehicles, new and used	9,348	202,892	229.9	30,926
Gas stations	20,388	210,250	124.7	23,199
Electronics, kitchen equipment, musical instruments	18,245	158,755	143.7	14,855
Metal products, lumber, glass, and construction materials	81,303	386,285	90.1	14,047
Vehicles, parts	55,534	252,731	110.6	10,881
Pharmaceutical and cosmetic products	50,778	240,633	94.2	9,658
Clothing and apparel	128,908	428,150	76.4	9,023
Food, beverages, and tobacco	135,672	378,102	60.7	6,900

Households. Average household size (2005) 3.5.

Family/household income and expenditure. Average family size (2000) 3.5; average annual income per household (2000) R$14,065 (U.S.$7,686), median annual income per household (2000) R$6,744 (U.S.$3,685); sources of income, n.a.; expenditure (1995–96)[14]: housing, energy, and household furnishings 28.8%, food and beverages 23.4%, transportation and communications 13.8%, health care 9.2%, education and recreation 8.4%.

Financial aggregates[15]

	2002	2003	2004	2005	2006	2007
Exchange rate, R$ per						
U.S. dollar	3.53	2.89	2.65	2.34	2.14	1.77
£	5.69	5.15	5.13	4.03	4.19	3.55
SDR	4.80	4.29	4.12	3.34	3.21	2.80
International reserves (U.S.$)						
Total (excl. gold, '000,000)	37,683	49,111	52,740	53,574	85,561	179,433
SDRs ('000,000)	275	2	4	29	8	2
Reserve pos. in IMF ('000,000)	—	—	—	—	—	—
Foreign exchange ('000,000)	37,409	49,108	52,736	53,545	85,553	179,431
Gold ('000,000 fine troy oz)	1.08	1.08	1.08	1.08	1.08	1.08
% world reserves	0.1	0.1	0.1	0.1	0.1	0.1
Interest and prices						
Central bank discount (%)	30.42	23.92	24.55	25.34	19.98	17.85
Govt. bond yield (%)		..	..	..	...	...
Industrial share prices		..	...	.	...	...
Balance of payments (U.S.$'000,000)						
Balance of visible trade	+13,121	+24,794	+33,666	+44,757	+46,458	+40,028
Imports, f.o.b.	47,240	48,290	62,809	73,551	91,350	120,621
Exports, f.o.b.	60,362	73,084	96,475	118,308	137,807	160,649
Balance of invisibles	−20,758	−20,617	−21,928	−30,558	−32,838	−38,568
Balance of payments, current account	−7,637	+4,177	+11,738	+14,199	+13,620	+1,460

Energy production (consumption): electricity (kW-hr; 2006) 412,159,000,000 ([2005] 441,980,000,000); hard coal (metric tons; 2005) 6,250,000 (20,000,000); crude petroleum (barrels; 2007) 645,800,000 ([2005] 627,500,000); petroleum products (metric tons; 2005) 79,814,000 (73,452,000); natural gas (cu m; 2007) 18,151,000,000 ([2005] 17,776,000,000); ethanol (litres; 2007) 19,000,000,000 (16,700,000,000).

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+13,121	+24,780	+33,662	+44,800	+46,463	+40,028
% of total	12.2%	20.4%	21.1%	23.4%	20.3%	14.2%

Imports (2006): U.S.$91,343,000,000 (mineral fuels 18.8%, of which crude petroleum 9.9%, refined petroleum 4.7%; chemicals and chemical products 18.0%, of which organic chemicals 4.9%, medicines and pharmaceuticals 3.3%; road vehicles 6.2%; general industrial machinery 5.1%; microcircuits/transistors 4.3%; telecommunications equipment 4.1%; power-generating machinery 3.8%; food 3.8%). *Major import sources* (2006): United States 16.2%; African countries 8.9%; Argentina 8.8%; China 8.7%; Germany 7.1%; Japan 4.2%; South Korea 3.4%; Chile 3.2%; France 3.1%.

Exports (2006): U.S.$137,806,000,000 (food 18.4%, of which meat 6.2%, raw sugar 2.9%, coffee 2.1%; road vehicles 8.6%; iron and steel 6.9%; chemicals and chemical products 6.7%, of which organic chemicals 2.7%; iron ore and concentrates 6.5%; soybeans [all forms] 5.0%; crude petroleum 5.0%; power-generating machinery 3.3%; refined petroleum 2.6%; aircraft/spacecraft 2.5%; specialized industrial machinery 2.5%; telecommunications equipment 2.3%; aluminum 2.0%; wood pulp and waste paper 1.8%). *Major export destinations* (2006): United States 18.0%; Argentina 8.5%; China 6.1%; African countries 5.4%; The Netherlands 4.2%; Germany 4.1%; Mexico 3.2%; Japan 2.8%; Italy 2.8%; Chile 2.8%.

Transport and communications

Transport. Railroads (2005): route length 18,396 mi, 29,605 km; passenger-km 5,852,000,000[16]; metric ton-km cargo 154,870,000,000[16]. Roads (2004): total length 1,088,558 mi, 1,751,868 km (paved [2000] 6%). Vehicles (2004): passenger cars 24,936,541; trucks and buses 6,294,502. Air transport (2005): passenger-km 50,689,000,000; metric ton-km cargo 1,530,700,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	65,949	369	PCs	2005	32,130	174
Telephones				Dailies	2004	6,522[17]	36[17]
Cellular	2007	120,980[18]	631[18]	Internet users	2007	50,000	261
Landline	2007	39,400	205	Broadband	2007	8,100[18]	44[18]

Education and health

Literacy (2005): total population age 15 and over literate/functionally literate 89.0%/76.5%; males literate/functionally literate 88.7%/75.9%; females literate/functionally literate 89.2%/77.0%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 7–14)	166,484	1,623,354	33,534,561[19]	21.5[20]
Secondary (age 15–17)	22,918	498,202	9,738,565[19]	18.6[20]
Higher[20]	1,859	236,203	4,619,409	19.6

Health: physicians (2001) 357,888 (1 per 485 persons); hospital beds (2005) 443,210 (1 per 416 persons); infant mortality rate per 1,000 live births (2006) 25.1; undernourished population (2002–04) 13,100,000 (7% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

Military

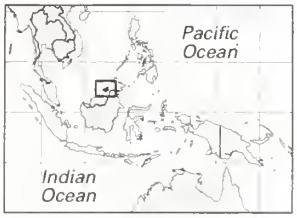
Total active duty personnel (November 2007): 367,901 (army 64.7%, navy 16.9%, air force 18.4%). *Military expenditure as percentage of GDP* (2005): 1.6%; per capita expenditure U.S.$68.

[1]Total area including inland water per survey of 2002. [2]Detail does not add to total given because of rounding. [3]Christian data include nominal Christians. [4]Urban populations of *municipios*. [5]Within Rio de Janeiro metropolitan area. [6]Within São Paulo metropolitan area. [7]Within Recife metropolitan area. [8]Excludes rural population of Acre, Amapá, Amazonas, Pará, Rondônia, and Roraima. [9]Import duties less imputed bank service charges. [10]Includes 8,263,800 unemployed. [11]Reported total; summed total equals 92,960,200. [12]Also found in alloys and oxides. [13]Includes televisions, radios, and telecommunications equipment. [14]Based on survey of 11 metropolitan areas only. [15]End-of-period figures. [16]Includes suburban services. [17]Circulation. [18]Subscribers. [19]2005. [20]2003.

Internet resources for further information:

- **IBGE: Instituto Brasileiro de Geografia e Estatística**
  http://www.ibge.gov.br/english/default.php
- **Central Bank of Brazil: Economic Data**
  http://www.bcb.gov.br/?english

Brunei



Official name: Negara Brunei Darussalam (State of Brunei).
Form of government: monarchy (sultanate) with one advisory body (Legislative Council [31][1]).
Head of state and government: Sultan.
Capital: Bandar Seri Begawan.
Official language: Malay[2].
Official religion: Islam.
Monetary unit: Brunei dollar (B$)[3]; valuation (Sept. 8, 2008) 1 U.S.$ = B$1.44; 1 £ = B$2.54.

Area and population

Districts	Capitals	area sq mi	area sq km	population 2006 estimate
Belait	Kuala Belait	1,052	2,724	63,900
Brunei and Muara	Bandar Seri Begawan	220	571	264,700
Temburong	Bangar	504	1,304	10,000
Tutong	Tutong	450	1,166	44,400
TOTAL		2,226	5,765	383,000

Demography

Population (2008): 400,000.
Density (2008): persons per sq mi 179.7, persons per sq km 69.4.
Urban-rural (2005): urban 73.5%; rural 26.5%.
Sex distribution (2005): male 52.77%; female 47.23%.
Age breakdown (2005): under 15, 29.5%; 15–29, 28.4%; 30–44, 24.1%; 45–59, 13.2%; 60–74, 4.0%; 75 and over, 0.8%.
Population projection: (2010) 415,000; (2020) 488,000.
Doubling time: 41 years.
Ethnic composition (2003): Malay 66.6%; Chinese 10.9%; other indigenous 3.6%; other 18.9%.
Religious affiliation (2004)[4]: Muslim *c.* 67%; Buddhist *c.* 13%; Christian *c.* 10%; traditional beliefs/other *c.* 10%.
Major cities (2004): Bandar Seri Begawan 81,500[5]; Kuala Belait 28,400; Seria 23,500.

Vital statistics

Birth rate per 1,000 population (2005): 19.9 (world avg. 20.3).
Death rate per 1,000 population (2005): 2.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 17.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.10.
Marriage/divorce rates per 1,000 population (2005): 5.5/1.0[6].
Life expectancy at birth (2005): male 74.6 years; female 77.5 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 85.2; malignant neoplasms (cancers) 60.9; diseases of the respiratory system 25.4; diabetes mellitus 21.8; accidents and violence 21.8.

National economy

Budget (2005–06). Revenue: B$8,441,000,000 (tax revenue 62.2%, of which taxes on petroleum and natural gas companies 59.1%; nontax revenue 37.8%, of which dividends paid by petroleum companies 22.9%, petroleum and natural gas royalties 10.0%). Expenditures: B$5,086,000,000 (current expenditure 80.1%; capital expenditure 19.9%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): vegetables 9,534, cassava 1,800, rice 1,200, pineapples 990, bananas 680; livestock (number of live animals) 4,580 buffalo, 15,500,000 chickens; roundwood (2005) 228,637 cu m, of which fuelwood 5%; fisheries production (2005) 3,108 (from aquaculture 23%). Mining and quarrying: other than petroleum and natural gas, none except sand and gravel for construction. Manufacturing (value added in B$'000,000; 2005): liquefied natural gas 1,672; textiles and apparel 197; other manufactures 83. Energy production (consumption): electricity (kW-hr; 2005) 3,264,000,000 (3,264,000,000); coal, none (none); crude petroleum (barrels; 2006) 72,300,000 ([2005] 100,000); petroleum products (metric tons; 2005) 1,115,000 (1,136,000); natural gas (cu m; 2005) 10,364,000,000 (1,476,000,000).
Gross national income (at current market prices; 2007): U.S.$12,400,000,000 (U.S.$31,523 per capita).

Structure of gross domestic product and labour force

	2005 in value B$'000,000	2005 % of total value	2001 labour force	2001 % of labour force
Agriculture, fishing, forestry	150	0.9	1,994	1.3
Petroleum, natural gas	8,868	55.9	3,954	2.5
Mining	..	...		
Manufacturing[7]	1,952	12.3	12,455	7.9
Construction	419	2.6	12,301	7.8
Public utilities	113	0.7	2,639	1.7
Transportation and communications	456	2.9	4,803	3.0
Trade, hotels	516	3.3	20,038	12.7
Finance, real estate	1,346	8.5	8,190	5.2
Pub. admin., defense	1,847	11.6	79,880	50.7
Services	196	1.2		
Other	—	—	11,340[8]	7.2[8]
TOTAL	15,864[9]	100.0[9]	157,594	100.0

Population economically active (2001): total 157,594[10]; activity rate of total population 45.2% (participation rates: ages 15–64, 65.9%; female 41.2%; unemployed [2005] 4.3%).

Price index (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	100.6	98.3	98.5	99.4	100.6	100.7

Public debt (external, outstanding; 2005): none.
Household income and expenditure. Average household size (2002) 5.6; income per household: n.a.; sources of income: n.a.; expenditure (2002)[11]: food and nonalcoholic beverages 28.8%, transportation 22.5%, housing and energy 8.8%, household furnishings 8.6%, recreation and entertainment 8.1%, clothing and footwear 5.6%, communications 5.5%.
Land use as % of total land area (2003): in temporary crops 2.5%, in permanent crops 0.9%, in pasture 1.1%; overall forest area (2005) 52.8%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 224; remittances, n.a.; foreign direct investment (FDI; 2004–06 avg.) 352. Disbursements for (U.S.$'000,000): tourism (2006) 408; remittances (2003) 139; FDI (2004–06 avg.) 26.

Foreign trade[12]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+2,481	+2,146	+3,094	+3,635	+4,758	+5,960
% of total	51.7%	40.8%	53.8%	56.1%	61.5%	64.0%

Imports (2006): U.S.$1,676,000,000 (food and live animals 14.1%; road vehicles 10.5%; chemicals and chemical products 10.5%; iron and steel 7.6%; power-generating machinery 6.0%; textile yarn, fabrics, made-up articles 5.3%). *Major import sources:* Malaysia 21.6%; Singapore 17.4%; Japan 12.8%; United States 9.0%; China 7.9%.
Exports (2006): U.S.$7,636,000,000 (crude petroleum 67.3%, liquefied natural gas 29.0%, apparel and clothing accessories 1.7%). *Major export destinations:* Japan 30.6%; Indonesia 19.8%; South Korea 15.1%; Australia 12.2%; United States 6.7%.

Transport and communications

Transport. Railroads (2004)[13]: length 12 mi, 19 km. Roads (2005): total length 2,270 mi, 3,650 km (paved 77%). Vehicles (2003): passenger cars 212,000; trucks and buses (2002) 20,000. Air transport (2007): passenger-km 3,720,000,000; metric ton-km cargo 115,536,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	215	648	PCs	2004	31	87
Telephones				Dailies	2005	35[14]	95[14]
Cellular	2006	254[15]	665[15]	Internet users	2006	166	434
Landline	2006	80	210	Broadband	2006	11[15]	28[15]

Education and health

Educational attainment (1991). Percentage of population age 25 and over having: no formal schooling 17.0%; primary education 43.3%; secondary 26.3%; postsecondary and higher 12.9%; not stated 0.5%. *Literacy* (2002): percentage of total population age 15 and over literate 93.9%; males literate 96.3%; females literate 91.4%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 5–11)[16]	210	5,237	58,413	11.2
Secondary (age 12–20)	33	3,914	40,850	10.4
Voc., teacher tr.	9	547	3,586	6.6
Higher	2	488	4,297[17]	8.8

Health (2004): physicians 463 (1 per 773 persons); hospital beds 943 (1 per 379 persons); infant mortality rate per 1,000 live births (2005) 8.8; undernourished population (2002–04) 15,000 (4% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

Military

Total active duty personnel (November 2007): 7,000[18] (army 70.0%, navy 14.3%, air force 15.7%). British troops 110; Singaporean troops 500. *Military expenditure as percentage of GDP* (2005): 3.9%; per capita expenditure U.S.$684.

[1]Legislative Council (suspended from 1984) reinstated September 2004 and enlarged August 2005; all seats are nonelected. [2]All official documents that must be published by law in Malay are also required to be issued in an official English version. [3]Pegged to the Singapore dollar at a ratio of 1:1. [4]Excludes expatriates. [5]Population of urban agglomeration. [6]Muslim divorces only. [7]Includes manufacture of liquefied natural gas (B$1,672,000,000; 10.5% of total value). [8]Unemployed. [9]Detail does not add to total given because of rounding. [10]Foreign workers accounted for 70% of the 160,500 economically active in 2004. [11]Weights of consumer price index components. [12]Imports c.i.f.; exports f.o.b. [13]Privately owned. [14]Circulation of daily newspapers. [15]Subscribers. [16]Includes preprimary. [17]Most of Brunei's college students attend universities abroad. [18]Excludes 2,250 paramilitary.

Internet resources for further information:

- **The Government of Brunei Darussalam**
  http://www.brunei.gov.bn/index.htm
- **Brunei Economic Development Board**
  http://www.bedb.com.bn

Bulgaria

Official name: Republika Bŭlgaria (Republic of Bulgaria).
Form of government: unitary multiparty republic with one legislative body (National Assembly [240]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Sofia.
Official language: Bulgarian.
Official religion: none[1].
Monetary unit: lev (Lv; plural leva); valuation (Sept. 8, 2008) 1 U.S.$ = 1.38 leva; 1 £ = 2.43 leva.

Area and population

Districts	area sq km	population 2008[2] estimate	Districts	area sq km	population 2008[2] estimate
Blagoevgrad	6,449	329,309	Ruse	2,803	253,008
Burgas	7,748	420,095	Shumen	3,390	196,559
Dobrich	4,720	203,138	Silistra	2,846	130,898
Gabrovo	2,023	133,218	Sliven	3,544	207,786
Khaskovo	5,533	261,726	Smolyan	3,193	128,200
Kŭrdzhali	3,209	156,652	Sofiya[3]	7,062	256,511
Kyustendil	3,052	149,187	Sofiya-Grad[4]	1,349	1,240,788
Lovech	4,129	155,468	Stara Zagora	5,151	355,626
Montana	3,636	161,161	Targovishte	2,559	132,771
Pazardzhik	4,457	294,086	Varna	3,819	459,613
Pernik	2,394	138,773	Veliko Turnovo	4,662	278,764
Pleven	4,335	297,928	Vidin	3,033	112,604
Plovdiv	5,973	705,121	Vratsa	3,938	202,711
Razgrad	2,640	136,062	Yambol	3,355	142,475
			TOTAL	111,002	7,640,238

Demography

Population (2008): 7,569,000.
Density (2008): persons per sq mi 176.6, persons per sq km 68.2.
Urban-rural (2008[2]): urban 70.7%; rural 29.3%.
Sex distribution (2008[2]): male 48.42%; female 51.58%.
Age breakdown (2008[2]): under 15, 13.4%; 15–29, 20.4%; 30–44, 21.5%; 45–59, 21.2%; 60–74, 16.1%; 75–84, 6.3%; 85 and over, 1.1%.
Population projection: (2010) 7,456,000; (2020) 6,859,000.
Ethnic composition (2001): Bulgarian 83.9%; Turkish 9.4%; Rom (Gypsy) 4.7%; other 2.0%.
Religious affiliation (2005[5]): Bulgarian Orthodox *c.* 81%; Sunnī Muslim *c.* 12%; Evangelical Protestant *c.* 2%; Catholic *c.* 1%; other *c.* 4%.
Major cities (2008[2]): Sofia 1,240,788; Plovdiv 341,464; Varna 312,026; Burgas 189,529; Ruse 158,201.

Vital statistics

Birth rate per 1,000 population (2007): 9.8 (world avg. 20.3); (2005) within marriage 51.0%; outside of marriage 49.0%.
Death rate per 1,000 population (2007): 14.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 5.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.42.
Life expectancy at birth (2007): male 69.2 years; female 76.3 years.
Marriage/divorce rates per 1,000 population (2007): 3.9/2.1.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 968.1; malignant neoplasms (cancers) 231.7; diseases of the respiratory system 57.7; accidents, poisoning, and violence 50.8.

National economy

Budget (2005). Revenue: 17,030,000,000 leva (tax revenue 79.7%, of which VAT 28.2%, social insurance 20.6%; nontax revenue 20.3%). Expenditures: 17,008,000,000 leva (social insurance 33.1%; economic services 14.4%; defense and security 12.2%; health 11.8%; education 10.7%).
Public debt (external, outstanding; 2007[2]): U.S.$7,253,300,000.
Gross national income (2007): U.S.$35,062,000,000 (U.S.$4,590 per capita).

Structure of gross domestic product and labour force

	2005			
	in value '000,000 leva	% of total value	labour force	% of labour force
Agriculture, forestry, and fishing	3,341	8.0	265,400	8.0
Manufacturing, mining	7,316	17.4	765,600	23.1
Construction	2,026	4 8	190,600	5 8
Transp. and commun.	4,952	11.8	213,900	6.5
Trade	2,950	7.0	597,300	18.0
Public utilities	1,626	3.9	64,000	1.9
Finance	1,682	4.0	179,400	5.4
Pub. admin., defense Services	12,130[6]	28.9[6]	214,100 487,600	6.5 14.7
Other	5,925	14 1	336,300[7]	10.1[7]
TOTAL	41,948	100.0[8]	3,314,200	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 2,390,000, corn (maize) 1,312,900, sunflower seeds 564,447, barley 419,762, grapes 376,663, potatoes 290,553, tobacco 41,100; livestock (number of live animals) 1,635,410 sheep, 1,012,655 pigs, 628,271 cattle; roundwood (2006) 5,992,000 cu m, of which fuelwood 48%; fisheries production (2005) 8,579 (from aquaculture 37%). Mining and quarrying (2004): copper (metal content) 107,000; iron (metal content) 27,000; gold 2,431 kg. Manufacturing (value added in U.S.$'000,000; 2004): refined petroleum products, n.a.; wearing apparel 359; food products 320; nonelectrical machinery and apparatus 278; cement, bricks, and ceramics 197. Energy production (consumption): electricity (kW-hr; 2007) 43,392,000,000 ([2005] 36,781,000,000); hard coal (metric tons; 2005) 9,000 (4,361,000); lignite (metric tons; 2007) 28,308,000 ([2005] 24,870,000); crude petroleum (barrels; 2005) 220,000 (45,400,000); petroleum products (metric tons; 2005) 5,268,000 (3,821,000); natural gas (cu m; 2007) 312,000,000 ([2005] 3,343,000,000).
Household income and expenditure (2006[2]). Average household size (2004) 2.7; income per household 5,204 leva (U.S.$3,167); sources of income: wages and salaries 51.8%, transfers 29.9%, self-employment 8.1%; expenditure: food and nonalcoholic beverages 36.9%, housing and energy 16.0%, communications 5.8%, health 5.5%, transportation 5.0%.
Population economically active (2005): total 3,314,200; activity rate of total population 49.7% (participation rates: ages 15–64 [2003] 60.9%; female 44.4%; unemployed [2008[9]] 6.5%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	107.4	113.6	116.3	123.4	129.6	139.0	150.7
Average monthly wages	106.9	114.7	121.7	134.3	147.2	...	...

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 2,610; remittances (2007) 2,087; foreign direct investment (FDI; 2004–06 avg.) 4,162. Disbursements for (U.S.$'000,000): tourism (2006) 1,474; remittances (2007) 86; FDI (2004–06 avg.) 82.
Land use as % of total land area (2003): in temporary crops 30.0%, in permanent crops 1.9%, in pasture 16.2%; overall forest area (2005) 32.8%.

Foreign trade[10]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
€'000,000	−1,778	−1,692	−2,200	−2,954	−4,369	−6,392
% of total	13.5%	12.2%	14.2%	15.6%	18.8%	21.1%

Imports (2006): €18,375,000,000 (crude petroleum and natural gas 17.4%; transport equipment and parts 13.8%; machinery and apparatus 12.1%; textiles 7.7%; base and other metals 6.6%). *Major import sources:* Russia 17.3%; Germany 12.4%; Italy 8.7%; Turkey 6.0%; Greece 4.9%; China 4.1%.
Exports (2006): €11,982,600,000 (base and fabricated metals 21.6%, of which iron and steel 7.4%; mineral fuels 15.5%, of which petroleum products 13.3%; machinery and transport equipment 14.3%; clothing and footwear 13.4%). *Major export destinations:* Turkey 11.4%; Italy 10.1%; Germany 9.6%; Greece 8.9%; Belgium 6.5%; France 4.1%; Romania 4.0%.

Transport and communications

Transport. Railroads (2004): track length 6,238 km; passenger-km 2,404,000,000; metric ton-km cargo 5,212,000,000. Roads (2004): length 44,033 km (paved 99%). Vehicles (2004): cars 2,438,383; trucks and buses 353,681. Air transport (2003): passenger-km 3,005,000,000; metric ton-km cargo 21,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	3,620	453	PCs	2004	461	59
Telephones				Dailies	2005	96[11]	124[11]
Cellular	2007	9,897[12]	1,296[12]	Internet users	2006	1,870	244
Landline	2007	2,300	301	Broadband	2007	563[12]	50[12]

Education and health

Educational attainment (2004). Percentage of population age 25–64 having: no formal schooling to complete primary education 28%; secondary 50%; higher 22%. *Literacy* (2003): total population age 15 and over literate 98.6%; males 99.1%; females 98.2%.

Education (2005–06)

	schools	teachers	students	student/ teacher ratio
Primary (age 5–13)	2,757	43,866	602,497	13.7
Secondary (age 14–18)		34,475	367,340	10.7
Voc., teacher tr.	609	19,352[13]	207,395[13]	10.7[13]
Higher	53	23,933	243,464	10.2

Health (2006[2]): physicians 28,030 (1 per 274 persons); hospital beds 50,688 (1 per 152 persons); infant mortality rate per 1,000 live births (2007) 9.2; undernourished population (2002–04) 600,000 (8% of total population based on the consumption of a minimum daily requirement of 1,990 calories).

Military

Total active duty personnel (November 2007): 40,747 (army 46.1%, navy 10.1%, air force 22.9%, other 20.9%). *Military expenditure as percentage of GDP* (2005): 2.4%[14]; per capita expenditure U.S.$74[14].

[1]Bulgaria has no official religion; the constitution, however, refers to Eastern Orthodoxy as the "traditional" religion. [2]January 1. [3]District nearly encircles Sofiya-Grad district on north, east, and south. [4]Sofiya-Grad includes Sofia city and immediately adjacent urban and rural areas. [5]Unofficially up to 40% of the population is estimated to be atheist or agnostic. [6]Includes hotels, restaurants, and real estate (usually included with Trade and with Finance). [7]Includes 334,200 unemployed. [8]Detail does not add to total given because of rounding. [9]1st quarter. [10]Imports f.o.b. in balance of trade and c.i.f. for commodities and trading partners. [11]Circulation of daily newspapers. [12]Subscribers. [13]2004–05. [14]Excludes expenditures for military pensions.

Internet resources for further information:
- **National Statistical Institute http://www.nsi.bg**
- **Bulgarian National Bank http://www.bnb.bg**

Burkina Faso

Official name: Burkina Faso (Burkina Faso).
Form of government: multiparty republic with one legislative body (National Assembly [111]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Ouagadougou.
Official language: French.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Regions	Capitals	area sq mi	area sq km	population 2006 census[1]
Boucle du Mouhoun	Dédougou	13,186	34,153	1,434,847
Cascades	Banfora	7,107	18,406	524,956
Centre	Ouagadougou	1,083	2,805	1,523,980
Centre-Est	Tenkodogo	4,560	11,811	1,132,023
Centre-Nord	Kava	7,656	19,829	1,203,073
Centre-Ouest	Koudougou	8,387	21,722	1,183,473
Centre-Sud	Manga	4,371	11,321	638,379
Est	Fada N'gourma	17,859	46,256	1,209,399
Hauts-Bassins	Bobo-Dioulasso	9,785	25,344	1,410,284
Nord	Ouahigouya	6,258	16,207	1,182,770
Plateau Central	Ziniaré	3,299	8,544	693,137
Sahel	Dori	13,649	35,350	969,881
Sud-Ouest	Gaoua	6,256	16,202	624,056
TOTAL		103,456	267,950	13,730,258

Demography

Population (2008): 14,391,000.
Density (2008): persons per sq mi 139.1, persons per sq km 53.7.
Urban-rural (2007): urban 19.2%; rural 80.8%.
Sex distribution (2006): male 48.33%; female 51.67%.
Age breakdown (2006): under 15, 46.7%; 15–29, 28.0%; 30–44, 14.8%; 45–59, 6.5%; 60–74, 3.3%; 75 and over, 0.7%.
Population projection: (2010) 15,313,000; (2020) 20,720,000.
Doubling time: 23 years.
Ethnic composition (1995): Mossi 47.9%; Fulani 10.3%; Lobi 6.9%; Bobo 6.9%; Mande 6.7%; Senufo 5.3%; Grosi 5.0%; Gurma 4.8%; Tuareg 3.1%.
Religious affiliation (2005): Muslim *c.* 48%[2]; traditional beliefs *c.* 32%; Roman Catholic *c.* 12%[2]; Protestant/independent Christian *c.* 8%[2].
Major cities (2006): Ouagadougou 1,181,702; Bobo-Dioulasso 435,543; Koudougou 82,720; Banfora 72,144; Ouahigouya 70,957.

Vital statistics

Birth rate per 1,000 population (2006): 45.6 (world avg. 20.3).
Death rate per 1,000 population (2006): 15.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 30.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 6.47.
Marriage/divorce rates per 1,000 population: n.a.[3].
Life expectancy at birth (2006): male 47.3 years; female 50.4 years.
Major causes of death as percentage of all deaths (2005): malaria 46.3%; anemia 8.7%; bronchitis/pneumonia 8.0%; meningitis 7.4%.
Adult population (ages 15–49) *living with HIV* (2007): 1.6%[4] (world avg. 0.8%).

National economy

Budget (2006). Revenue: CFAF 793,000,000,000 (tax revenue 52.3%, of which taxes on goods and services 29.3%; loans 23.2%; grants 18.5%; nontax revenue 3.6%; other 2.4%). Expenditures: CFAF 892,100,000,000 (current expenditure 50.1%, development expenditure 49.9%).
Public debt (external; 2006): U.S.$1,022,000,000.
Household income and expenditure. Average household size[5] (2003) 6.3; average annual income per household: n.a.; sources of income: n.a.; expenditure (2003): food, beverages, and tobacco 48.8%, housing and energy 17.8%, transportation 7.0%, clothing 6.8%, health 4.4%, recreation and culture 4.1%.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sorghum 1,619,590, millet 1,104,010, corn (maize) 879,030, seed cotton 690,000, sugarcane 455,000, dry cowpeas 455,000, peanuts (groundnuts) 225,000, rice 123,000, shea nuts (2005) 70,000, bambara beans 40,500, sesame 25,600; livestock (number of live animals) 11,427,500 goats, 8,764,100 cattle, 7,321,200 sheep; roundwood (2006) 13,238,000 cu m, of which fuelwood 91%; fisheries production (2005) 9,006 (from aquaculture, negligible). Mining and quarrying (2006): gold 1,571 kg. Manufacturing (value added in CFAF '000,000; 1999): food products, beverages, and tobacco 126,125; textiles 46,217; chemicals and chemical products 9,335; cement, bricks, and ceramics 3,484; paper and paper products 2,150. Energy production (consumption): electricity (kW-hr; 2005) 417,000,000 (417,000,000); crude petroleum (2005) none (none); petroleum products (metric tons; 2005) none (237,000); natural gas (2005) none (none).
Population economically active (2003): total 5,417,000[6]; activity rate 43.6%[6] (participation rates: ages 15–64, 84.7%[6]; female 46.6%[6]; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.9	107.3	109.5	109.0	116.0	118.7	118.5

Gross national income (GNI; 2007): U.S.$6,384,000,000 (U.S.$430 per capita); purchasing power parity GNI (U.S.$1,120 per capita).

Structure of gross domestic product and labour force

	2003 in value CFAF '000,000	2003 % of total value	1996 labour force	1996 % of labour force
Agriculture	661,000	28.6	4,513,868	88.9
Mining	17,700	0.8	3,979	0.1
Manufacturing	337,800	14.6	71,565	1.4
Public utilities			2,813	0.1
Construction	80,000	3.5	21,076	0.4
Transp. and commun.	124,000	5.4	20,580	0.4
Trade	408,900	17.7	224,581	4.4
Finance	.		13,131	0.3
Pub. admin., defense	499,100	21.6	103,926	2.0
Services				
Other	179,000[7]	7.8[7]	100,096[8]	2.0[8]
TOTAL	2,308,000[9]	100.0	5,075,615	100.0

Land use as % of total land area (2003): in temporary crops 17.7%, in permanent crops 0.2%, in pasture 21.9%; overall forest area (2005) 29.0%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 45; remittances (2007) 50; foreign direct investment (2004–06 avg.) 25; official development assistance (2006) 871. Disbursements for (U.S.$'000,000): tourism (2005) 46; remittances (2007) 44.

Foreign trade

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
CFAF '000,000,000	–236	–278	–284	–264	–328	–444
% of total	50.3%	52.4%	54.6%	42.0%	44.3%	55.9%

Imports (2005): CFAF 619,000,000,000 (mineral fuels 24.6%, machinery and apparatus 14.3%, chemicals and chemical products 14.1%, transport equipment 9.1%). *Major import sources:* France 18.7%; Côte d'Ivoire 18.0%; Togo 11.4%; Benin 6.8%; Ghana 5.9%.
Exports (2005): CFAF 175,000,000,000 (raw cotton 74.5%, sesame 2.9%, cigarettes 2.1%, sugar 1.5%). *Major export destinations:* Togo 41.1%; Ghana 16.7%; Côte d'Ivoire 10.5%; France 9.8%; Switzerland 9.4%.

Transport and communications

Transport. Railroads: (2004): route length 386 mi, 622 km; (2003) passenger-km 9,980,000; (2005) metric ton-km cargo 674,900,000. Roads (2006): total length 9,490 mi, 15,272 km (paved 17%). Vehicles (2005): passenger cars 84,161; trucks and buses 38,261. Air transport (2005)[10]: passenger arrivals 134,247, passenger departures 137,373; cargo unloaded 2,837 metric tons, cargo loaded 1,347 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	156	12	PCs	2005	31	2.4
Telephones				Dailies	2004	12[11]	0.9[11]
Cellular	2007	1,611[12]	109[12]	Internet users	2006	80	5.9
Landline	2006	95	7	Broadband	2006	1.7[12]	0.1[12]

Education and health

Educational attainment (2003)[5]. Percentage of population age 25 and over having: no formal schooling or unknown 85.4%; incomplete to complete primary education 7.9%; incomplete to complete secondary 5.5%; higher 1.2%. *Literacy* (2003): percentage of total population age 15 and over literate 26.6%; males literate 36.8%; females literate 16.6%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	...	30,341[13]	1,390,571[13]	45.8[13]
Secondary (age 13–19)	548	3,969	272,980	68.8
Vocational	77	660	22,432	34.0
Higher	35	645	27,942	43.3

Health: physicians (2004) 369 (1 per 35,439 persons); hospital beds (2001) 15,801 (1 per 735 persons); infant mortality rate per 1,000 live births (2006) 91.4; undernourished population (2002–04) 2,000,000 (15% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2007): 10,800 (army 98.1%, air force 1.9%). *Military expenditure as percentage of GDP* (2005): 1.3%; per capita expenditure U.S.$6.

[1]Preliminary. [2]Adherence to beliefs often nominal. [3]Percentage of men in polygamous marriages (1996) 33.2%. [4]Statistically derived midpoint within range. [5]Based on the 2003 Burkina Faso Demographic and Health Survey, comprising 57,737 people in 9,097 households, about 80% of which are located in rural areas. [6]Estimates of the ILO Employment Trends Unit. [7]Import taxes and duties. [8]Includes 71,280 unemployed. [9]Detail does not add to total given because of rounding. [10]Combined data for Ouagadougou and Bobo-Dioulasso airports. [11]Circulation of daily newspapers. [12]Subscribers. [13]2005–06.

Internet resources for further information:

- **Institut National de la Statistique et de la Demographie**
  http://www.insd.bf
- **La Banque de France: La Zone Franc**
  http://www.banque-france.fr/fr/eurosys/zonefr.htm

Burundi

Official name: Republika y'u Burundi (Rundi); République du Burundi (French) (Republic of Burundi).
Form of government: republic with two legislative bodies (Senate [49[1]]; National Assembly [100[2]]).
Head of state and government: President assisted by Vice Presidents.
Capital: Bujumbura[3].
Official languages: Rundi; French.
Official religion: none.
Monetary unit: Burundi franc (FBu); valuation (Sept. 8, 2008) 1 U.S.$ = FBu 1,178; 1 £ = FBu 2,080.

Area and population

Provinces	area sq km	population 1999 estimate	Provinces	area sq km	population 1999 estimate
Bubanza	1,089	289,060	Muyinga	1,836	485,347
Bujumbura	1,232	755,994[4]	Mwaro	840	[5]
Bururi	2,465	437,931	Ngozi	1,474	601,382
Cankuzo	1,965	172,477	Rutana	1,959	244,939
Cibitoke	1,636	385,438	Ruyigi	2,339	304,567
Gitega	1,979	628,872			
Karuzi	1,457	384,187	**Urban Province**		
Kayanza	1,233	458,815	Bujumbura	87	[4]
Kirundo	1,703	502,171	TOTAL LAND AREA	25,950	
Makamba	1,960	357,492	INLAND WATER	1,867	
Muramvya	696	481,846[5]	TOTAL	27,816[6]	6,490,518

Demography

Population (2008): 8,691,000.
Density (2008)[7]: persons per sq mi 867.5, persons per sq km 334.9.
Urban-rural (2007): urban 9.9%; rural 90.1%.
Sex distribution (2005): male 48.82%; female 51.18%.
Age breakdown (2005): under 15, 45.1%; 15–29, 29.0%; 30–44, 13.7%; 45–59, 8.2%; 60–74, 3.2%; 75–84, 0.7%; 85 and over, 0.1%.
Population projection: (2010) 9,281,000; (2020) 12,266,000.
Doubling time: 24 years.
Ethnic composition (2000): Hutu 80.9%; Tutsi 15.6%; Lingala 1.6%; Twa Pygmy 1.0%; other 0.9%.
Religious affiliation (2004): Christian *c.* 67%, of which Roman Catholic *c.* 62%, Protestant *c.* 5%; traditional beliefs *c.* 23%; Muslim *c.* 10%.
Major cities (2004): Bujumbura 340,300; Gitega 46,900; Muyinga 45,300; Ngozi 40,200; Ruyigi 36,800.

Vital statistics

Birth rate per 1,000 population (2005): 45.6 (world avg. 20.3).
Death rate per 1,000 population (2005): 16.1 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 29.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 6.80.
Life expectancy at birth (2005): male 47.0 years; female 49.8 years.
Adult population (ages 15–49) *living with HIV* (2007): 2.0%[8] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): HIV/AIDS-related *c.* 370; lower respiratory infections *c.* 185; diarrheal diseases *c.* 128; war-related *c.* 114; perinatal conditions *c.* 100; malaria *c.* 57.

National economy

Budget (2006). Revenue: FBu 220,170,000,000 (tax revenue 71.3%, of which sales tax 37.8%, taxes on international trade 11.7%, company income tax 11.1%, personal income tax 8.7%; grants 18.8%; nontax revenue 6.9%; other 3.0%). Expenditures: FBu 319,061,000,000 (current expenditure 70.1%, of which debt service 6.4%; capital expenditure 27.9%; other 2.0%).
Public debt (external, outstanding; September 2006): U.S.$1,227,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 1,600,000, sweet potatoes 835,000, cassava 710,000, dry beans 220,000, sugarcane 180,000, corn (maize) 115,000, sorghum 75,000, rice 69,500, taros 62,000, peas 33,500, coffee 15,595, tea 7,700, seed cotton 4,600; livestock (number of live animals) 750,000 goats, 400,000 cattle, 250,000 sheep; roundwood (2006) 9,014,000 cu m, of which fuelwood 96%; fisheries production (2005) 14,200 (from aquaculture 1%). Mining and quarrying (2006): columbite-tantalite ore 16,177 kg; gold 4,313 kg. Manufacturing (2005): beer 1,012,500 hectolitres; carbonated beverages 143,600 hectolitres; cottonseed oil 135,900 litres; sugar 19,058 tons; cigarettes 419,055,000 units; blankets 43,253 units; fabrics 4,811,000,000 sq m. Energy production (consumption): electricity (kW-hr; 2005) 101,000,000 (172,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (71,000); natural gas, none (none); peat (metric tons; 2005) 4,700 ([2000] 12,000).
Household income and expenditure (2004)[9]. Average household size 5.6; average annual income per household *c.* FBu 168,000 (*c.* U.S.$153); sources of income: agriculture/livestock *c.* 91%, other *c.* 9%; expenditure: food *c.* 46%, housing, n.a., debt service *c.* 14%, alcoholic beverages and tobacco *c.* 8%, transportation *c.* 6%, health *c.* 5%, clothing *c.* 4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1.3; remittances (2007) negligible; foreign direct investment (2004–06 avg.) 97; official development assistance (2006) 415. Disbursements for (U.S.$'000,000): tourism (2006) 125; remittances (2007) negligible.
Gross national income (GNI; 2007): U.S.$923,000,000 (U.S.$110 per capita); purchasing power parity GNI (U.S.$330 per capita).

Structure of gross domestic product and labour force

	2005 in value FBu '000,000	2005 % of total value	1990 labour force	1990 % of labour force
Agriculture	271,100	31.5	2,574,443	93.1
Mining, Public utilities	9,100	1.1	1,419 1,672	— 0.1
Manufacturing	68,700	8.0	33,867	1.2
Handicrafts	36,200	4.2	...	...
Construction	41,700	4 8	19,737	0.7
Transp. and communications	46,900	5.4	8,504	0.3
Trade	44,700	5.2	25,822	0.9
Finance			2,005	0.1
Pub. admin., defense, Services	256,000	29.7	85,191	3.1
Other	86,400[10]	10.0[10]	13,270	0.5
TOTAL	860,800	100.0[6]	2,765,945[6]	100.0

Population economically active (2003)[11]: total 3,464,000; activity rate of total population 49.2% (participation rates: ages 15–64, 92.2%; female 52.1%; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	109.2	107.8	116.3	128.7	146.1	150.2	162.7

Land use as % of total land area (2003): in temporary crops 38.6%, in permanent crops 14.2%, in pasture 38.6%; overall forest area (2005) 5.9%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
FBu '000,000,000	–83.3	–92.2	–129.1	–140.9	–227.5	–382.1
% of total	56.6%	61.5%	61 4%	57.2%	64.9%	76.0%

Imports (2006): FBu 442,500,000,000 (machinery and apparatus 21.3%, transportation equipment 15.7%, mineral fuels 13.4%, fabricated metals 7.2%, pharmaceuticals 6.6%). *Major import sources:* Saudi Arabia 12.6%; Belgium-Luxembourg 11.7%; Kenya 8.2%; Japan 7.8%; Russia 4.7%; United Kingdom 4.6%.
Exports (2006): FBu 60,400,000,000 (coffee 67.7%, tea 17.0%, hides and skins 2.6%, cotton fabric 1.9%). *Major export destinations:* Switzerland 34.4%; United Kingdom 12.3%; Pakistan 7.8%; Rwanda 5.1%; other EU 24.6%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 7,657 mi, 12,322 km (paved 7%). Vehicles: passenger cars (2003) 7,000; trucks and buses (2002) 14,400. Air transport (2005)[12]: passenger arrivals 73,072, passenger departures 63,908; cargo unloaded 3,093 metric tons, cargo loaded 188 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	280	37	PCs	2004	34	4.8
Telephones				Dailies	2004	2.5[13]	0.3[13]
Cellular	2007	250[14]	29[14]	Internet users	2006	60	7.7
Landline	2005	31	4 1	Broadband	2006	...	...

Education and health

Educational attainment: n.a. *Literacy* (2007): percentage of total population age 15 and over literate 56.1%; males literate 61.4%; females literate 51.1%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	1,512[15]	18,899	968,488	51.2
Secondary (age 13–19), Voc., teacher tr.	400[15]	8,047	140,735	17.5
Higher	...	669	15,706	23.5

Health (2004): physicians 200 (1 per 37,581 persons); hospital beds (1999) 3,380 (1 per 1,657 persons); infant mortality rate per 1,000 live births (2005) 64.4; undernourished population (2002–04) 4,500,000 (66% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

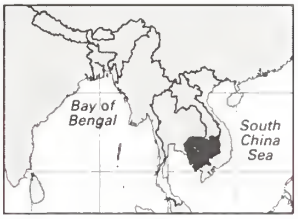
Military

Total active duty personnel (November 2007): 35,000 (army 100%)[16, 17].
Military expenditure as percentage of GDP (2005): 6.2%; per capita expenditure U.S.$6.

[1]34 seats are indirectly elected; 15 additional seats (as of March 2007) are designated for the Twa ethnic group, former presidents, and women (to assure 30% quota for women). [2]Excludes 18 additional seats appointed (as of the 2005 elections) to assure specific ethnic and gender composition of National Assembly. [3]Future move of capital to Gitega announced by president in March 2007. [4]Bujumbura (province) includes Bujumbura urban province. [5]Muramvya includes Mwaro. [6]Detail does not add to total given because of rounding. [7]Based on land area. [8]Statistically derived midpoint within range. [9]Based on a survey of 4,300 households in rural Burundi. [10]Indirect taxes less subsidies. [11]Estimates of the ILO Employment Trends Unit. [12]Figures for Bujumbura airport only. [13]Circulation of daily newspapers. [14]Subscribers. [15]1998. [16]Number of active duty personnel is to be reduced per peace accord signed in 2003. [17]The UN peacekeeping operation in Burundi ended in December 2006; South African peacekeeping troops (November 2007) 862.

Internet resource for further information:
- **Banque Centrale du Burundi http://brb.bi**

Cambodia



Official name: Preah Reach Ana Pak Kampuchea (Kingdom of Cambodia).
Form of government: constitutional monarchy with two legislative houses (Senate [61[1]]; National Assembly [123]).
Chief of state: King.
Head of government: Prime Minister.
Capital: Phnom Penh.
Official language: Khmer.
Official religion: Buddhism.
Monetary unit: riel (KHR); valuation (Sept. 8, 2008) 1 U.S.$ = KHR 4,135; 1 £ = KHR 7,305.

Area and population

Provinces	area sq km	population 2004 estimate[2]	Provinces	area sq km	population 2004 estimate[2]
Banteay Mean chey	6,679	752,392	Ratanak Kiri	10,782	117,664
Battambang	11,702	979,823	Siemreap	10,299	841,268
Kampong Cham	9,799	1,830,722	Stung Treng	11,092	101,136
Kampong Chanang	5,521	501,455	Svay Rieng	2,966	532,478
Kampong Speu	7,017	713,967	Takeo	3,563	889,777
Kampong Thom	13,814	668,895	**Municipalities**		
Kampot	4,873	595,036	Kep	336	36,592
Kandal	3,568	1,224,433	Pailin	803	31,442
Koh Kong	11,160	183,648	Phnom Penh	290	1,272,386
Kratie	11,094	325,097	Sihanoukville	868	201,981
Mondul Kiri	14,288	41,201	TOTAL LAND AREA	178,035	
Oddar Mean chey	6,158	95,410	INLAND WATER	3,000	
Preah Vihear	13,788	148,407	TOTAL	181,035	13,542,410[2]
Prey Veng	4,883	1,035,672			
Pursat	12,692	421,528			

Demography

Population (2008): 14,242,000.
Density (2008)[3]: persons per sq mi 207.2, persons per sq km 80.0.
Urban-rural (2004): urban 15.0%; rural 85.0%.
Sex distribution (2005): male 48.75%; female 51.25%.
Age breakdown (2005): under 15, 36.6%; 15–29, 30.5%; 30–44, 18.4%; 45–59, 9.4%; 60–74, 4.1%; 75–84, 0.9%; 85 and over, 0.1%.
Doubling time: 41 years.
Population projection: (2010) 14,753,000; (2020) 17,601,000.
Ethnic composition (2000): Khmer 85.2%; Chinese 6.4%; Vietnamese 3.0%; Cham 2.5%; Lao 0.6%; other 2.3%.
Religious affiliation (2000): Buddhist 84.7%; Chinese folk religionist 4.7%; traditional beliefs 4.3%; Muslim 2.3%; Christian 1.1%; other 2.9%.
Major urban areas (1998): Phnom Penh (2005) 1,364,000; Battambang 124,290; Sisophon 85,382; Siemreap 83,715; Sihanoukville 66,723.

Vital statistics

Birth rate per 1,000 population (2007): 25.5 (world avg. 20.3).
Death rate per 1,000 population (2007): 8.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 17.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 3.12.
Life expectancy at birth (2007): male 59.3 years; female 63.4 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases *c.* 158; HIV/AIDS-related *c.* 114; tuberculosis *c.* 90; diarrheal diseases *c.* 86; perinatal conditions *c.* 84.

National economy

Budget (2005). Revenue: KHR 3,280,300,000,000 (tax revenue 58.3%; nontax revenue 17.2%; grants 20.0%; other 4.5%). Expenditures: KHR 3,294,700,000,000 (current expenditure 59.7%, development expenditure 40.3%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 5,995,000, cassava 2,000,000, corn (maize) 380,000, sugarcane 170,000, bananas 130,000, soybeans 83,000, coconuts 71,000, oranges 63,000, rubber 22,000, tobacco leaves 14,300; livestock (number of live animals) 3,500,000 cattle, 2,790,000 pigs, 775,000 buffalo, (2005) 120,000 crocodiles; roundwood (2006) 9,334,000 cu m, of which fuelwood 99%; fisheries production (2005) 410,000 (from aquaculture 6%); aquatic plants production 16,000 (from aquaculture 100%). Mining and quarrying (2007): gold, n.a.; gemstones, n.a.; crude stones 702,000; salt 76,700. Manufacturing (value added in KHR '000,000,000; 2002): wearing apparel 1,808; food products 392; base and fabricated metals 120; wood and paper products and publishing 101; textiles 96. Energy production (consumption): electricity (kW-hr; 2005) 764,000,000 (846,000,000); petroleum products (metric tons; 2005) none (176,000); crude petroleum (barrels; 2005) none (none); natural gas (cu m; 2005) none (none).
Household income and expenditure. Average household size (2004) 5.1; average annual extrapolated monetary and nonmonetary income (1993–94): KHR 2,031,000 (U.S.$787); sources of income (1993–94): monetary 67.4%, of which nonagricultural (mostly self-employment) 36.8%, agricultural 18.1%, wages and salaries 9.1%; non-monetary 32.6%, of which agricultural 11.4%; household expenditure (2002): food, beverages, and tobacco 62.6%, housing and energy 19.7%, health 6.0%, transportation and communications 3.4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 963; remittances (2007) 353; foreign direct investment (2004–06 avg.) 332; official development assistance (2006) 529. Disbursements for (U.S.$'000,000): tourism (2006) 122; remittances (2007) 157.
Gross national income (GNI; 2007): U.S.$7,858,000,000 (U.S.$540 per capita); purchasing power parity GNI (U.S.$1,690 per capita).

Structure of gross domestic product and labour force

	2005 in value KHR '000,000,000	2005 % of total value	2002 labour force	2002 % of labour force
Agriculture	8,208	32.4	4,479,773	70.0
Mining	95	0.4	10,751	0.2
Manufacturing	4,583	18.1	556,388	8.7
Construction	1,605	6.3	100,123	1.6
Public utilities	129	0.5	4,704	0.1
Transp. and commun	1,690	6.7	174,711	2.7
Trade, hotels	3,331	13.1	661,406	10.3
Finance, real estate	1,753	6.9	16,224	0.3
Public admin., defense	464	1.8	143,513	2.2
Services	2,147	8.5	252,084	3.9
Other	1,345[4]	5.3[4]	—	—
TOTAL	25,350	100.0	6,399,677	100.0

Public debt (external, outstanding; 2006): U.S.$3,318,000,000.
Population economically active (2004): total 7,557,600; activity rate of total population *c.* 55% (participation rates: ages 15–64, 82.6%; female 49.4%; unemployed[5] [November 2001] 1.8%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	99.4	102.6	103.8	107.9	114.0	119.4	126.4

Land use as % of total land area (2003): in temporary crops 21.0%, in permanent crops 0.8%, in pasture 8.5%; overall forest area (2005) 59.2%.

Foreign trade[6]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	–523	–591	–581	–681	–1,018	–1,056
% of total	14.3%	14.3%	12.2%	11.6%	14.9%	12.5%

Imports (2005): U.S.$4,254,000,000 (retained imports 97.3%; imports for reexport 2.7%). *Major import sources* (2004): Thailand 23.9%; Hong Kong 15.0%; China 13.5%; Singapore 11.5%; Vietnam 7.6%.
Exports (2005): U.S.$2,910,000,000 (domestic exports 95.3%, of which garments 77.7%, rice 6.1%[7], rubber 4.1%[7], fish 2.6%[7], sawn timber and logs 0.5%[7]; reexports 4.7%). *Major export destinations* (2004): U.S. 56.2%; Germany 11.5%; U.K. 7.0%; Canada 4.3%; Vietnam 3.7%.

Transport and communications

Transport. Railroads (2004): length 374 mi, 602 km; (2000) passenger-km 45,000,000; (1999) metric ton-km 76,171,000. Roads (2004): total length 23,770 mi, 38,257 km (paved 6%). Vehicles (2004): passenger cars 235,298; trucks and buses 35,448. Air transport (2005–06): passenger-km 198,000,000; metric ton-km cargo 1,214,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	103	8.0	PCs	2004	38	2.6
Telephones				Dailies	2004	36[8]	2.7[8]
Cellular	2007	2,583[9]	179[9]	Internet users	2007	70	4.8
Landline	2007	38	2.6	Broadband	2007	5.0[9]	0.4[9]

Education and health

Educational attainment (2004). Percentage of literate population age 25 and over having: no formal schooling 4.4%; incomplete primary education 54.0%; complete primary 23.7%; incomplete secondary 11.3%; secondary/vocational 5.3%; higher 1.1%; unknown 0.2%. *Literacy* (2004): percentage of total population age 15 and over literate 74.4%; males literate 82.1%; females literate 67.4%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	5,915	48,433	2,747,411	56.7
Secondary (age 11–16)	594	22,830	543,885	23.8
Voc., teacher tr.[10]		2,315	9,983	4.3
Higher		2,479	43,210	17.4

Health: physicians (2004) 2,122 (1 per 6,169 persons); hospital beds (2002) 9,800 (1 per 1,405 persons); infant mortality rate per 1,000 live births (2007) 58.5; undernourished population (2002–04) 4,600,000 (33% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2007)[11]: 124,300 (army 60.3%, navy 2.3%, air force 1.2%, provincial forces 36.2%). *Military expenditure as percentage of GDP* (2005): 1.8%[12]; per capita expenditure U.S.$8[12].

[1]Includes 59 indirectly elected seats and 2 nonelected seats. [2]Projection based on 1998 census; 2004 population estimate based on 2004 intercensal survey is 13,091,000. [3]Based on land area. [4]Indirect taxes less subsidies and less imputed bank service charges. [5]Registered; for population age 10 and over. [6]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [7]Includes estimates for illegal exports. [8]Circulation of daily newspapers. [9]Subscribers. [10]1997–98. [11]Figures exclude 67,000 paramilitary. [12]Includes expenditures for police.

Internet resource for further information:
- **National Institute of Statistics http://www.nis.gov.kh**

Cameroon

Official name: République du Cameroun (French); Republic of Cameroon (English).
Form of government: unitary multiparty republic with one legislative house (National Assembly [180]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Yaoundé.
Official languages: French; English.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Regions	Capitals	area sq mi	area sq km	population 2004 estimate
Adamoua	Ngaoundéré	24,595	63,701	782,000
Centre	Yaoundé	26,623	68,953	2,703,000
Est	Bertoua	42,086	109,002	816,000
Extrême-Nord	Maroua	13,229	34,263	2,941,000
Littoral	Douala	7,818	20,248	2,380,000
Nord	Garoua	25,517	66,090	1,326,000
Nord-Ouest	Bamenda	6,680	17,300	1,989,000
Ouest	Bafoussam	5,364	13,892	2,142,000
Sud	Ebolowa	18,221	47,191	578,000
Sud-Ouest	Buea	10,081[1]	26,110[1]	1,343,000
LAND AREA		180,213[2]	466,750	
INLAND WATER		3,707	9,600	
TOTAL		183,920[1, 2]	476,350[1]	17,000,000

Demography

Population (2008): 18,468,000.
Density (2008)[3]: persons per sq mi 102.6, persons per sq km 39.6.
Urban-rural (2007): urban 56.0%; rural 44.0%.
Sex distribution (2006): male 50.15%; female 49.85%.
Age breakdown (2006): under 15, 41.5%; 15–29, 29.0%; 30–44, 15.7%; 45–59, 8.8%; 60–74, 4.1%; 75–84, 0.8%; 85 and over, 0.1%.
Population projection: (2010) 19,294,000; (2020) 23,471,000.
Doubling time: 31 years.
Ethnic composition (1983): Fang 19.6%; Bamileke and Bamum 18.5%; Duala, Luanda, and Basa 14.7%; Fulani 9.6%; Tikar 7.4%; Mandara 5.7%; Maka 4.9%; Chamba 2.4%; Mbum 1.3%; Hausa 1.2%; French 0.2%; other 14.5%.
Religious affiliation (2005): Roman Catholic 27.4%; traditional beliefs 22.2%; Protestant 20.2%; Sunnī Muslim 20.0%; nonreligious/other 10.2%.
Major urban areas (2004): Douala 1,532,800; Yaoundé 1,434,700; Garoua 409,000; Kousséri 332,900; Bamenda 298,500; Maroua 297,600.

Vital statistics

Birth rate per 1,000 population (2006): 35.6 (world avg. 20.3).
Death rate per 1,000 population (2006): 13.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 22.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 4.58.
Life expectancy at birth (2006): male 51.7 years; female 53.0 years.
Adult population (ages 15–49) *living with HIV* (2007): 5.1%[4] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): HIV/AIDS-related *c.* 308; lower respiratory infections *c.* 201; malaria *c.* 119; diarrheal diseases *c.* 88; perinatal conditions *c.* 69.

National economy

Budget (2005). Revenue: CFAF 1,590,000,000,000 (non-oil revenue 69.4%, of which VAT 22.0%, direct taxes 16.5%, customs duties 11.9%, nontax revenue 7.9%; oil revenue 27.6%; grants 3.0%). Expenditures: CFAF 1,278,000,000,000 (current expenditure 82.6%, of which interest on public debt 10.1%; capital expenditure 16.1%; other 1.3%).
Gross national income (GNI; 2007): U.S.$19,447,000,000 (U.S.$1,050 per capita); purchasing power parity GNI (U.S.$2,120 per capita).

Structure of gross domestic product and labour force

	2004 in value CFAF '000,000,000	2004 % of total value	2001 labour force	2001 % of labour force
Agriculture, fishing, forestry	1,574	20.3		..
Crude petroleum	555	7.2		...
other Mining	12	0.2		.
Manufacturing	1,422	18.3		...
Construction	203	2.6		...
Public utilities	58	0.7		...
Transp. and commun.	522	6.7		..
Trade	1,554	20.0		..
Finance, real estate	98	1.3		.
Services	1,294	16.7		.
Public admin., defense				.
Other	466[5]	6.0[5]		..
TOTAL	7,757[2]	100.0	5,464,853	100.0

Household income and expenditure. Average household size (2004) 4.8; expenditure (1993)[6]: food 49.1%, housing 18.0%, transportation and communications 13.0%, health 8.6%, clothing 7.6%, recreation 2.4%.
Land use as % of total land area (2003): in temporary crops 12.8%, in permanent crops 2.6%, in pasture 4.3%; overall forest area (2005) 45.6%.
Population economically active (2003)[7]: total 6,093,000; activity rate of total population 38.7% (participation rates: ages 15–64, 68.4%; female 39.6%; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.4	107.4	108.0	108.3	110.5	116.1	117.2

Public debt (external, outstanding; 2006): U.S.$2,078,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 2,076,000, sugarcane 1,430,000, plantains 1,317,000, oil palm fruit 1,300,000, taro 1,133,000, corn (maize) 923,000, bananas 790,000, sorghum 540,000, tomatoes 407,000, yams 287,000, seed cotton 225,000, cacao 179,239, peanuts (groundnuts) 160,000, coffee 48,240, natural rubber 47,000; livestock (number of live animals) 6,000,000 cattle, 4,400,000 goats, 3,800,000 sheep; roundwood (2006) 11,366,000 cu m, of which fuelwood 84%; fisheries production (2005) 142,682 (from aquaculture, negligible). Mining and quarrying (2006): pozzolana 600,000; limestone 100,000; gold 20,000 kg. Manufacturing (value added in U.S.$'000,000; 2002): food products 97; refined petroleum 88; beverages 78; paints, soaps, and varnishes 51; wood products (excl. furniture) 48; rubber products 38. Energy production (consumption): electricity (kW-hr; 2005) 4,145,000,000 (4,145,000,000); coal, none (none); crude petroleum (barrels; 2005) 43,500,000 (13,920,000); petroleum products (metric tons; 2005) 1,784,000 (932,000); natural gas, none (none).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 36; remittances (2007) 103; foreign direct investment (2004–06 avg.) 284; official development assistance (2006) 1,684. Disbursements for (U.S.$'000,000): tourism (2004) 323; remittances (2007) 42.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005
CFAF '000,000,000	+54.6	+50.3	−108.2	−48.2
% of total	2.0%	2.0%	4.1%	1.6%

Imports (2005): CFAF 1,524,200,000,000 (crude petroleum 27.8%, machinery and apparatus 11.6%, chemicals and chemical products 11.1%, cereals 7.4%, motor vehicles 6.1%). *Major import sources:* Nigeria 21.0%; France 17.7%; China 5.0%; U.S. 4.6%; Japan 3.9%.
Exports (2005): CFAF 1,476,000,000,000 (crude petroleum 44.8%, fuels and lubricants 12.2%, sawn wood 12.0%, cocoa beans 7.5%, aluminum 4.7%, raw cotton 4.7%, bananas 2.4%, coffee 2.3%). *Major export destinations:* Spain 19.7%; France 12.7%; Italy 11.7%; The Netherlands 7.6%; U.S. 6.7%.

Transport and communications

Transport. Railroads (2005): route length 631 mi, 1,016 km; passenger-km 323,000,000; metric ton-km cargo 1,119,000,000. Roads (2004): total length 31,068 mi, 50,000 km (paved 10%). Vehicles (2005): passenger cars 175,981; trucks and buses 59,399. Air transport (2001): passenger-km 796,567,000; metric ton-km cargo 23,255,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	720	43	PCs	2005	200	12
Telephones				Dailies	2005	59[8]	3.5[8]
Cellular	2007	4,536[9]	245[9]	Internet users	2006	370	22
Landline	2005	100	6.1	Broadband	2006	...	...

Education and health

Educational attainment (2004)[10]: Percentage of population 25 and over having: no formal schooling 32.9%; primary education 35.3%; secondary 26.2%; higher 4.2%; other/unknown 1.4%. *Literacy* (2007): percentage of total population age 15 and over literate 78.8%; males 84.6%; females 73.2%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–14)	10,519	49,042	2,798,523	57.1
Secondary (age 15–24)	1,106	27,595	669,129	24.2
Vocational	346	10,455	137,044	13.1
Higher[11]	7	2,223	58,251	26.2

Health (2004): physicians 2,966 (1 per 5,609 persons); hospital beds 38,067[12] (1 per 437 persons); infant mortality rate per 1,000 live births (2006) 67.2; undernourished population (2002–04) 4,200,000 (26% of total population based on the consumption of a minimum daily requirement of 1,860 calories).

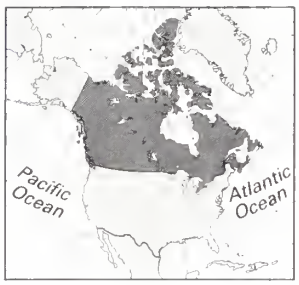
Military

Total active duty personnel (November 2007): 14,100 (army 88.7%, navy 9.2%, air force 2.1%). *Military expenditure as percentage of GDP* (2005): 1.3%; per capita expenditure U.S.$13.

[1]Includes the 270-sq-mi (700-sq-km) area of Bakassi Peninsula, which was formally ceded by Nigeria to Cameroon on Aug. 14, 2008; reliable population figures for the Bakassi Peninsula are unavailable. [2]Detail does not add to total given because of rounding. [3]Based on land area excluding the Bakassi Peninsula. [4]Statistically derived midpoint within range. [5]Indirect taxes less subsidies and imputed bank service charge. [6]Weights of consumer price index components. [7]Estimates of the ILO Employment Trends Unit. [8]Circulation. [9]Subscribers. [10]Based on 2004 survey of 17,506 persons. [11]Universities only; 2003–04. [12]Includes health centres with fewer than 10 beds.

Internet resource for further information:
- **National Institute of Statistics**
  http://www.statistics-cameroon.org

Canada



Official name: Canada.
Form of government: federal multiparty parliamentary state with two legislative houses (Senate [105[1]]; House of Commons [308]).
Chief of state: Queen of Canada (British Monarch).
Representative of chief of state: Governor-General.
Head of government: Prime Minister.
Capital: Ottawa.
Official languages: English; French.
Official religion: none.
Monetary unit: Canadian dollar (Can$); valuation (Sept. 8, 2008) 1 U.S.$ = Can$1.07; 1 £ = Can$1.88.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2006 estimate
Alberta	Edmonton	255,541	661,848	3,375,800
British Columbia	Victoria	364,764	944,735	4,310,500
Manitoba	Winnipeg	250,116	647,797	1,177,800
New Brunswick	Fredericton	28,150	72,908	749,200
Newfoundland and Labrador	St. John's	156,453	405,212	509,700
Nova Scotia	Halifax	21,345	55,284	934,400
Ontario	Toronto	415,599	1,076,395	12,687,000
Prince Edward Island	Charlottetown	2,185	5,660	138,500
Quebec	Quebec	595,391	1,542,056	7,651,500
Saskatchewan	Regina	251,367	651,036	985,400
Territories				
Northwest Territories	Yellowknife	519,735	1,346,106	41,900
Nunavut	Iqaluit	808,185	2,093,190	30,800
Yukon Territory	Whitehorse	186,272	482,443	31,200
TOTAL		3,855,103[2]	9,984,670[2]	32,623,500[3] [4]

Demography

Population (2008): 33,213,000.
Density (2008)[5]: persons per sq mi 9.5, persons per sq km 3.7.
Urban-rural (2005): urban 80.1%; rural 19.9%.
Sex distribution (2006)[6]: male 48.95%; female 51.05%.
Age breakdown (2006)[6]: under 15, 17.7%; 15–29, 19.6%; 30–44, 21.6%; 45–59, 22.3%; 60–74, 12.3%; 75–84, 4.8%; 85 and over, 1.7%.
Population projection: (2010) 33,760,000; (2020) 36,387,000.
Ethnic origin (2000): Anglo-Canadian 45.5%; French-Canadian 23.5%; Chinese 3.4%; British expatriates 3.3%; Indo-Pakistani 2.6%, of which Punjabi 2.3%; German 2.4%; Italian 2.2%; U.S. white 1.8%; Métis (part-Indian) 1.8%; Indian 1.5%, of which detribalized 0.5%; Jewish 1.4%; Arab 1.3%; Ukrainian 1.2%; Eskimo (Inuit) 0.1%; other 8.0%.
Religious affiliation (2001): Christian 77.1%, of which Roman Catholic 43.2%, Protestant 28.3%, unspecified Christian 2.6%, Orthodox 1.7%, other Christian 1.3%; Muslim 2.0%; Jewish 1.1%; Hindu 1.0%; Buddhist 1.0%; Sikh 0.9%; nonreligious 16.5%; other 0.4%.
Major metropolitan areas (2006): Toronto 5,113,149; Montreal 3,635,571; Vancouver 2,116,581; Ottawa-Hull 1,130,761; Calgary 1,079,310; Edmonton 1,034,945; Quebec 715,515; Winnipeg 694,668; Hamilton 692,911; London 457,720.

Other metropolitan areas (2006)

	population		population		population
Abbotsford	159,020	Oshawa	330,594	Saskatoon	233,923
Barrie	177,061	Regina	194,971	Sherbrooke	186,952
Halifax	372,858	St. Catharines–Niagara	390,317	Sudbury	158,258
Kingston	152,358	St. John's	181,113	Victoria	330,088
Kitchener	451,235			Windsor	323,342

Place of birth (2001): 81.6% native-born; 18.4% foreign-born, of which U.K. 2.0%, other European 5.7%, Asian countries 5.8%, U.S. 0.8%, other 4.1%.
Mobility (2001). Population living in the same residence as in 1996: 58.1%; different residence, same municipality 22.4%; same province, different municipality 3.3%; different province 12.7%; different country 3.5%.
Households. Total number of households (2004) 11,952,550. Average household size (2004) 2.67; 1 person (1997) 25.2%, 2 persons 33.0%, 3 persons 16.7%, 4 persons 16.3%, 5 or more persons 8.8%. Family households (2001): 8,371,020 (72.4%), nonfamily 3,191,955 (27.6%, of which 1 person 75.6%).
Immigration (2004): permanent immigrants admitted 235,824; from Asia 48.6%, of which China 15.4%, India 10.8%, Philippines 5.6%; Europe 17.8%, of which U.K. 2.6%, France 2.1%; U.S. 3.2%; refugee arrivals 26,526; overall refugee population (end of 2004) 141,398.

Vital statistics

Birth rate per 1,000 population (2005–06): 10.6 (world avg. 20.3); (1997) within marriage 72.3%; outside of marriage 27.7%.
Death rate per 1,000 population (2005–06): 7.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2005–06): 3.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.61.
Marriage/divorce rates per 1,000 population: (2006) 4.6/(2003) 2.2.
Life expectancy at birth (2006): male 76.9 years; female 83.7 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 240.6; malignant neoplasms (cancers) 207.5; diseases of the respiratory system 56.6; accidents and violence 44.1 (including suicide 11.6).

Social indicators

Educational attainment (2004). Percentage of population age 15 and over having: incomplete primary and complete primary education 8.8%; incomplete secondary 15.7%; complete secondary 19.3%; some university/higher vocational 39.0%; bachelor's degree or higher 17.2%.

Distribution of income (1999)
percentage of household income by quintile

1	2	3	4	5 (highest)
7.4%	11.6%	15.3%	24.2%	41.5%

Quality of working life. Average workweek (2005): 35.2 hours. Annual rate per 100,000 workers for (2005): injury, accident, or industrial illness 2,090; death 6.8. Average days lost to labour stoppages per 1,000 employee-workdays (2001): 0.7. Average commuting distance (2001): 4.5 mi, 7.2 km; mode of transportation: automobile 80.7%, public transportation 10.5%, walking 6.6%, other 2.2%. Labour force covered by a pension plan (2001): 33.6%.
Access to services. Proportion of households having access to: electricity (2002) 100%; public water supply (1996) 99.8%; public sewage collection (1996) 99.3%.
Social participation. Eligible voters participating in last national election (January 2006): 64.9%. Population over 18 years of age participating in voluntary work (2000): 26.7%. Union membership as percentage of civilian labour force (2003) 25.0%. Attendance at religious services on a weekly basis (2006): 17%.
Social deviance (2004). Offense rate per 100,000 population for: violent crime 946.1, of which assault 731.8, sexual assault 73.7, homicide 2.0; property crime 3,990.9, of which auto theft 530.7, breaking and entering 859.9.
Leisure (1998). Favourite leisure activities (hours weekly): television (2004) 21.4; radio (2005) 19.1; social time 13.3; reading 2.8; sports and entertainment 1.4.
Material well-being (2003). Households possessing: automobile 62.4%; telephone 96.3%; cellular phone 53.9%; colour television 99.0%; central air conditioner 39.3%; cable television 65.1%; home computers 66.8%; Internet access 56.9%.

National economy

Gross national income (GNI; 2007): U.S.$1,300,025,000,000 (U.S.$39,420 per capita); purchasing power parity GNI (U.S.$35,310 per capita).

Structure of gross domestic product and labour force

	2006 in value Can$'000,000[8]	2006 % of total value	2006[7] labour force	2006[7] % of labour force
Agriculture, fishing, forestry	23,371	2.1	341,100[9]	2.0[9]
Mining	40,134	3.6	321,000[10]	1.8[10]
Manufacturing	175,066	15.9	2,131,200	12.2
Construction	67,616	6.1	1,057,100	6.1
Public utilities	28,043	2.5	121,200	0.7
Transportation	52,784	4.8	801,400	4.6
Trade, hotels	164,915	15.0	3,624,600	20.7
Finance, real estate[11]	270,212	24.6	2,767,400	15.8
Pub. admin., defense	61,527	5.6	850,000	4.9
Services	216,657	19.7	4,306,200	24.6
Other	—	—	1,152,500	6.6
TOTAL	1,100,325[12]	100.0[3]	17,473,500[13]	100.0

Budget (2005–06)[14]. Revenue: Can$229,660,000,000 (income tax 62.9%, sales tax 15.4%, contributions to social security 9.6%, other 12.1%). Expenditures: Can$216,156,000,000 (social services and welfare 37.1%, defense and social protection 11.2%, health 10.0%, public debt interest 9.9%, resource conservation and industrial development 3.8%, education 2.3%).
Public debt (2007[7]): U.S.$582,601,000,000.

Manufacturing, mining, and construction enterprises (2004)

	no. of employees	weekly wages as a % of avg. of all wages[15, 16]	annual value added (Can$'000,000)[17]
Manufacturing			
Transport equipment	228,358	148.4	28,101
Food and beverages	270,096[18]	100.2	22,287[18]
Chemicals and related products	93,735	147.5	17,239
Electrical and electronic products	128,858	140.1	14,085
Metal fabricating	195,350	123.2	14,164
Primary metals	85,475	153.9	12,261
Wood products (excl. furniture)	133,853	111.9	13,725
Paper and related products	97,649	154.4	11,393
Nonelectrical machinery	143,421	145.9	12,490
Rubber and plastic products	130,504	111.3	10,341
Furniture and fixtures	101,164	99.7	5,848
Nonmetallic mineral products	59,315	121.5	5,639
Printing, publishing, and related products	81,119	109.6	5,610
Wearing apparel	67,864	72.6	2,558
Textiles	46,799	101.9	2,154
Petroleum and coal products	17,056	186.1	1,991
Tobacco products industries	[18]	201.3	[18]
Mining	164,010	180.5	41,193
Construction	1,056,276	115.4	63,559

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 20,641,100, barley 11,822,100, corn (maize) 10,554,500, rapeseed 8,864,200, oats 5,009,100, potatoes 4,970,938, dry peas 3,023,600, soybeans 2,785,400, lentils 669,700, linseed 633,500, tomatoes 607,852, apples 405,089, canary seed 169,200, cranberries and blueberries (2005) 139,099, mustard seed 112,000, mushrooms 81,500; livestock (number of live animals; 2007[7]) 14,329,000 pigs, 14,315,000 cattle, 590,500 sheep; roundwood (2006) 205,893,000 cu m, of which fuelwood 1%; fisheries production (2005) 1,235,065 (from aquaculture 13%). Mining and quarrying (value of production in

Can$'000,000; 2005)[19]: nickel 3,302 (3); potash 2,839 (1); copper 2,455 (8); gold 2,041 (8); diamonds (gemstones) 1,684 (4); iron ore 1,496 (9); sand and gravel 1,165; stone 1,133; zinc 998 (4); salt 420 (5); silver 299 (6); lime 262 (10); gypsum 100 (3); cobalt 91 (4). Manufacturing (value added in Can$'000,000,000; 2005)[8]: transportation equipment 28.1; food 17.6; chemicals 17.2; fabricated metal products 14.2; wood industries 13.7; machinery 12.5; primary metals 12.3; paper products 11.4; rubber and plastic products 10.3; computers and electronic products 10.3.

Retail trade (2002)

	no. of employees[16]	weekly wages as a % of all wages[15, 16]	annual sales (Can$'000,000)
Motor vehicle dealers	326,400[20]	143.5	89,979.0
Food stores	496,700	84.2	66,424.8
Clothing and footwear stores	144,600	79.4	27,229.0
Home furnishings and electronics	173,200	81.7	24,501.5
Automotive stores	[20]	143.5	23,078.5
Service stations	[20]	143.5	22,679.5
Furniture and appliance stores	87,000	119.2	18,275.9
Pharmacies	54,200	. .	14,356.7
Sporting goods	...	..	11,686.9
Hardware stores	.	81.7	8,113.0
Electronics, including computers	[21]	92.0	8,108.2
Personal care products	[21]	79.4	7,620.0
Other	235,300[21]	92.0	53,767.7

Energy production (consumption): electricity (kW-hr; 2005) 628,194,000,000 (604,343,000,000); hard coal (metric tons; 2005) 28,586,000 (15,107,000); lignite (metric tons; 2005) 36,759,000 (45,413,000); crude petroleum[22] (barrels; 2007) 914,000,000 ([2005] 670,900,000); petroleum products (metric tons; 2005) 88,583,000 (80,070,000); natural gas (cu m; 2007) 166,467,000,000 ([2005] 96,376,000,000).

Population economically active (2007[7]): total 17,825,800; activity rate of total population 55.6% (participation rates: ages 15 and over, 67.5%; female 46.7%; unemployed [February 2007] 6.1%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.5	104.8	107.7	109.7	112.2	114.4	116.9
Hourly earnings index[23]	102.0	105.0	108.3	111.1	113.1	113.7	118.5

Household income and expenditure. Average household size (2004) 2.7; average annual income per family (2003) Can$72,700 (U.S.$51,888); sources of income (2001): wages, salaries, and self-employment 71.8%, transfer payments 14.0%, other 14.2%; expenditure (2004): housing 26.9%, transportation 19.0%, food 15.2%, recreation 9.3%, household operations 6.4%, clothing 5.5%, household furnishings 4.1%, health 3.7%, alcoholic beverages and tobacco 3.3%, education 2.4%, other 4.2%.

Financial aggregates

	2002	2003	2004	2005	2006	2007
Exchange rate, Can$ per						
U.S. dollar[24]	1.58	1.29	1.20	1.16	1.17	0.99
£[24]	2.37	2.29	2.38	2.20	2.30	1.98
SDR[24]	2.15	1.92	1.87	1.66	1.75	1.56
International reserves (U.S.$)						
Total (excl. gold, '000,000)[24]	36,984	36,222	34,429	32,962	34,994	40,991
SDRs ('000,000)[24]	719	838	924	897	963	1,016
Reserve pos. in IMF ('000,000)[24]	3,580	3,847	3,338	1,401	833	661
Foreign exchange ('000,000)[24]	32,685	31,537	30,167	30,664	33,198	39,314
Gold ('000,000 fine troy oz)[24]	0.60	0.11	0.11	0.11	0.11	0.11
% world reserves	0.06	0.01	0.01	0.01	0.01	0.01
Interest and prices						
Central bank discount (%)[24]	3.00	3.00	2.75	3.50	4.50	4.50
Govt. bond yield (%)[25]	5.66	5.28	5.08	4.39	4.30	4.34
Industrial share prices (2000 = 100)[25]	73.2	74.5	90.0	105.8	125.7	142.6
Balance of payments (U.S.$'000,000)						
Balance of visible trade, of which:	+36,488	+41,076	+50,682	+52,679	+45,146	+45,838
Imports, f.o.b.	−227,431	−244,836	−279,430	−320,575	−356,641	−388,211
Exports, f.o.b.	263,919	285,912	330,112	373,254	401,786	434,049
Balance of invisibles	−23,032	−27,716	−28,682	−29,271	−24,349	−33,023
Balance of payments, current account	+13,456	+13,360	+22,000	+23,408	+20,797	+12,815

Land use as % of total land area (2003): in temporary crops 5.0%, in permanent crops 0.7%, in pasture 1.7%; overall forest area (2005) 33.6%.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 14,678; remittances, n.a.; foreign direct investment (FDI; 2004–06 avg.) 32,533. Disbursements for (U.S.$'000,000): tourism (2006) 20,538; remittances, n.a.; FDI (2004–06 avg.) 40,825.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
Can$'000,000,000	+70.7	+57.3	+57.6	+66.1	+66.7	+53.6
% of total	9.2%	7.4%	7.8%	8.3%	7.9%	6.2%

Imports (2006): Can$404,535,000,000 (machinery and apparatus 24.7%; transport equipment 23.4%, of which road vehicles and parts 19.7%; chemicals and chemical products 7.3%; base metals 6.9%; food products 5.8%; crude petroleum 5.6%). *Major import sources* (2006): U.S. 65.5%; Japan 2.9%; U.K. 2.4%; other European Economic Community countries 8.0%.

Exports (2006): Can$458,166,900,000 (transport equipment 22.7%, of which road vehicles and parts 18.1%; machinery and apparatus 16.4%; base metals and alloys 9.9%; crude petroleum 8.4%; food products 6.9%; chemicals and chemical products 6.8%; natural gas 6.0%; wood and wood pulp 4.9%; paper and paperboard 2.4%). *Major export destinations* (2006): U.S. 78.9%; U.K. 2.6%; Japan 2.3%; other European Economic Community countries 4.7%.

Trade by commodities (2006)

	imports		exports	
SITC Group	U.S.$'000,000	%	U.S.$'000,000	%
00 Food and live animals	16,403	4.7	22,627	5.8
01 Beverages and tobacco	2,826	0.8	2,227[26]	0.6[26]
02 Crude materials, excluding fuels	9,852	2.8	29,354	7.6
03 Mineral fuels, lubricants, and related materials	31,903	9.1	77,534	20.0
04 Animal and vegetable oils, fats, and waxes	567	0.1	...	...
05 Chemicals and related products, n.e.s.	35,912	10.3	29,441	7.6
06 Basic manufactures	46,215	13.2	59,438	15.3
07 Machinery and transport equipment	156,759	44.8	123,224	31.8
08 Miscellaneous manufactured articles	40,779	11.7	22,510	5.8
09 Goods not classified by kind	8,673	2.4	21,665	5.6
TOTAL	349,889	100.0[3]	388,020	100.0[3]

Direction of trade (2006)

	imports		exports	
	U.S.$'000,000	%	U.S.$'000,000	%
Africa	7,429	2.1	2,251	0.6
Asia-Oceania	70,188	20.1	30,737	7.9[3]
China	30,424	8.7	6,755	1.7
Japan	13,521	3.9	8,302	2.1
South Korea	5,084	1.5	2,880	0.7
Other	21,159	6.0	12,800	3.3
Americas	220,619	63.1[3]	325,643	83.9
Mexico	14,123	4.0	3,867	1.0
United States	191,996	54.9	316,665	81.6
Other Americas	14,500	4.1	5,111	1.3
Europe	51,642	14.8[3]	29,376	7.6
United Kingdom	9,569	2.7	8,935	2.3
Germany	9,817	2.8	3,418	0.9
Other Europe	32,256	9.2	17,023	4.4
TOTAL	349,889[13]	100.0[3]	388,020[13]	100.0

Transport and communications

Transport. Railroads (2005): length 72,168 km; passenger-km 1,472,781,000; metric ton-km cargo 352,133,000,000. Roads (2004): total length 1,408,900 km (paved *c.* 35%). Vehicles (2005): passenger cars 18,123,885; trucks and buses 785,649. Air transport (2007)[27]: passenger-km 74,400,000,000; metric ton-km cargo 1,184,868,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	22,384	707	PCs	2004	22,390	701
Telephones				Dailies	2004	5,350[28]	167[28]
Cellular	2006	18,749[29]	576[29]	Internet users	2007	28,000[30]	852[30]
Landline	2006	21,000	645	Broadband	2006	7,676[29]	236[29]

Education and health

Literacy (2005): total population age 15 and over literate virtually 100%.

Education (2001–02)

	schools[31]	teachers	students	student/teacher ratio
Primary (age 6–14)	15,595	142,531	2,482,315	17.4
Secondary (age 14–18)		136,963	2,520,348	18.4
Postsecondary	199[32]	10,990	102,125	9.3
Higher	75[33]	37,203[34]	735,599[34]	19.8[34]

Health: physicians (2004) 67,087 (1 per 476 persons); hospital beds (2002–03) 115,120 (1 per 274 persons); infant mortality rate (2005) 5.4; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 64,000 (army 52.0%, navy 17.3%, air force 30.7%). *Military expenditure as percentage of GDP* (2005): 1.1%; per capita expenditure U.S.$403.

[1]Statutory number. [2]Total area equals 3,855,103 sq mi (9,984,670 sq km), of which land area equals 3,511,023 sq mi (9,093,507 sq km), inland water area equals 310,296 sq mi (803,663 sq km), and Great Lakes water area equals 33,784 sq mi (87,500 sq km). [3]Detail does not add to total given because of rounding. [4]2006 preliminary unadjusted census total equals 31,612,897. [5]Based on land area. [6]Based on preliminary unadjusted census. [7]January 1. [8]At prices of 1997. [9]Excludes fishing, forestry. [10]Includes fishing, forestry. [11]Includes professional, scientific, and technical services. [12]GDP at current values in 2005 was Can$1,371,425,000,000. [13]Detail does not add to total given because of discrepancies in estimates. [14]Federal government revenue and expenditure. [15]Excludes agriculture, fishing and trapping, private household services, religious organizations, and the military. [16]2000. [17]For 2005 in constant dollars of 1997. [18]Food and beverages includes tobacco. [19]World ranking by production volume is in parentheses. [20]Motor vehicle dealers includes Service stations and Automotive stores. [21]Other includes Electronics and Personal care products. [22]In 2006 there were 411,000,000 barrels of marketable crude petroleum (47% of total production) produced from the Alberta oil sands. [23]Manufacturing only. [24]End of period. [25]Period average. [26]Includes 04 SITC group. [27]Air Canada only. [28]Circulation of daily newspapers. [29]Subscribers. [30]Estimated figure. [31]1999–2000. [32]Community colleges. [33]Universities only. [34]2003–04.

Internet resource for further information:

- **Statistics Canada http://www.statcan.ca**

Cape Verde

Official name: República de Cabo Verde (Republic of Cape Verde).
Form of government: multiparty republic with one legislative house (National Assembly [72]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Praia.
Official language: Portuguese.
Official religion: none.
Monetary unit: escudo (C.V.Esc.); valuation (Sept. 8, 2008) 1 U.S.$ = C.V.Esc. 76.20; 1 £ = C.V.Esc. 134.62.

Area and population

Island Groups Islands/Counties	Principal towns	area sq mi	area sq km	population 2005 estimate
Leeward Islands		694[1]	1,798	317,990
Brava[2]	Nova Sintra	25	64	6,462
Fogo[3]	São Filipe	184	476	37,861
Maio[2]	Porto Inglês	103	267	7,506
Santiago[4]	Praia	383	991	266,161
Windward Islands		858	2,223	157,959
Boa Vista[2]	Sal Rei	239	620	5,398
Sal[2]	Santa Maria	83	216	17,631
Santa Luzia[5]	—	14	35	0
Santo Antão[3]	Porto Novo	300	779	47,484
São Nicolau[6]	Ribeira Brava	134	346	13,310
São Vicente[2]	Mindelo	88	227	74,136
Other islets		5	12	0
TOTAL		1,557	4,033	475,949

Demography

Population (2008): 500,000.
Density (2008): persons per sq mi 321.1, persons per sq km 124.0.
Urban-rural (2007): urban 58.9%; rural 41.1%.
Sex distribution (2005): male 48.47%; female 51.53%.
Age breakdown (2005): under 15, 39.4%; 15–29, 31.0%; 30–44, 16.6%; 45–59, 7.5%; 60–74, 4.1%; 75–84, 1.2%; 85 and over, 0.2%.
Population projection: (2010) 518,000; (2020) 622,000.
Doubling time: 38 years.
Ethnic composition (2000): Cape Verdean *mestico* (black-white admixture) 69.6%; Fulani 12.2%; Balanta 10.0%; Mandyako 4.6%; Portuguese white 2.0%; other 1.6%.
Religious affiliation (2000): Christian 95.1%, of which Roman Catholic 88.1%, Protestant 3.3%, independent Christian 2.7%; Muslim 2.8%; other 2.1%.
Major cities (2005): Praia 111,500; Mindelo 70,000; Santa Maria (2000) 13,220; Assomada 11,900; Pedra Badejo 10,700.

Vital statistics

Birth rate per 1,000 population (2006): 24.9 (world avg. 20.3).
Death rate per 1,000 population (2006): 6.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 18.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.90.
Life expectancy at birth (2006): male 68.3 years; female 76.1 years.
Major causes of death per 100,000 population (1999): circulatory system diseases 151.0; respiratory system diseases 58.3; infectious and parasitic diseases 55.9; malignant neoplasms (cancers) 48.7; accidents and violence 48.0.

National economy

Budget (2006). Revenue: C.V.Esc. 34,603,000,000 (tax revenue 68.1%, of which consumption taxes 28.6%, taxes on income and profits 22.0%; grants 20.2%; nontax revenue 11.0%; net lending 0.7%). Expenditures: C.V.Esc. 36,309,000,000 (current expenditure 59.7%; capital expenditure 34.8%; other 5.5%).
Public debt (external, outstanding; 2005): U.S.$545,800,000.
Gross national income (GNI; 2007): U.S.$1,287,000,000 (U.S.$2,430 per capita); purchasing power parity GNI (U.S.$2,940 per capita).

Structure of gross domestic product and labour force

	2005 in value C.V.Esc. '000,000	2005 % of total value	1990 labour force	1990 % of labour force
Agriculture, fishing	8,904	9.1	29,876	24.7
Manufacturing	7,530	7.7	5,520	4.6
Public utilities			883	0.7
Mining			410	0.3
Construction	9,112	9.3	22,722	18.9
Transp. and commun.	18,621	19.0	6,138	5.1
Trade, hotels	20,288	20.7	12,747	10.6
Finance, real estate	8,775	8.9	821	0.7
Pub. admin., defense	11,813	12.0	17,358	14.4
Services	2,078	2.1		
Other	11,017[7]	11.2[7]	24,090	20.0
TOTAL	98,139[1]	100.0	120,565	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 15,400, corn (maize) 12,000, bananas 6,800, mangoes 6,000, pulses 5,300, tomatoes 5,000, sweet potatoes 4,700; livestock (number of live animals) 217,000 pigs, 115,400 goats; roundwood (2006) 2,000 cu m, of which fuelwood 100%; fisheries production (2005) 7,742 (from aquaculture, none). Mining and quarrying (2006): salt 1,600; pozzolana, n.a. Manufacturing (1999): flour 15,901; soap 1,371; frozen fish 900[8]; canned fish 200[8]; garments, n.a.; cigarettes and cigars 77 kg; beer 41,045 hectolitres. Energy production (consumption): electricity (kW-hr; 2005) 237,000,000 (237,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (93,000); natural gas, none (none).
Population economically active (2003): total 157,000[9]; activity rate of total population *c.* 32.5%[9] (participation rates: ages 15–64 *c.* 58%[9]; female *c.* 34%[9]; unemployed [2006] 21.1%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.3	105.3	106.5	104.5	105.0	110.6	115.5

Household income and expenditure. Average household size (2006) 4.9; expenditure (1997): food 38.7%, transportation 13.6%, alcoholic beverages 10.1%, housing 7.7%, household furnishings 6.0%, energy 5.0%.
Land use as % of total land area (2003): in temporary crops 11.4%, in permanent crops 0.7%, in pasture 6.2%; overall forest area (2005) 20.7%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 215; remittances (2007) 143; foreign direct investment (2004–06 avg.) 73; official development assistance (2006) 138. Disbursements for (U.S.$'000,000): tourism (2006) 82; remittances (2007) 6.0.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006
C.V.Esc. '000,000	–28,143	–29,425	–30,219	–30,810	–40,292
% of total	75.6%	75.4%	75.7%	65.5%	73.4%

Imports (2006): C.V.Esc. 47,578,000,000 (food and agricultural products 27.2%, machinery and apparatus 10.7%, mineral fuels 8.6%, transport equipment 5.4%, iron and steel 5.2%, cement 4.5%). *Major import sources:* Portugal 30.9%; The Netherlands and Belgium 13.3%; U.S. 12.8%; Spain 7.6%; Brazil 5.4%.
Exports (2006): C.V.Esc. 7,286,000,000 (reexports [significantly resold fuel (bunkering) to passing ships and aircraft] 75.9%; domestic exports 24.1%, of which fresh fish 10.5%, clothing 6.7%, footwear 3.3%). *Major export destinations*[11]: Portugal 49.8%; Spain 27.3%; other 22.9%.

Transport and communications

Transport. Railroads: none. Roads (2001): total length 870 mi, 1,400 km (paved [2000] 69%). Vehicles (2004[12]): passenger cars 23,811; trucks and buses 5,032. Air transport (2002): passenger-km 279,000,000; metric ton-km cargo, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	48	105	PCs	2004	48	102
Telephones				Dailies	2005	5[13]	11[13]
Cellular	2007	148[14]	279[14]	Internet users	2007	37	70
Landline	2006	72	138	Broadband	2006	1.8[14]	3.7[14]

Education and health

Educational attainment (1990). Percentage of population age 25 and over having: no formal schooling 47.9%; primary 40.9%; incomplete secondary 3.9%; complete secondary 1.4%; higher 1.5%; unknown 4.4%. *Literacy* (2007): total population age 15 and over literate 79.4%; males 87.5%; females 72.6%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	425	3,169	85,138	26.9
Secondary (age 12–17)	33	2,193	49,790	22.7
Teacher training	3	52	948	18.2
Higher	...	425	3,036[15]	7.1

Health (2005): physicians 241 (1 per 1,976 persons); hospital beds 950 (1 per 501 persons); infant mortality rate per 1,000 live births 30.0; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 1,200 (army 83.3%, air force 8.3%, coast guard 8.4%). *Military expenditure as percentage of GDP* (2004): 0.7%; per capita expenditure U.S.$15.

[1]Detail does not add to total given because of rounding. [2]Island/county areas are coterminous. [3]Administratively split into 3 counties. [4]Administratively split into 9 counties. [5]Administered by São Vicente. [6]Administratively split into 2 counties. [7]Taxes and duties on imports less imputed bank service charges. [8]2002. [9]Estimates of the ILO Employment Trends Unit. [10]Including reexports. [11]Domestic exports only. [12]January 1. [13]Circulation of daily newspapers. [14]Subscribers. [15]Excludes pupils studying abroad; applicable number for year earlier (2002–03) was 1,743.

Internet resources for further information:
- **Instituto Nacional de Estatística de Cabo Verde http://www.ine.cv**
- **Banco de Cabo Verde http://www.bcv.cv**

Cayman Islands

Official name: Cayman Islands.
Political status: overseas territory (United Kingdom) with one legislative house (Legislative Assembly [18[1]]).
Chief of state: British Monarch, represented by Governor.
Head of government: Leader of Government Business.
Capital: George Town.
Official language: none.
Official religion: none.
Monetary unit: 1 Cayman Islands dollar (CI$); valuation (Sept. 8, 2008) CI$1.00 = U.S.$1.23[2] = £0.70.

Area and population

Islands	area sq mi	area sq km	population 1999 census
Grand Cayman[3]	76	197	37,473
Cayman Brac[4]	15	39	1,822
Little Cayman[4]	11	28	115
TOTAL	102[5]	264[5]	39,410

Demography

Population (2008): 55,500.
Density (2008)[6]: persons per sq mi 596.8, persons per sq km 230.3.
Urban-rural (2005): urban 100%; rural 0%.
Sex distribution (2005): male 48.88%; female 51.12%.
Age breakdown (2005): under 15, 21.0%; 15–29, 18.3%; 30–44, 25.9%; 45–59, 22.6%; 60–74, 9.2%; 75 and over, 3.0%.
Population projection: (2010) 58,000; (2020) 72,000.
Doubling time: 68 years.
Ethnic composition (2000): mulatto 51.5%; West Indian black 25.8%; British 19.3%; Jewish 1.9%; Indo-Pakistani 0.3%; other 1.2%.[7]
Religious affiliation (2000): Protestant (significantly Presbyterian) *c.* 55%; Spiritist (Rastafarian) *c.* 15%; independent Christian *c.* 10%; unaffiliated Christian *c.* 10%; nonreligious *c.* 4%; Jewish *c.* 2%; other *c.* 4%.
Major urban areas (2007): George Town 31,785; West Bay 11,436; Bodden Town 6,918.

Vital statistics

Birth rate per 1,000 population (2006): 13.7 (world avg. 20.3).
Death rate per 1,000 population (2006): 3.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 10.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.90.
Marriage/divorce rates per 1,000 population (2006): 9.9[8]/2.9.
Life expectancy at birth (2005): male 77.3 years; female 82.6 years.
Major causes of death per 100,000 population (2000): diseases of the circulatory system 136.8, of which ischemic heart disease 39.8; malignant neoplasms (cancers) 99.5; accidents and violence 34.8.

National economy

Budget (2005). Revenue: CI$428,600,000 (taxes on international trade 40.1%; sales tax 40.0%; property tax 5.0%). Expenditures: CI$430,300,000 (current expenditures 78.9%, of which wages and salaries 38.1%, transfers 17.8%; capital expenditures 11.3%; other 9.8%).
Public debt (December 2005): U.S.$207,500,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 210, pumpkins, squash, and gourds 75, guavas and mangoes 35, plantains 35, yams 32, tomatoes 25; livestock (number of live animals) 1,300 cattle, 400 pigs, 270 goats; roundwood, n.a.; fisheries production (2005) 125 (from aquaculture, none). Mining and quarrying: crushed stone for local use. Manufacturing: industries include fish and turtle processing, handicrafts, and small-boat building[9]. Energy production (consumption): electricity (kW-hr; 2005) 454,000,000 (454,000,000); coal (metric tons; 2005) none (none); crude petroleum (barrels; 2005) none (none); petroleum products (metric tons; 2005) none (163,000); natural gas (cu m; 2005) none (none).
Gross national income (at current market prices; 2005): U.S.$2,217,000,000 (U.S.$47,744 per capita).

Structure of gross domestic product and labour force

	2005 in value U.S.$'000,000	2005 % of total value	2006 labour force	2006 % of labour force
Agriculture, forestry, fishing	6.0	0.4	805	2.2
Mining and quarrying / Public utilities	52.8	3.3	726	2.0
Manufacturing	27.6	1.7	383	1.1
Construction	152.0	9.6	6,344	17.7
Trade, hotels, restaurants	368.0	23.2	8,011	22.3
Transportation and communications	172.0	10.8	1,477	4.1
Finance, real estate, insurance, international business[10]	786.0	49.4	7,648	21.3
Pub. admin., defense			2,380	6.6
Services			7,242	20.1
Other	25.6	1.6	943[11]	2.6[11]
TOTAL	1,590.0	100.0	35,959	100.0

Population economically active (2006)[12]: total 18,303; activity rate of total population 58.0% (participation rates: ages 15–64, 82.4%; female 50.3%; unemployed 3.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006
Consumer price index	101.1	103.7	104.2	108.9	116.5	117.4
Monthly earnings index	...	..	...	...	...	...

Household income and expenditure (1999). Average household size 2.6; average annual income per household CI$52,400 (U.S.$62,880); sources of income: wages and salaries 76.2%, self-employment 13.4%, transfers 1.2%; expenditure: n.a.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 509; cruise ship visitors (mostly day-trip participants; 2006) 1,930,100; remittances, n.a.; foreign direct investment (FDI; 2004–06 avg.) 7,822[13]. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.; FDI (2004–06 avg.) 4,194.
Land use as % of total land area (2003): in temporary crops *c.* 4%, in permanent crops, n.a., in pasture *c.* 8%; overall forest area (2005) *c.* 48%.

Foreign trade[14]

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
CI$'000,000	–573.7	–512.7	–493.6	–552.5	–723.8	–989.1
% of total	99.3%	99.1%	98.8%	98.5%	99.4%	99.7%

Imports (2005): CI$990,403,000 (transportation equipment 15.3%; food products and beverages 11.3%; cement, bricks, and ceramics 8.9%; mineral fuels 8.4%; machinery and apparatus 4.9%; furniture 4.0%). *Major import sources:* U.S. 76.5%; Netherlands Antilles 8.6%; Japan 1.1%; U.K. 0.7%; Jamaica 0.7%.
Exports (2005): CI$1,300,000 (significantly manufactured consumer goods, turtle products, fish, and cut flowers [mainly orchids]). *Major export destinations:* mostly the U.S.

Transport and communications

Transport. Railroads: none. Roads (2002): total length 488 mi, 785 km (paved 100%). Vehicles (2006): passenger cars 25,320; trucks and buses 6,667. Air transport (2005): passengers arriving 357,200, passengers departing 342,500; freight loaded 480 metric tons, freight unloaded 3,810 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1997	23	639	PCs	2006	...	...
Telephones				Dailies	2004	12[15]	264[15]
Cellular	2004	34[16]	766[16]	Internet users	2007	22	466
Landline	2002	38	884	Broadband	2007	...	...

Education and health

Educational attainment (2006). Percentage of population age 15 and over having: no formal schooling/unknown 3.5%; incomplete primary education through incomplete secondary 19.0%; complete secondary 40.0%; vocational/technical degree 17.4%; higher 20.1%. *Literacy* (1998): total population literate 98.0%; males literate 98.0%; females literate 98.0%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 5–10)	11	251	3,361	13.4
Secondary (age 11–16) / Voc., teacher tr.	8	239	2,701	11.3
Higher[17]	...	27	390	14.4

Health (2005): physicians 76 (1 per 691 persons); hospital beds 119 (1 per 441 persons); infant mortality rate per 1,000 live births 8.2; undernourished population, n.a.

Military

Total active duty personnel: none; defense is the responsibility of the United Kingdom.

[1]Includes three nonelective seats. [2]Rounded pegged rate. [3]Grand Cayman has no local government structure. [4]Cayman Brac and Little Cayman together are administered by a district commissioner appointed by the governor. [5]Area includes 9 sq mi (23 sq km) of inland water. [6]Density based on land area. [7]In 2006 the population was 60.7% Caymanian and 39.3% non-Caymanian. [8]Excludes marriages in which both the bride and groom are visitors. [9]The economy of the Cayman Islands is overwhelmingly based on service industries such as tourism, insurance companies, offshore financial centres, and e-commerce companies. [10]The Cayman Islands is the world's largest centre for offshore banking, with 432 licensed banks, including 284 offshore banking facilities, in 2005. In that year the assets of Cayman Islands banks exceeded U.S.$1,000,000,000,000. Also of great importance to the economy are the insurance, mutual and hedge fund (80% of the world's hedge funds are registered in the Cayman Islands), trust management, and ship registration sectors. [11]Unemployed. [12]Native Caymanians only. [13]Estimated figure. [14]Imports c.i.f.; exports f.o.b. [15]Circulation. [16]Subscribers. [17]2001.

Internet resources for further information:
- **Economics and Statistics Office http://www.eso.ky**
- **Cayman Islands Government http://www.gov.ky**

Central African Republic

Official name: République Centrafricaine (Central African Republic).
Form of government: multiparty republic with one legislative body (National Assembly [105]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Bangui.
Official languages: French; Sango.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Prefectures	Capitals	area sq mi	area sq km	population 2003 census
Bamingui-Bangoran	Ndélé	22,471	58,200	43,229
Basse-Kotto	Mobaye	6,797	17,604	249,150
Haut-Mbomou	Obo	21,440	55,530	57,602
Haute-Kotto	Bria	33,456	86,650	90,316
Kemo	Sibut	6,642	17,204	118,420
Lobaye	Mbaïki	7,427	19,235	246,875
Mambéré-Kadéï	Berbérati	11,661	30,203	364,795
Mbomou	Bangassou	23,610	61,150	164,009
Nana-Gribizi	Kaga-Bandoro	7,721	19,996	117,816
Nana-Mambéré	Bouar	10,270	26,600	233,666
Ombella-M'poko	Boali	12,292	31,835	356,725
Ouaka	Bambari	19,266	49,900	276,710
Ouham	Bossangoa	19,402	50,250	369,220
Ouham-Pendé	Bozoum	12,394	32,100	430,506
Sangha-Mbaéré	Nola	7,495	19,412	101,074
Vakaga	Birao	17,954	46,500	52,255
Autonomous commune				
Bangui	Bangui	26	67	622,771
TOTAL		240,324	622,436	3,895,139

Demography

Population (2008): 4,424,000.
Density (2008): persons per sq mi 18.4, persons per sq km 7.1.
Urban-rural (2007): urban 38.3%; rural 61.7%.
Sex distribution (2005): male 48.72%; female 51.28%.
Age breakdown (2005): under 15, 42.7%; 15–29, 28.1%; 30–44, 14.7%; 45–59, 8.8%; 60–74, 4.6%; 75–84, 1.0%; 85 and over, 0.1%.
Population projection: (2010) 4,592,000; (2020) 5,434,000.
Doubling time: 47 years.
Ethnolinguistic composition (2004): Gbaya (Baya) *c.* 33%; Banda *c.* 27%; Mandjia *c.* 13%; Sara *c.* 10%; Mbum *c.* 7%; Ngbaka *c.* 4%; other *c.* 6%.
Religious affiliation (2005): independent Christian 20.2%; Roman Catholic 19.8%; traditional beliefs 19.5%; Protestant 16.4%; Sunnī Muslim 14.5%; non-religious/other 9.6%.
Major cities (2003): Bangui 622,771; Bimbo 124,176; Berbérati 76,918; Carnot 45,421; Bambari 41,356.

Vital statistics

Birth rate per 1,000 population (2006): 33.9 (world avg. 20.3).
Death rate per 1,000 population (2006): 18.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 15.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 4.41.
Life expectancy at birth (2006): male 43.5 years; female 43.6 years.
Adult population (ages 15–49) *living with HIV* (2007): 6.3%[1] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): HIV/AIDS-related *c.* 604; lower respiratory infections *c.* 184; malaria *c.* 158; diarrheal diseases *c.* 105.

National economy

Budget (2005). Revenue: CFAF 88,000,000,000 (taxes 57.5%, of which indirect domestic taxes 30.0%, direct taxes on income and profits 16.7%, taxes on international trade 10.8%; grants 33.5%; nontax revenue 9.0%). Expenditures: CFAF 120,400,000,000 (current expenditure 62.6%; development expenditure 31.9%; interest payments 5.5%).
Public debt (external, outstanding; 2006): U.S.$863,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 565,000, yams 346,000, peanuts (groundnuts) 137,000, corn (maize) 115,000, bananas 110,000, taro 96,000, sorghum 43,000, sesame seeds 40,000, pulses 27,000, coffee 2,400, seed cotton 1,000; livestock (number of live animals) 3,378,000 cattle, 3,087,000 goats, 805,000 pigs; roundwood (2006) 2,832,000 cu m, of which fuelwood 71%; fisheries production (2005) 15,000 (from aquaculture, negligible). Mining and quarrying (2006): diamonds 420,000 carats[2]. Manufacturing (2002): refined sugar 10,570; palm oil 2,743; soap 1,625; aluminum products 812; cigarettes (2003) 16,100,000 packets; beer (2003) 121,700 hectolitres; soft drinks (2003) 38,400 hectolitres. Energy production (consumption): electricity (kW-hr; 2005) 110,000,000 (110,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (82,000); natural gas, none (none).
Household income and expenditure. Average household size (2004) 5.3; average annual income per household (1988) CFAF 91,985 (U.S.$435); sources of income: n.a.; expenditure (1991)[3]: food 70.5%, clothing 8.5%, energy 7.3%.
Gross national income (GNI; 2007): U.S.$1,667,000,000 (U.S.$380 per capita); purchasing power parity GNI (U.S.$740 per capita).

Structure of gross domestic product and labour force

	2003 in value CFAF '000,000	2003 % of total value	1988 labour force	1988 % of labour force
Agriculture	378,800	54.4	1,113,900	80.4
Mining	46,100	6.6	15,400	1.1
Manufacturing	16,100	2.3	22,400	1.6
Construction	30,900	4.4	7,000	0.5
Public utilities	5,400	0.8	1,500	0.1
Transp. and commun.	26,600	3.8	1,500	0.1
Trade	72,300	10.4	118,000	8.5
Services	42,100	6.0	15,600	1.1
Pub. admin., defense	47,000	6.8	91,700	6.6
Other	31,300[4]	4.5[4]	—	—
TOTAL	696,400[5]	100.0	1,387,000	100.0

Population economically active (2003): total 1,786,000[6]; activity rate of total population 45.4%[6] (participation rates: ages 15–64, 80.4%[6]; female 46.2%[6]; unemployed [Bangui only; 2001] 23%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.8	106.3	110.6	108.4	111.5	...	120.1

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 4.0; remittances, n.a.; foreign direct investment (2004–06 avg.) 26; official development assistance (2006) 134. Disbursements for (U.S.$'000,000): tourism (2004) 32; remittances, n.a.
Land use as % of total land area (2003): in temporary crops 3.1%, in permanent crops 0.2%, in pasture 5.0%; overall forest area (2005) 36.5%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
CFAF '000,000,000	+25.6	+18.6	+6.1	−11.4	−22.9	−23.8
% of total	14.0%	10.0%	4.3%	7.9%	14.5%	12.6%

Imports (2005): CFAF 90,300,000,000 (petroleum products 19.6%, unspecified 80.4%). *Major import sources:* France *c.* 17%; The Netherlands *c.* 10%; Cameroon *c.* 10%; U.S. *c.* 7%.
Exports (2005): CFAF 67,400,000,000 (diamonds 48.7%, wood and wood products 38.3%, cotton 1.6%, coffee 1.3%). *Major export destinations:* Belgium *c.* 35%; France *c.* 10%; Spain *c.* 9%; Italy *c.* 8%; China *c.* 7%; Indonesia *c.* 6%.

Transport and communications

Transport. Railroads: none. Roads (2005): total length 6,200 mi[7], 10,000 km[7] (paved *c.* 7%). Vehicles: passenger cars (2002) 5,000; trucks and buses (2001) 6,300. Air transport (2003): passenger arrivals 19,250[8], passenger departures 19,107[8]; metric ton-km cargo 7,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	24	6.1	PCs	2005	12	3.0
Telephones				Dailies	2005	4[9]	1.0[9]
Cellular	2007	130[10]	30[10]	Internet users	2006	13	3.2
Landline	2005	10	2.5	Broadband	2006	. .	. .

Education and health

Educational attainment (1994–95)[11]. Percentage of population age 25 and over having: no formal schooling 54.1%; at least some primary education 30.5%; at least some secondary education 14.4%; unknown 1.0%. *Literacy* (2007): total population age 15 and over literate 56.6%; males literate 67.6%; females literate 46.4%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	. .	4,004	420,712	105.1
Secondary (age 12–18)		1,005	66,492[12]	.
Vocational			.	.
Higher[12, 13]	1	154	6,474	42.0

Health: physicians (2004) 331 (1 per 11,867 persons); hospital beds (2001) 4,365 (1 per 879 persons); infant mortality rate (2006) 85.6; undernourished population (2002–04) 1,700,000 (44% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2007): 3,150 (army 63.5%; navy, none; air force 4.8%; paramilitary [gendarmerie] 31.7%)[14]. *Military expenditure as percentage of GDP* (2005): 1.1%; per capita expenditure U.S.$2.

[1]Statistically derived midpoint of range. [2]Official figure; a roughly equal amount was smuggled out of the country in 2006. [3]Weights of consumer price index components. [4]Indirect taxes and customs duties. [5]Detail does not add to total given because of rounding. [6]Estimate of the ILO Employment Trends Unit. [7]National roads only; much of the 9,700-mi (15,600-km) local road network is unusable. [8]Bangui airport only. [9]Circulation. [10]Subscribers. [11]Based on demographic and health survey of 9,414 people. [12]2002–03. [13]University of Bangui only. [14]Deployment of 3,700 troops from 14 EU nations to protect refugees and displaced persons in both the Central African Republic and Chad began in March 2008.

Internet resource for further information:
- **Statistics, Economic Studies, and Social Division**
  http://www.stat-centrafrique.com

Chad

Official name: Jumhūrīyah Tshad (Arabic); République du Tchad (French) (Republic of Chad).
Form of government: unitary republic with one legislative body (National Assembly [155]).
Chief of state: President.
Head of government: Prime Minister.
Capital: N'Djamena.
Official languages: Arabic; French.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Regions[1]	area sq km	population 1993 census	Regions[1]	area sq km	population 1993 census
Batha	88,800	288,458	Mayo-Kebbi Est	...	...
Bourkou-Ennedi-Tibesti	600,350	73,185	Mayo-Kebbi Ouest		..
Chari-Baguirmi			Moyen-Chari		...
Guéra	58,950	306,253	Ouaddaï		
Hadjer-Lamis	..		Salamat		
Kanem	114,520	279,927	Tandjilé		
Lac	22,320	252,932	Wadi Fira	46,850	184,807
Logone Occidental	8,695	455,489	**City**[1]		
Logone Oriental	28,035	441,064	N'Djamena		...
Mandoul	.		TOTAL	1,284,000	6,279,931

Demography

Population (2008): 10,111,000[2].
Density (2008): persons per sq mi 20.4, persons per sq km 7.9.
Urban-rural (2007): urban 26.3%; rural 73.7%.
Sex distribution (2005): male 48.82%; female 51.18%.
Age breakdown (2005): under 15, 48.0%; 15–29, 26.7%; 30–44, 13.7%; 45–59, 7.3%; 60–74, 3.5%; 75 and over, 0.8%.
Population projection: (2010) 10,543,000; (2020) 12,756,000.
Doubling time: 27 years.
Ethnolinguistic composition (1993): Sara 27.7%; Sudanic Arab 12.3%; Mayo-Kebbi peoples 11.5%; Kanem-Bornu peoples 9.0%; Ouaddaï peoples 8.7%; Hadjeray (Hadjaraï) 6.7%; Tangale (Tandjilé) peoples 6.5%; Gorane peoples 6.3%; Fitri-Batha peoples 4.7%; Fulani (Peul) 2.4%; other 4.2%.
Religious affiliation (2005): Sunnī Muslim 57.0%; animist 18.8%; Protestant 10.5%; other (significantly Roman Catholic and nonreligious) 13.7%.
Major cities (2000): N'Djamena (2005) 888,000[3]; Moundou 108,728; Sarh 95,050; Abéché 63,165; Kelo 36,643; Pala 31,281.

Vital statistics

Birth rate per 1,000 population (2007): 42.4 (world avg. 20.3).
Death rate per 1,000 population (2007): 16.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 25.7 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 5.56.
Life expectancy at birth (2007): male 46.2 years; female 48.3 years.
Adult population (age 15–49) *living with HIV* (2007): 3.5%[4] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): lower respiratory infections *c.* 226; HIV/AIDS-related *c.* 204; malaria *c.* 181; diarrheal diseases *c.* 124.

National economy

Budget (2005). Revenue: CFAF 311,100,000,000 (tax revenue 45.9%; petroleum revenue 43.7%; nontax revenue 10.4%). Expenditures: CFAF 482,000,000,000 (capital expenditure 61.9%; current expenditure 38.1%, of which wages and salaries 13.9%, materials and supply 7.8%, transfer payments 7.1%, defense 6.3%, debt service 2.9%).
Public debt (external, outstanding; 2006): U.S.$1,686,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 1,290,000, sorghum 700,000, millet 550,000, peanuts (groundnuts) 450,000, cassava 330,000, seed cotton 260,000, yams 235,000, corn (maize) 200,000, pulses 122,000, sesame seed 35,300, gum arabic (2006) 20,000; livestock (number of live animals) 6,820,300 cattle, 6,096,390 goats, 2,981,800 sheep, 749,500 camels; roundwood (2006) 7,361,000 cu m, of which fuelwood 90%; fisheries production (2005) 70,000 (from aquaculture, none). Mining and quarrying (2006): aggregate (gravel) 300,000; natron 12,000; salt 10,000; gold 150 kg. Manufacturing (2004–05): cotton fibre 88,158; refined sugar 51,823; woven cotton fabrics (2000) 1,000,000 metres; carbonated beverages 104,205 hectolitres; beer 76,485 hectolitres; edible oil (2003–04) 74,514 hectolitres; cigarettes 41,873,000 packs. Energy production (consumption): electricity (kW-hr; 2005) 100,000,000 (100,000,000); coal, none (none); crude petroleum (barrels; 2006) 55,900,000 (n.a.); petroleum products (metric tons; 2005) none (61,000); natural gas, none (none).
Household income and expenditure. Average household size (2004) 5.0; average annual income per household (1993) CFAF 96,806 (U.S.$458); sources of income (1995–96; urban): informal-sector employment and entrepreneurship 36.7%, transfers 24.8%, wages 23.6%, ownership of real estate 8.6%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 14; remittances, n.a.; foreign direct investment (2004–06 avg.) 603; official development assistance (2006) 284. Disbursements for (U.S.$'000,000): tourism (2002) 80; remittances, n.a.

Population economically active (2003)[5]: total 3,385,000; activity rate of total population 37.1% (participation rates: ages 15–64, 70.2%; female 47.3%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	112.4	118.3	116.2	110.0	118.7	128.2	116.7

Gross national income (GNI; 2007): U.S.$5,760,000,000 (U.S.$540 per capita); purchasing power parity GNI (U.S.$1,280 per capita).

Structure of gross domestic product and labour force

	2005 in value CFAF '000,000	2005 % of total value	1993 labour force	1993 % of labour force
Agriculture, fishing, and mining	648,900	20.5	1,904,248	83.1
Petroleum production/ transportation	1,348,200	42.7	—	—
Manufacturing	143,300[6]	4.5[6]	33,670	1.4
Construction	67,100[7]	2.1[7]	10,885	0.5
Public utilities	9,200	0.3	2,026	0.1
Transp. and commun.	423,900	13.4	13,252	0.6
Trade, hotels			211,812	9.2
Finance, real estate			1,071	—
Pub. admin., defense	208,300	6.6	61,875	2.7
Services	257,800	8.2	45,453	2.0
Other	53,400[8]	1.7[8]	9,271	0.4
TOTAL	3,111,200[9]	100.0	2,291,577[10]	100.0

Land use as % of total land area (2003): in temporary crops 2.9%, in permanent crops 0.02%, in pasture 35.7%; overall forest area (2005) 9.5%.

Foreign trade

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
CFAF '000,000,000	–40.2	–239.5	–904.7	–104.0	+730.5	+1,293.0
% of total	13.4%	46.4%	77.8%	13.0%	47.7%	66.6%

Imports (2005): CFAF 323,500,000,000 (non-petroleum private sector 42.7%; public sector 19.3%; petroleum sector 15.6%). *Major import sources:* France *c.* 21%; Cameroon *c.* 15%; U.S. *c.* 12%; Belgium *c.* 7%; Portugal *c.* 5%.
Exports (2004): CFAF 1,152,300,000,000 (crude petroleum 84.5%; live cattle 10.4%; cotton 3.3%). *Major export destinations:* U.S. *c.* 78%; China *c.* 10%; Taiwan *c.* 4%.

Transport and communications

Transport. Railroads: none. Roads (2002): total length 33,400 km (paved 1%). Vehicles (2002): passenger cars 8,900; trucks and buses 12,400. Air transport: passenger-km (2001) 130,000,000; metric ton-km cargo (2004) 7,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	55	5.9	PCs	2004	15	1.6
Telephones				Dailies	2005	...[11]	...[11]
Cellular	2007	918[12]	85[12]	Internet users	2006	60	6.0
Landline	2006	13	1.3	Broadband	2007	...	...

Education and health

Educational attainment (2003)[13]. Percentage of population age 25 and over having: no formal schooling 74.5%; primary education 17.4%; secondary education 6.8%; higher education 1.3%. *Literacy* (2007): percentage of total population age 15 and over literate 53.7%; males 61.5%; females 46.3%.

Education (2003–04)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–12)	...	16,228	1,124,992	69.3
Secondary (age 13–19)	...	6,464	222,167	34.4
Higher[14]	1	203	5,183	25.5

Health: physicians (2004) 345 (1 per 27,180 persons); hospital beds (1998) 4,105 (1 per 1,908 persons); infant mortality rate (2007) 102.1; undernourished population (2002–04) 3,000,000 (35% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2007): 25,350 (army 78.9%; air force 1.4%; other 19.7%) [15]. *Military expenditure as percentage of GDP* (2005): 1.0%; per capita expenditure U.S.$6.

[1]The effectiveness of the 2002 administrative reorganization was unclear in mid-2007. [2]Excludes about 213,000 Sudanese refugees in eastern Chad in May 2008. [3]Urban agglomeration. [4]Statistically derived midpoint of range. [5]Estimates of the ILO Employment Trends Unit. [6]Includes handicrafts. [7]Includes construction of petroleum pipeline. [8]Import duties and taxes. [9]Reported total; summed total equals CFAF 3,160,-100,000,000. [10]Official census total; summed total equals 2,293,563. [11]The only daily newspaper is the bulletin of the official news agency. [12]Subscribers. [13]Based on the 2003 Chad Demographic and Health Survey, comprising 27,879 people in 5,369 households, about 80% of which were in rural areas. [14]University of N'Djamena only (Chad's only university). [15]Deployment of 3,700 troops from 14 EU nations to protect refugees and displaced persons in both Chad and the Central African Republic began in March 2008.

Internet resources for further information:

- **National Institute of Statistics and Economic and Demographic Studies**
  http://www.inseed-tchad.org
- **La Banque de France: La Zone Franc**
  http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm

Chile

Official name: República de Chile (Republic of Chile).
Form of government: multiparty republic with two legislative houses (Senate [38]; Chamber of Deputies [120]).
Head of state and government: President.
Capital: Santiago[1].
Official language: Spanish.
Official religion: none.
Monetary unit: peso (Ch$); valuation (Sept. 8, 2008) 1 U.S.$ = Ch$523.55; 1 £ = Ch$924.96.

Area and population[2]

Regions	area sq km	population 2005 estimate	Regions	area sq km	population 2005 estimate
Aisén del General Carlos Ibáñez del Campo	108,495	99,300	Los Lagos Los Ríos[3]	48,583 18,430	1,156,300
Antofagasta	126,049	541,100	Magallanes y Antártica Chilena	132,297	156,000[4]
Araucanía	31,842	929,000	Maule	30,296	967,100
Arica y Parinacota[5]	16,873	[6]	Región Metropolitana	15,403	6,538,900
Atacama	75,176	270,400	Tarapacá	42,226	469,900[6]
Bío-Bío	37,063	1,969,200	Valparaíso	16,396	1,662,700
Coquimbo	40,580	666,900	TOTAL	756,096	16,267,300[7]
Libertador General Bernardo O'Higgins	16,387	840,600			

Demography

Population (2008): 16,454,000.
Density (2008): persons per sq mi 56.4, persons per sq km 21.8.
Urban-rural (2003): urban 87.0%; rural 13.0%.
Sex distribution (2005): male 49.47%; female 50.53%.
Age breakdown (2005): under 15, 24.9%; 15–29, 24.3%; 30–44, 23.0%; 45–59, 16.2%; 60–74, 8.3%; 75–84, 2.5%; 85 and over, 0.8%.
Population projection: (2010) 16,746,000; (2020) 18,058,000.
Ethnic composition (2002): mestizo *c.* 72%; white *c.* 22%; Amerindian *c.* 5%, of which Araucanian (Mapuche) *c.* 4%; other *c.* 1%.
Religious affiliation (2002)[8]: Roman Catholic 70.0%; Protestant/independent Christian 15.1%; other Christian 2.0%; atheist/nonreligious 8.3%.
Major urban agglomerations (2002): Santiago 5,428,590; Valparaíso/Viña del Mar 803,683; Concepción 666,381; La Serena/Coquimbo 296,253; Antofagasta 285,255.

Vital statistics

Birth rate per 1,000 population (2006): 15.2 (world avg. 20.3).
Death rate per 1,000 population (2006): 5.8 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 2.00.
Marriage/divorce rates per 1,000 population (2003): 3.6/[9].
Life expectancy at birth (2006): male 73.5 years; female 80.2 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 148.6; malignant neoplasms (cancers) 123.5; diseases of the respiratory system 46.6; diseases of the digestive system 41.4; accidents 30.6.

National economy

Budget (2005). Revenue: Ch$15,680,877,000,000 (tax revenue 71.3%, copper revenue 15.6%, other 13.1%). Expenditures: Ch$10,582,361,000,000 (subsidies and grants 31.0%, pension payments 28.7%, wages and salaries 23.8%, goods and services 11.1%).
Public debt (external, outstanding; 2006): U.S.$9,454,000,000.
Population economically active (2005): total 6,345,400[10]; activity rate of total population 39.2%[10] (participation rates: ages 15–64, 59.3%[10]; female 35.6%[10]; unemployed [2006] 7.8%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.6	106.1	109.1	110.3	113.6	117.5	122.7
Hourly earnings index	105.2	110.0	114.2	117.5	123.3	130.0	139.6

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): grapes 2,350,000, sugar beets 1,806,600, corn (maize) 1,557,100, potatoes 1,445,000, apples 1,390,000, wheat 1,322,300, tomatoes 1,270,000, oats 524,200, peaches and nectarines 330,000, avocados 167,000; livestock (number of live animals) 4,350,000 cattle, 3,480,000 pigs, 3,420,000 sheep; roundwood (2006) 47,116,000 cu m, of which fuelwood 30%; fisheries production (2005) 5,028,539 (from aquaculture 14%); aquatic plants production 425,343 (from aquaculture 4%). Mining (2005): copper 5,321,000[11]; iron ore 4,707,000[11]; molybdenum 47,748[11]; lithium carbonate 43,595; iodine 15,346; silver 1,400,000[11] kg; gold 40,447[11] kg. Manufacturing (value added in U.S.$'000,000; 2003)[12]: food products 2,041; nonferrous base metals 1,877; beverages 962; refined petroleum 845; paper and paper products 802; paints, soaps, pharmaceuticals 617. Energy production (consumption): electricity (kW-hr; 2007) 57,576,000,000 ([2005] 56,535,000,000); hard coal (metric tons; 2007) 192,000 ([2005] 4,426,000); crude petroleum (barrels; 2006) 1,210,000 ([2005] 74,600,000); petroleum products (metric tons; 2005) 9,747,000 (11,066,000); natural gas (cu m; 2007) 1,999,000,000 ([2005] 8,311,000,000).
Land use as % of total land area (2003): in temporary crops 2.6%, in permanent crops 0.4%, in pasture 17.3%; overall forest area (2005) 21.5%.

Gross national income (GNI; 2007): U.S.$138,630,000,000 (U.S.$8,350 per capita); purchasing power parity GNI (U.S.$12,590 per capita).

Structure of gross domestic product and labour force

	2004 in value Ch$'000,000,000[13]	2004 % of total value	2005[10] labour force	2005[10] % of labour force
Agriculture, fishing	2,476	6.0	777,100	12.2
Mining	3,263	7.9	74,300	1.2
Manufacturing	6,601	15.9	775,000	12.2
Public utilities	1,185	2.8	34,800	0.5
Construction	3,302	8.0	471,300	7.4
Transp. and commun.	3,226	7.8	471,500	7.4
Trade, hotels	4,478	10.8	1,114,800	17.6
Finance, real estate	8,116	19.6	521,200	8.2
Pub. admin., defense	1,438	3.5	1,665,100	26.2
Services	4,366	10.5		
Other	2,976[14]	7.2[14]	440,400[15]	6.9[15]
TOTAL	41,427	100.0	6,345,400[7]	100.0[7]

Household income and expenditure. Average household size (2004) 3.4; average annual income per household (2001) Ch$6,804,000 (U.S.$9,530); sources of income (2001): wages and salaries 39.5%, transfer payments 19.7%, rent on property 14.5%, self-employment 9.8%, other 16.5%; expenditure: n.a.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,214; remittances (2007) 3; foreign direct investment (FDI; 2004–06 avg.) 7,362; official development assistance (2006) 83. Disbursements for (U.S.$'000,000): tourism (2006) 1,252; remittances (2007) 6; FDI (2004–06 avg.) 2,216.

Foreign trade[16]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+2,386	+3,723	+9,585	+10,805	+22,214	+24,456
% of total	7.0%	9.4%	17.3%	15.1%	23.6%	21.8%

Imports (2005): U.S.$32,021,400,000 (capital goods 22.3%; consumer goods 14.7%; crude petroleum 11.8%; free zone imports 5.1%). *Major import sources* (2006): U.S. 16.0%; Argentina 12.9%; Brazil 12.2%; China 10.0%.
Exports (2005): U.S.$39,881,400,000 (copper 45.9%; foodstuffs 12.0%, of which salmon and trout 4.2%; fruits 5.3%; wood and wooden furniture 4.5%; paper and paper products 4.2%). *Major export destinations* (2006): U.S. 16.0%; Japan 10.8%; China 8.8%; The Netherlands 6.8%; South Korea 6.1%.

Transport and communications

Transport. Railroads (2002): route length 5,410 mi, 8,707 km; (2004) passenger-km 830,259,000; metric ton-km cargo 3,899,000,000. Roads (2003): total length 50,023 mi, 80,505 km (paved 22%). Vehicles (2005): passenger cars 1,406,796; trucks and buses 681,974. Air transport (2007): passenger-km 16,056,000,000; metric ton-km cargo 1,294,968,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	4,305	268	PCs	2005	2,800	172
Telephones				Dailies	2004	816[17]	52[17]
Cellular	2007	13,955[18]	839[18]	Internet users	2007	5,570	335
Landline	2007	3,379	203	Broadband	2007	1,198[18]	72[18]

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling/other 5.4%; incomplete primary education 24.6%; complete primary 8.7%; secondary 43.9%; higher technical 4.9%; university 12.5%. *Literacy* (2002): total population age 15 and over literate 95.7%; males literate 95.8%; females literate 95.6%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)		50,261	1,713,538	34.1
Secondary (age 12–17)[19]		47,108	1,557,120	33.1
Higher	226		567,114	

Health: physicians (2004) 20,726 (1 per 778 persons); hospital beds (2003) 39,782 (1 per 401 persons); infant mortality rate (2006) 8.6; undernourished population (2002–04) 600,000 (4% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

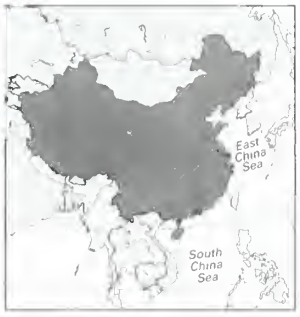
Military

Total active duty personnel (November 2007): 64,966 (army 55.4%, navy 31.5%, air force 13.1%). *Military expenditure as percentage of GDP* (2005): 3.8%[20]; per capita expenditure U.S.$270[20].

[1]Legislative bodies meet in Valparaíso. [2]Excludes the 480,000-sq mi (1,250,000-sq km) section of Antarctica claimed by Chile (and administered as part of Magallanes y Antártica Chilena region) and "inland" (actually tidal) water areas. [3]Created in March 2007. [4]Includes 130 people in Chilean-claimed Antarctica. [5]Created in March 2007 from part of Tarapacá. [6]Tarapacá includes Arica y Parinacota. [7]Detail does not add to total given because of rounding. [8]For population age 15 years and older. [9]Divorce became legal in Chile in November 2004. [10]Civilians only. [11]Metal content. [12]Establishments employing 50 or more employees only. [13]In constant prices of 1996. [14]Import duties and VAT less imputed bank service charges. [15]Unemployed. [16]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [17]Circulation of daily newspapers. [18]Subscribers. [19]Includes vocational. [20]Includes military pensions.

Internet resources for further information:
- **Instituto Nacional de Estadísticas http://www.ine.cl**
- **Banco Central de Chile http://www.bcentral.cl/eng**

China



Official name: Zhonghua Renmin Gongheguo (People's Republic of China).
Form of government: single-party people's republic with one legislative house (National People's Congress [3,000[1]]).
Chief of state: President.
Head of government: Premier.
Capital: Beijing (Peking).
Official language: Mandarin Chinese.
Official religion: none.
Monetary unit: renminbi (yuan) (Y); valuation (Sept. 8, 2008) 1 U.S.$ = Y 6.84; 1 £ = Y 12.08.

Area and population[2]

Provinces[5]	Capitals[5]	area[3] sq mi	area[3] sq km	population 2007[4] estimate
Anhui (Anhwei)	Hefei	54,000	139,900	61,100,000
Fujian (Fukien)	Fuzhou	47,500	123,100	35,580,000
Gansu (Kansu)	Lanzhou	141,500	366,500	26,060,000
Guangdong (Kwangtung)	Guangzhou (Canton)	76,100	197,100	93,570,000
Guizhou (Kweichow)	Guiyang	67,200	174,000	37,570,000
Hainan	Haikou	13,200	34,300	8,360,000
Hebei (Hopeh)	Shijiazhuang	78,200	202,700	68,980,000
Heilongjiang (Heilungkiang)	Harbin	179,000	463,600	38,230,000
Henan (Honan)	Zhengzhou	64,500	167,000	93,920,000
Hubei (Hupeh)	Wuhan	72,400	187,500	56,930,000
Hunan	Changsha	81,300	210,500	63,420,000
Jiangsu (Kiangsu)	Nanjing (Nanking)	39,600	102,600	75,500,000
Jiangxi (Kiangsi)	Nanchang	63,600	164,800	43,390,000
Jilin (Kirin)	Changchun	72,200	187,000	27,230,000
Liaoning (Liaoning)	Shenyang	58,300	151,000	42,710,000
Qinghai (Tsinghai)	Xining	278,400	721,000	5,480,000
Shaanxi (Shensi)	Xi'an (Sian)	75,600	195,800	37,350,000
Shandong (Shantung)	Jinan	59,200	153,300	93,090,000
Shanxi (Shansi)	Taiyuan	60,700	157,100	33,750,000
Sichuan (Szechwan)	Chengdu	188,000	487,000	81,690,000
Yunnan	Kunming	168,400	436,200	44,830,000
Zhejiang (Chekiang)	Hangzhou	39,300	101,800	49,800,000
Autonomous regions[5]				
Guangxi Zhuang (Kwangsi Chuang)	Nanning	85,100	220,400	47,190,000
Inner Mongolia (Nei Mongol)	Hohhot	454,600	1,177,500	23,970,000
Ningxia Hui (Ningsia Hui)	Yinchuan	25,600	66,400	6,040,000
Tibet (Xizang)	Lhasa	471,700	1,221,600	2,810,000
Xinjiang Uygur (Sinkiang Uighur)	Urumqi (Urumchi)	635,900	1,646,900	20,500,000
Municipalities[5]				
Beijing (Peking)	—	6,500	16,800	15,810,000
Chongqing (Chungking)	—	31,700	82,000	28,080,000
Shanghai	—	2,400	6,200	18,150,000
Tianjin (Tientsin)	—	4,400	11,300	10,750,000
TOTAL		3,696,100	9,572,900	1,314,480,000[6]

Demography

Population (2008): 1,324,681,000.
Density (2008): persons per sq mi 358.4, persons per sq km 138.4.
Urban-rural (2007[4]): urban 43.9%; rural 56.1%.
Sex distribution (2007[4]): male 51.52%; female 48.48%.
Age breakdown (2004): under 15, 19.3%; 15–29, 22.1%; 30–44, 27.2%; 45–59, 19.0%; 60–74, 9.6%; 75–84, 2.4%; 85 and over, 0.4%.
Population projection: (2010) 1,338,442,000; (2020) 1,407,520,000.
Ethnic composition (2000): Han (Chinese) 91.53%; Chuang 1.30%; Manchu 0.86%; Hui 0.79%; Miao 0.72%; Uighur 0.68%; Tuchia 0.65%; Yi 0.62%; Mongolian 0.47%; Tibetan 0.44%; Puyi 0.24%; Tung 0.24%; Yao 0.21%; Korean 0.15%; Pai 0.15%; Hani 0.12%; Kazakh 0.10%; Li 0.10%; Tai 0.09%; other 0.54%.
Religious affiliation (2005): nonreligious 39.2%; Chinese folk-religionist 28.7%; Christian 10.0%, of which unregistered Protestant 7.7%[7], registered Protestant 1.2%[7], unregistered Roman Catholic 0.5%[7], registered Roman Catholic 0.4%[7]; Buddhist 8.4%; atheist 7.8%; traditional beliefs 4.4%; Muslim 1.5%.
Major urban agglomerations (2007): Shanghai 14,987,000; Beijing 11,106,000; Guangzhou 8,829,000; Shenzhen 7,581,000; Wuhan 7,243,000; Tianjin 7,180,000; Chongqing 6,461,000; Shenyang 4,787,000; Dongguan 4,528,000; Chengdu 4,123,000; Xi'an 4,009,000; Nanjing 3,679,000; Guiyang 3,662,000; Harbin 3,621,000; Changchun 3,183,000; Dalian 3,167,000; Zibo 3,061,000; Hangzhou 3,007,000; Kunming 2,931,000; Taiyuan 2,913,000; Qingdao 2,866,000; Jinan 2,798,000; Zhengzhou 2,636,000; Fuzhou 2,606,000; Changsha 2,604,000; Lanzhou 2,561,000.
Households. Average family household size (2004) 3.6, of which urban family households 3.0, rural family households 4.1; 1 person 7.8%, 2 persons 19.6%, 3 persons 31.4%, 4 persons 21.8%, 5 persons 12.4%, 6 or more persons 7.0%; non-family households 0.8%.
Mobility (2004). Population residing in registered enumeration area 91.3%; population not residing in registered enumeration area for more than 6 months 7.4%; remainder 1.3%.

Vital statistics

Birth rate per 1,000 population (2006): 12.1 (world avg. 20.3).
Death rate per 1,000 population (2006): 6.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 5.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.72.
Marriage/divorce rates per 1,000 population: (2004) 6.7/(2005) 1.4.
Life expectancy at birth (2005): male 70.9 years; female 74.3 years.
Adult population (ages 15–49) *living with HIV* (2007): 0.1%[8] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): malignant neoplasms (cancers) 133.5, of which stomach cancer 31.9, liver cancer 24.9; cerebrovascular disease 126.9; chronic obstructive pulmonary disease 98.6; ischemic heart disease 54.0; accidents and poisoning 52.3; infectious and parasitic diseases 39.0, of which tuberculosis 20.8; diseases of the digestive system 27.9; violence/suicide 24.0.

Social indicators

Educational attainment (2000). Percentage of population age 15 and over having: no schooling and incomplete primary 15.6%; completed primary 35.7%; some secondary 34.0%; complete secondary 11.1%; some postsecondary through advanced degree 3.6%.

Distribution of income (2004)

percentage of urban household income by quintile

1	2	3	4	5 (highest)
9.2	13.7	17.5	22.4	37.2

Quality of working life. Average workweek (1998): 40 hours. Annual rate per 100,000 workers for (2006): death in mining, industrial, or commercial enterprises 3.33. Death toll from work accidents (2006) 112,822.
Access to services. Percentage of population having access to electricity (2003) 97.7%. Percentage of total (urban, rural) population with safe public water supply (2002) 83.6% (94.0%, 73.0%). Sewage system (1999): total (urban, rural) households with flush apparatus 20.7% (50.0%, 4.3%), with pit latrines 69.3% (33.6%, 86.7%), with no latrine 5.3% (7.8%, 4.1%).
Social participation. Eligible voters participating in last national election: n.a. Population participating in voluntary work: n.a. Trade union membership in total labour force (2004): *c.* 18%. Percentage of population who consider themselves religious (2005–06) 31.4%.
Social deviance. Annual reported arrest rate per 100,000 population (2004) for: murder, n.a.; rape, n.a.; thievery 197; robbery 23.
Material well-being. Urban households possessing (number per household; 2004): bicycles 1.4; colour televisions 1.3; washing machines 1.0; refrigerators 0.9; air conditioners 0.7; cameras 0.5. Rural families possessing (number per household; 2004): bicycles 1.2; colour televisions 0.8; washing machines 0.4; refrigerators 0.2; air conditioners 0.05; cameras 0.04.

National economy

Gross national income (GNI; 2007): U.S.$3,120,891,000,000 (U.S.$2,360 per capita); purchasing power parity GNI (U.S.$5,370 per capita).

Structure of gross domestic product and labour force

	2003 in value Y '000,000	2003 % of total value	2002 labour force ('000)	2002 % of labour force
Agriculture	1,692,810	14.4	324,870	43.1
Mining			5,580	0.7
Manufacturing	5,309,290	45.2	83,070	11.0
Public utilities		...	2,900	0.4
Construction	818,120	7.0	38,930	5.2
Transp. and commun.	664,430	5.7	20,840	2.8
Trade, hotels	923,840	7.9	49,690	6.6
Finance/real estate	884,490	7.5	4,580	0.6
Pub. admin.	313,850	2.7	10,750	1.4
Services	1,099,990	9.4	33,150	4.4
Other	32,200	0.3	179,240[9]	23.8[9]
TOTAL	11,739,020	100.0[10]	753,600	100.0

Budget (2004). Revenue: Y 2,639,647,000,000 (tax revenue 91.5%, of which VAT 34.2%, corporate income taxes 15.0%, business tax 13.6%, consumption tax 5.7%; nontax revenue 8.5%). Expenditures: Y 2,848,689,000,000 (economic development 27.8%, of which agriculture 8.3%; social, cultural, and educational development 26.3%; administration 19.4%; defense 7.7%; other 18.8%).
Public debt (external, outstanding; 2006): U.S.$85,802,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): grains—rice 185,490,000, corn (maize) 151,830,000, wheat 109,860,000, barley 3,851,000; oilseeds—soybeans 15,600,000, peanuts (groundnuts) 13,016,000, rapeseed 10,375,000, sunflower seeds 1,800,000; fruits and nuts—watermelons 63,000,000, apples 27,500,000, citrus 19,617,100, cantaloupes 13,650,000, pears 12,500,000, bananas 7,100,000; other—sugarcane 105,651,000, sweet potatoes 102,000,000, potatoes 72,000,000, cabbage 36,000,000, tomatoes 33,500,000, cucumbers 28,000,000, seed cotton 22,872,000, onions 20,500,000, eggplants 18,000,000, chilies and peppers 14,000,000, garlic 12,000,000, spinach 12,000,000, asparagus 6,250,000, tobacco leaves 2,395,000, tea 1,186,500, silkworm cocoons (2003) 667,000; livestock (number of live animals) 501,475,621 pigs, 197,267,883 goats, 171,961,000 sheep, 116,859,793 cattle, 22,717,000 water buffalo, 4,509,633,000 chickens, 736,912,000 ducks; roundwood (2006) 298,170,000 cu m, of which fuelwood 68%; fisheries production (2005) 49,467,309 (from aquaculture 66%); aquatic plants production (2005) 11,103,395 (from aquaculture 97%). Mining and quarrying (2005; by world rank): metal content of mine output—iron ore 138,000,000 (3), zinc 2,450,000 (1), manganese 1,100,000 (5), lead 1,000,000 (1), copper 740,000 (7), antimony 120,000 (1), tin 110,000 (1), tungsten 61,000 (1), silver 2,500 (3), gold 225 (2); metal ores—bauxite 18,000,000 (3), vanadium 17,000 (1); nonmetals—salt 44,547,000 (2), phosphate rock 9,130,000 (2), magnesite 4,700,000 (1), barite 4,200,000 (1), talc 3,000,000 (1), fluorspar 2,700,000 (1), asbestos 520,000 (2), strontium 140,000 (2). Manufacturing (value added in U.S.$'000,000; 2003): electrical machinery (including telecommunications equipment) 66,521; industrial chemicals,

paints, and soaps 45,727; transportation equipment 35,000; iron and steel 34,119; nonelectrical machinery (incl. computers) 31,395; food products 25,776; textiles 23,036; tobacco products 19,010; cement, bricks, and tiles 16,334; refined petroleum 15,554; fabricated metal products 11,731; wearing apparel 11,073; nonferrous base metals 10,899. Distribution of industrial production (percentage of total value added by sector; 2004): directly state-owned and state-controlled enterprises 42.4%; private enterprises 15.1%; collectives 5.3%; remainder[11] 37.2%. Retail trade (percentage of total sales by sector; 2004): domestically funded enterprises 81.8%, of which shareholding corporations 29.2%, limited liability corporations 23.8%, private enterprises 18.3%, state-owned enterprises 6.8%, collectives 1.0%; foreign-funded enterprises 11.1%; Hong Kong-, Macau-, or Taiwan-based enterprises 7.1%.

Manufacturing and mining enterprises (2003)

	no. of enterprises	no. of employees[12]	annual wages as a % of avg. of all wages	annual gross output value (Y '000,000)
Manufacturing				
Machinery, transport equipment, and metal manufactures, of which,	56,473	21,560		5,000,698
Metal products	9,746	1,810,000		385,740
Industrial equipment	12,546	7,020,000		571,121
Transport equipment	8,281	3,540,000		1,121,405
Electronic goods	5,856	1,630,000		1,583,976
Measuring equipment	2,515	820,000		163,672
Textiles	14,863	6,340,000		772,520
Garments	9,717	1,680,000		342,602
Foodstuffs, of which,	19,277	4,710,000		1,291,142
Food processing	15,828	3,170,000		844,239
Beverages	3,194	1,210,000		223,322
Tobacco manufactures	255	330,000		223,581
Chemicals, of which,	13,803	8,140,000		924,486
Pharmaceuticals	4,063	1,020,000		288,998
Plastics	8,382	1,050,000		306,383
Secondary forest products (including paper and stationery)	7,616	2,310,000		324,602
Primary forest products	3,501	1,140,000		99,279
Mining				
Nonferrous and ferrous metals	2,189	810,000		92,421
Petroleum and natural gas	112	1,250,000		347,902
Coal	3,139	5,050,000		245,938

Energy production (consumption): electricity (kW-hr; 2007) 3,180,560,000,000 ([2005] 2,491,258,000,000); hard coal (metric tons; 2006) 2,210,000,000 ([2005] 2,145,000,000 [including lignite]); lignite (metric tons; 2006) 110,000 (n.a.); crude petroleum (barrels; 2007) 1,367,000,000 ([2006] 2,346,000,000); petroleum products (metric tons; 2005) 225,341,000 (248,048,000); natural gas (cu m; 2007) 68,611,000,000 ([2006] 55,600,000,000).

Financial aggregates[13]

	2002	2003	2004	2005	2006	2007
Exchange rate, Y per:						
U.S. dollar	8.28	8.28	8.28	8.07	7.81	7.30
£	13.34	14.77	15.99	13.90	15.33	14.62
SDR	11.25	12.30	12.85	11.53	11.75	11.54
International reserves (U.S.$)						
Total (excl. gold; '000,000)	291,128	408,151	614,500	821,514	1,068,493	1,530,282
SDRs ('000,000)	998	1,102	1,247	1,251	1,068	1,192
Reserve pos. in IMF ('000,000)	3,723	3,798	3,320	1,391	1,081	840
Foreign exchange ('000,000)	286,407	403,251	609,932	818,872	1,066,344	1,528,249
Gold ('000,000 fine troy oz)	19.3	19.3	19.3	19.3	19.3	19.3
% world reserves	2.1	2.1	2.1	2.2	2.2	2.2
Interest and prices						
Central bank discount (%)	2.70	2.70	3.33	3.33	3.33	3.33
Govt. bond yield (%)	...	.	.	.	.	.
Industrial share prices	.	.	...	...	.	.
Balance of payments (U.S.$'000,000)						
Balance of visible trade, of which:	+44,167	+44,652	+58,982	+134,189	+217,746	+315,381
Imports, f.o.b.	−281,484	−393,618	−534,410	−628,295	−751,936	−904,618
Exports, f.o.b.	325,651	438,270	593,393	762,484	969,682	1,220,000
Balance of invisibles	−8,745	+1,223	+9,677	+26,629	+35,522	+56,452
Balance of payments, current account	+35,422	+45,875	+68,659	+160,818	+253,268	+371,833

Population economically active (2003): total 766,430,000[14]; activity rate of total population 59.0%[14] (participation rates: ages 15–64, 82.4%[14]; female 44.6%[14]; registered unemployed in urban areas [2005] 4.2%). Urban employed workforce (2004): 264,760,000; by sector: state enterprises 67,100,000, privately run enterprises 29,940,000, self-employment 25,210,000, limited liability corporations 14,360,000.

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	100.5	99.7	100.9	104.8	106.6	108.2	113.4
Monthly earnings index	116.0	132.6	149.8	171.0	...	.	...

Household income and expenditure. Average annual per capita disposable income of household (2006): rural households Y 3,587 (U.S.$450), urban households Y 11,579 (U.S.$1,452). Sources of income (2004): rural households—income from household businesses 59.5%, wages 34.0%, transfers and property 6.5%; urban households—wages 70.6%, transfers 22.9%, business income 4.9%, property 1.6%. Expenditure: rural (urban) households—food 47.2% (37.8%), housing and energy 14.8% (10.2%), education and recreation 11.3% (14.4%), transportation and communications 8.8% (11.7%), clothing 5.5% (9.6%), medicine and medical service 6.0% (7.4%), household furnishings 4.1% (5.7%).

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 33,950; remittances (2007) 25,703; foreign direct investment (FDI: 2004–06 avg.) 67,501; official development assistance (2006) 1,245. Disbursements for (U.S.$'000,000): tourism (2006) 24,322; remittances (2007) 3,025; FDI (2004–06 avg.) 11,296.

Land use as % of total land area (2004): in temporary crops or permanent crops *c.* 13.5%, in pasture *c.* 41.5%; overall forest area (2005) 21.2%.

Foreign trade[15]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+30,426	+25,468	+32,097	+102,000	+177,475	+189,132
% of total	4.9%	2.9%	2.8%	7.2%	10.1%	11.9%

Imports (2006): U.S.$791,461,000,000 (machinery and apparatus 41.4%, of which electronic integrated circuits and micro-assemblies 13.4%, computers and office machines 5.1%, telecommunications equipment and parts 4.1%; mineral fuels 11.2%, of which crude petroleum 8.4%; chemicals and chemical products 11.0%; metal ore and metal scrap 5.6%; optical devices 4.5%). *Major import sources:* Japan 14.6%; South Korea 11.3%; Taiwan 11.0%; China free trade zones 9.3%; United States 7.5%; Germany 4.8%; Malaysia 3.0%; Australia 2.4%; Thailand 2.3%; Philippines 2.2%.

Exports (2006): U.S.$968,936,000,000 (machinery and apparatus 43.2%, of which computers and office machines 13.9%, electrical machinery 10.5%, telecommunications equipment and parts 8.8%; wearing apparel and accessories 9.8%; textile yarn, fabrics, and made-up articles 5.0%; chemicals and chemical products 4.6%; iron and steel 3.4%). *Major export destinations:* United States 21.0%; Hong Kong 16.0%; Japan 9.5%; South Korea 4.6%; Germany 4.2%; The Netherlands 3.2%; United Kingdom 2.5%; Singapore 2.4%; Taiwan 2.1%; Italy 1.6%.

Transport and communications

Transport. Railroads (2005): route length (2004) 46,230 mi, 74,400 km; passenger-km 662,200,000,000; metric ton-km cargo 2,195,400,000,000. Roads (2005): total length 1,199,582 mi, 1,930,544 km (paved 82%). Vehicles (2005): passenger cars 19,186,682; trucks 12,383,863. Air transport (2007): passenger-km 271,476,000,000; metric ton-km cargo 11,116,608,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	493,902	381	PCs	2004	52,990	40
Telephones				Dailies	2005	96,600[16]	74[16]
Cellular	2007[4]	461,080[17]	350[17]	Internet users	2007	210,000	158
Landline	2007[4]	367,810	279	Broadband	2007	66,464[17]	50[17]

Education and health

Literacy (2000): total population age 15 and over literate 90.9%; males literate 95.1%; females literate 86.5%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 7–13)	394,200	5,629,000	112,462,000	20.0
Secondary (age 13–17)	79,100	4,668,000	86,954,000	18.6
Higher (regular)	1,731	858,000	13,335,000	15.5
Science/technology	32,724		2,252,000	.

Health (2007[4]): physicians[18] 1,970,000 (1 per 668 persons); hospital beds 3,216,000 (1 per 409 persons); infant mortality rate per 1,000 live births (2005) 24.4; undernourished population (2002–04) 150,000,000 (12% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

Military

Total active duty personnel (November 2007): 2,105,000 (army 76.0%, navy 12.1%, air force 11.9%). *Military expenditure as percentage of GDP* (2005): 2.0%; per capita expenditure U.S.$34.

[1]Statutory number; includes 36 seats allotted to Hong Kong and 12 to Macau. [2]Data for Taiwan, Quemoy, and Matsu (parts of Fujian province occupied by Taiwan); Hong Kong and Macau are excluded. [3]Estimated figures. [4]January 1. [5]Preferred names in all instances are based on Pinyin transliteration (except for Inner Mongolia and Tibet, which are current English-language conventional names). [6]Total includes 5,730,000 military personnel not distributed by province, autonomous region, or municipality; detail does not add to total given because the national total population, but not the regional figures, was adjusted for survey and sampling errors. [7]Percentage is rough estimate. [8]Statistically derived midpoint of range. [9]Includes 7,700,000 registered unemployed; remainder mostly activities not defined. [10]Detail does not add to total given because of rounding. [11]Shareholding enterprises or foreign-funded enterprises (incl. enterprises funded from Hong Kong, Macau, or Taiwan) that are not state owned or state controlled. [12]In state-owned and collective-owned industries only; 1996. [13]All data are for end of period. [14]Estimates of the ILO Employment Trends Unit. [15]Imports c.i.f., exports f.o.b. [16]Circulation. [17]Subscribers. [18]Includes assistant doctors.

Internet resources for further information:

- **National Bureau of Statistics of China http://www.stats.gov.cn/english**
- **Embassy of The People's Republic of China in the U.S. http://www.china-embassy.org**

Colombia

Official name: Republica de Colombia (Republic of Colombia).
Form of government: unitary, multiparty republic with two legislative houses (Senate [102]; House of Representatives [166[1]]).
Head of state and government: President.
Capital: Bogotá.
Official language: Spanish.
Official religion: none.
Monetary unit: peso (Col$); valuation (Sept. 8, 2008) 1 U.S.$ = Col$2,054; 1 £ = Col$3,629.

Population (2007 estimate)

Departments	population	Departments	population	Departments	population
Amazonas	68,519	Cundinamarca	2,355,408	San Andrés y Providencia	72,923
Antioquia	5,831,851	Guainía	36,381	Santander	1,975,963
Arauca	238,605	Guaviare	98,189	Sucre	792,377
Atlántico	2,227,713	Huila	1,038,061	Tolima	1,371,253
Bolívar	1,924,139	La Guajira	715,175	Valle del Cauca	4,257,741
Boyacá	1,265,198	Magdalena	1,180,703	Vaupés	39,231
Caldas	973,226	Meta	817,857	Vichada	60,463
Caquetá	427,634	Nariño	1,578,877		
Casanare	306,510	Norte de Santander	1,267,028	**Capital District**	
Cauca	1,285,794	Putumayo	319,804	Bogotá	7,050,133
Cesar	929,096	Quindío	542,752	TOTAL	43,941,792
Chocó	467,374	Risaralda	911,239		
Córdoba	1,514,575				

Demography

Population (2008): 44,442,000.
Density (2008): persons per sq mi 100.8, persons per sq km 38.9.
Urban-rural (2005): urban 72.7%; rural 27.3%.
Sex distribution (2005): male 49.25%; female 50.75%.
Age breakdown (2005): under 15, 30.3%; 15–29, 27.1%; 30–44, 21.6%; 45–59, 13.4%; 60–74, 5.6%; 75–84, 1.6%; 85 and over, 0.4%.
Population projection: (2010) 45,508,000; (2020) 50,912,000.
Ethnic composition (2000): mestizo 47.3%; mulatto 23.0%; white 20.0%; black 6.0%; black-Amerindian 1.0%; Amerindian/other 2.7%.
Religious affiliation (2005): Roman Catholic 92.5%; Protestant 2.8%; independent Christian 2.4%; Mormon 0.3%; Muslim 0.2%; other 1.8%.
Major cities (2005): Bogotá 6,763,325; Medellín 2,187,356; Cali 2,039,626; Barranquilla 1,109,067; Cartagena 845,801; Cúcuta 566,244.

Vital statistics

Birth rate per 1,000 population (2006): 20.5 (world avg. 20.3).
Death rate per 1,000 population (2006): 5.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 14.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.54.
Life expectancy at birth (2006): male 68.2 years; female 76.0 years.
Major causes of death per 100,000 population (2002): violence and suicides 91.4; malignant neoplasms (cancers) 79.9; ischemic heart disease 66.2; cerebrovascular diseases 40.2; accidents 33.6.
Adult population (ages 15–49) *living with HIV* (2007): 0.6%[2] (world avg. 0.8%).

National economy

Budget (2003–04). Revenue: Col$39,951,400,000,000 (tax revenue 92.0%, nontax revenue 8.0%). Expenditures: Col$53,934,600,000,000 (transfers 53.1%, debt service 19.0%, other 27.9%).
Public debt (external, outstanding; 2006): U.S.$25,764,000,000.
Population economically active (2006): total 20,177,100; activity rate 44.5% (participation rates: ages 12–55, 63.2%; female 43.0%; unemployed 12.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	108.0	114.8	123.0	130.3	136.9	142.7	150.5
Minimum wage	110.0	118.8	127.6	137.6	146.7	..	...

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 40,000,000, plantains 3,600,000, rice 2,250,000, cassava 2,100,000, bananas 1,800,000, corn (maize) 1,400,000, coffee 710,000, avocados 200,000;[3] livestock (number of live animals) 26,000,000 cattle, 3,400,000 sheep, 2,500,000 horses; roundwood (2006) 11,987,000 cu m, of which fuelwood 86%; fisheries production (2006) 155,100 (from aquaculture 39%). Mining and quarrying (2005): nickel (metal content) 81,000; gold 35,785 kg; emeralds 6,746,000 carats. Manufacturing (value added in Col$'000,000,000; 2003): processed food 6,471; chemicals 5,737; beverages 3,775; petroleum products 3,712; cement, bricks, and ceramics 2,648; clothing 1,969; paper products 1,723; base metals 1,645; plastic products 1,475.[4] Energy production (consumption): electricity (kW-hr; 2005) 50,665,000,000 (48,923,000,000); hard coal (metric tons; 2005) 59,100,000 (4,170,000); crude petroleum (barrels; 2007) 191,900,000 ([2005] 107,600,000); petroleum products (metric tons; 2005) 13,613,000 (9,438,000); natural gas (cu m; 2005) 8,229,000,000 (8,229,000,000).
Land use as % of total land area (2003): in temporary crops 2.0%, in permanent crops 1.3%, in pasture 34.5%; overall forest area (2005) 58.5%.
Gross national income (GNI; 2007): U.S.$149,934,000,000 (U.S.$3,250 per capita); purchasing power parity GNI (U.S.$6,640 per capita).

Structure of gross domestic product and labour force

	2004		2005[5]	
	in value Col$'000,000	% of total value	labour force	% of labour force
Agriculture	29,541,116	11.5	4,074,000	19.8
Mining	17,343,664	6.8	214,900	1.0
Manufacturing	36,838,341	14.4	2,351,000	11.4
Construction	13,391,667	5.2	859,000	4.2
Public utilities	11,625,842	4.5	..	...
Transp. and commun	18,773,366	7.3	1,201,000	5.8
Trade, hotels	28,030,192	11.0	4,431,000	21.5
Finance, real estate	37,368,127	14.6	1,074,500	5.2
Pub. admin., defense Services	52,658,281	20.6	4,009,000	19.4
Other	10,413,777[6]	4.1[6]	2,405,960	11.7
TOTAL	255,984,373	100.0	20,620,360	100.0

Household income and expenditure. Average household size (March 2004) 3.8; sources of income (2002): wages 42.6%, self-employment 38.9%; expenditure (1992): food 34.2%, transportation 18.5%, housing 7.8%, health care 6.4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,550; remittances (2007) 4,523; foreign direct investment (FDI; 2004–06 avg.) 6,545; official development assistance (2006) 988. Disbursements for (U.S.$'000,000): tourism (2006) 1,329; remittances (2007) 95; FDI (2004–06 avg.) 1,967.

Foreign trade[7]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+333	+78	+105	+1,104	+1,388	−143
% of total	1.4%	0.3%	0.4%	3.4%	3.4%	0.3%

Imports (2006): U.S.$26,162,000,000 (chemicals and chemical products 20.2%, transportation equipment 15.3%, nonelectrical machinery 11.2%, telecommunications equipment 8.6%). *Major import sources* (2006): U.S. 26.5%; Mexico 8.8%; China 8.5%; Brazil 7.2%; Venezuela 5.7%.
Exports (2006): U.S.$24,391,000,000 (crude and refined petroleum 26.0%, coal 11.9%, chemicals and chemical products 7.4%, base metals 6.6%, food, beverages, and tobacco 6.5%, coffee 6.0%, textiles and clothing 5.4%). *Major export destinations* (2006): U.S. 39.6%; EU 13.7%; Venezuela 11.1%; Ecuador 5.1%; Peru 2.8%.

Transport and communications

Transport. Railroads (2004): route length 2,053 mi, 3,304 km; passenger-km (1999) negligible; metric ton-km cargo (1999) 473,000,600. Roads (2005): total length 100,586 mi, 164,257 km (paved [2000] 23%). Vehicles (2005): cars 1,606,880; trucks and buses 1,079,247. Air transport (2007): passenger-km 9,552,000,000; metric ton-km cargo 189,804,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	11,358	268	PCs	2005	1,892	44
Telephones				Dailies	2005	1,294[8]	30[8]
Cellular	2007	33,941[9]	735[9]	Internet users	2007	12,100	262
Landline	2007	7,936	172	Broadband	2007	1,207[9]	28[9]

Education and health

Educational attainment (2005)[10]. Percentage of population age 25 and over having: no schooling/unknown 10.2%; primary education 40.1%; secondary 34.2%; higher 15.5%. *Literacy* (2003): population age 15 and over literate 92.5%; males literate 92.4%; females literate 92.6%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	52,110	188,215	5,045,450	26.8
Secondary (age 11–16)	26,011	185,768	3,795,745	20.4
Higher	321[11]	87,544[12]	1,112,574[12]	12.7[12]

Health (2004): physicians 59,235 (1 per 714 persons); hospital beds 50,773 (1 per 833 persons); infant mortality rate (2006) 20.4; undernourished population (2002–04) 5,900,000 (13% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2007): 254,259 (army 85.3%, navy 10.9%, air force 3.8%). *Military expenditure as percentage of GDP* (2005): 3.7%; per capita expenditure U.S.$106.

[1]Up to five seats are reserved for representatives from indigenous communities. [2]Statistically derived midpoint within range. [3]Also major producer of cut flowers; export value (2006) U.S.$1,000,000,000. [4]Illegal cocaine production (2004) 430 metric tons. [5]Third quarter; includes ages 10 and over. [6]Import duties and VAT, less imputed bank service charges and less subsidies. [7]Import figures are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [8]Circulation of daily newspapers. [9]Subscribers. [10]Based on the 2005 Colombia Demographic and Health Survey, comprising 117,205 people in 37,211 households, about three-fourths of which are located in urban areas. [11]2002. [12]2004.

Internet resource for further information:
- **National Administration Department of Statistics http://www.dane.gov.co**

Comoros[1]

Official name: L'Union des Comores (French); Udzima wa Komori (Comorian); (Union of the Comoros)[2].
Form of government: republic[3] with one legislative house (Assembly of the Union [334]).
Head of state and government: President assisted by Vice Presidents.
Capital: Moroni.
Official languages: Comorian (Shikomor); Arabic; French.
Official religion: Islam.
Monetary unit: Comorian franc[5] (CF); valuation (Sept. 8, 2008) 1 U.S.$ = CF 344.89; 1 £ = CF 609.32.

Area and population

Autonomous islands	Capitals	area sq mi	area sq km	population 2003 census[6]
Mwali (Mohéli)	Fomboni	112	290	35,751
Ngazidja (Grande Comore)	Moroni	443	1,148	296,177
Nzwani (Anjouan)	Mutsamudu	164	424	243,732
TOTAL		719	1,862	575,660

Demography

Population (2008): 645,000[7].
Density (2008): persons per sq mi 897.1, persons per sq km 346.4.
Urban-rural (2007): urban 28.0%; rural 72.0%.
Sex distribution (2006): male 49.61%; female 50.39%.
Age breakdown (2006): under 15, 42.7%; 15–29, 26.6%; 30–44, 17.8%; 45–59, 8.2%; 60–74, 3.9%; 75 and over, 0.8%.
Population projection: (2010) 668,000; (2020) 814,000.
Doubling time: 24 years.
Ethnic composition (2000): Comorian (a mixture of Bantu, Arab, Malay, and Malagasy peoples) 97.1%; Makua 1.6%; French 0.4%; Arab 0.1%; other 0.8%.
Religious affiliation (2005): Muslim (nearly all Sunnī) 98.4%; other 1.6%.
Major cities (2002): Moroni (2003) 41,557 (urban agglomeration [2003] 53,000); Mutsamudu 21,558; Domoni 13,254; Fomboni 13,053; Tsémbéhou 10,552.

Vital statistics

Birth rate per 1,000 population (2006): 36.9 (world avg. 20.3).
Death rate per 1,000 population (2006): 8.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 28.7 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 5.03.
Life expectancy at birth (2006): male 60.0 years; female 64.7 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 261.6, of which malaria 65.0, diarrheal diseases 52.0, measles 49.8; diseases of the circulatory system 118.9; accidents and injuries 68.1; perinatal conditions 59.2; malignant neoplasms (cancers) 46.9.

National economy

Budget (2005). Revenue: CF 30,509,000,000 (tax revenue 58.3%, of which taxes on international trade 31.0%, income and profit taxes 20.3%; grants 21.4%; nontax revenue 20.3%). Expenditures: CF 30,425,000,000 (current expenditures 77.3%, of which education 25.1%, health 15.6%, interest on debt 3.9%; development expenditures 22.7%).
Public debt (external, outstanding; 2004): U.S.$301,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 77,000, bananas 65,000, cassava 58,000, rice 17,000, taro 9,000, yams 4,000, corn (maize) 4,000, cloves 2,500, vanilla 90, ylang-ylang essence (2006) 47; other export crops grown in small quantities include coffee, cinnamon, and tuberoses; livestock (number of live animals) 115,000 goats, 45,000 cattle, 21,000 sheep; roundwood (2006) 9,000, of which fuelwood, none; fisheries production (2006) 15,070 (from aquaculture, none). Mining and quarrying: sand, gravel, and crushed stone from coral mining for local construction. Manufacturing: products of small-scale industries include processed vanilla and ylang-ylang, cement, handicrafts, soaps, soft drinks, woodwork, and clothing. Energy production (consumption): electricity (kW-hr; 2006) 50,600,000 ([2005] 35,900,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (29,000); natural gas, none (none).
Population economically active (2000)[8]: total 287,000; activity rate of total population 41.0% (participation rates: ages 15–64, 73.2%; female 40.4%; unemployed [2005] 13.3%).

Price index (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	105.9	109.3	113.4	118.5	122.3	126.5

Household income and expenditure. Average household size (2004) 5.8; average annual income per household (2004) CF 699,000[9] (U.S.$1,764); sources of income (2004)[9]: wages/self-employment 36.9%, value ascribed to self-produced food 27.7%, value ascribed to principal dwelling 23.9%; expenditure (1999)[10]: food, beverages, and tobacco products 68.0%, housing and energy 15.5%, clothing and footwear 4.7%, education 4.2%.

Gross national income (GNI; 2007): U.S.$425,000,000 (U.S.$680 per capita); purchasing power parity GNI (U.S.$1,150 per capita).

Structure of gross domestic product and labour force

	2005 in value CF '000,000	2005 % of total value	2004 labour force[11]	2004 % of labour force[11]
Agriculture, fishing	78,110	51.0	270,000	71.8
Mining	.			
Manufacturing	6,666	4.4		
Construction	7,876	5.1		
Public utilities	2,292	1.5		
Transportation and communications	14,111	9.2	106,000	28.2
Trade, restaurants, hotels	27,261[12]	17.8[12]		
Finance, insurance	8,698	5.7		
Public admin., defense	15,854	10.4		
Services	130	0.1		
Other	–7,886[13]	–5.2[13]		
TOTAL	153,112	100.0	376,000	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 27; remittances (2007) 12; foreign direct investment (2004–06 avg.) 1[14]; official development assistance (2006) 30. Disbursements for (U.S.$'000,000): tourism (2006) 11; remittances, n.a.
Land use as % of total land area (2003): in temporary crops *c.* 36%[15], in permanent crops *c.* 23%[15], in pasture *c.* 7%[15]; overall forest area (2005)[1] 2.9%.

Foreign trade[16]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
CF '000,000,000	–18.6	–17.6	–18.4	–28.1	–34.3	–41.3
% of total	50.4%	47.1%	43.6%	70.9%	78.3%	84.1%

Imports (2004): CF 33,917,000,000 (food products 30.3%, of which rice 14.3%, meat 8.9%; petroleum products 20.9%; vehicles 11.5%; cement 5.1%). *Major import sources:* France *c.* 23%; South Africa *c.* 11%; United Arab Emirates *c.* 7%; Kenya *c.* 7%; Mauritius *c.* 6%.
Exports (2004): CF 5,777,000,000 (cloves 49.9%, vanilla 30.8%, ylang-ylang 14.7%). *Major export destinations:* United States *c.* 42%; France *c.* 18%; Singapore *c.* 16%; Turkey *c.* 5%; Germany *c.* 4%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 493 mi, 793 km (paved 70%). Vehicles (1996): passenger cars 9,100; trucks and buses 4,950. Air transport (2001): passengers arriving/departing Moroni 108,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	13	23	PCs	2004	5.0	6.3
Telephones				Dailies	2005	[17]	[17]
Cellular	2007	40[18]	48[18]	Internet users	2006	21	26
Landline	2005	17	28	Broadband	2006	. .	.

Education and health

Educational attainment (1996)[19]. Percentage of population age 25 and over having: no formal schooling 72.7%[20]; primary education 11.0%[20]; secondary 15.1%; unknown 1.2%. *Literacy* (2007): total population age 15 and over literate 57.1%; males literate 64.2%; females literate 50.1%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	348[21]	2,908	106,972	36.8
Secondary (age 12–18)	..	3,399	38,272	11.3
Higher	1[22]	..	2,187[22]	. .

Health (2004): physicians 48 (1 per 12,417 persons); hospital beds (1995) 1,450[14] (1 per 342[14] persons); infant mortality rate per 1,000 live births (2006) 72.9; undernourished population (2002–04) 500,000[15, 23] (60% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (2006): the Comoros small standing army is not necessarily accepted by each of the islands; each island also has its own armed security. France provides training for military personnel. *Military expenditure as percentage of GDP* (2005): *c.* 3.5%; per capita expenditure U.S.$21.

[1]Excludes Mayotte, an overseas possession of France, unless otherwise indicated. [2]The short-form Arabic name is Al-Qumur. [3]In actuality, a loose union of semiautonomous islands. [4]Includes 15 nonelected seats. [5]Formerly pegged to the French franc and since Jan. 1, 2002, to the euro at the rate of €1 = CF 491.97. [6]Preliminary. [7]Excludes Comorians living abroad in France or Mayotte (about 150,000 people). [8]ILO Employment Trends Unit estimates. [9]Includes both monetary and nonmonetary income. [10]Weights of consumer price index components. [11]FAO estimate. [12]Includes import duties and taxes. [13]Less imputed bank service charge. [14]Estimated figure. [15]Includes Mayotte. [16]Imports c.i.f.; exports f.o.b. [17]Circulation data unavailable for the one daily newspaper. [18]Subscribers. [19]Based on sample survey of 4,881 persons on all three islands. [20]Basic education may also be received through Qur'anic schools. [21]1998. [22]2004–05 data for the Comoros' first university opened in 2003. [23]Based on FAO population estimate.

Internet resource for further information:
- **Banque Centrale des Comores**
  http://www.bancecom.com

Congo, Democratic Republic of the

Official name. République Democratique du Congo (Democratic Republic of the Congo).
Form of government: unitary multiparty republic with two legislative bodies (Senate [108]; National Assembly [500]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Kinshasa.
Official language: French[1].
Official religion: none.
Monetary unit: Congo franc (FC); valuation (Sept. 8, 2008) 1 U.S.$ = FC 551.50; 1 £ = FC 974.33.[2]

Area and population

Provinces[3]	Capitals	area sq mi	area sq km	population 1998 estimate
Bandundu	Bandundu	114,154	295,658	5,201,000
Bas-Congo	Matadi	20,819	53,920	2,835,000
Equateur	Mbandaka	155,712	403,292	4,820,000
Kasai-Occidental	Kananga	59,746	154,742	3,337,000
Kasai-Oriental	Mbuji-Mayi	65,754	170,302	3,830,000
Katanga	Lubumbashi	191,845	496,877	4,125,000
Maniema	Kindu	51,062	132,250	1,246,787
Nord-Kivu	Goma	22,967	59,483	3,564,434
Orientale	Kisangani	194,302	503,239	5,566,000
Sud-Kivu	Bukavu	25,147	65,130	2,837,779
City				
Kinshasa	—	3,847	9,965	4,787,000
TOTAL		905,355	2,344,858	42,150,000

Demography

Population (2008): 66,515,000.
Density (2008): persons per sq mi 73.5, persons per sq km 28.4.
Urban-rural (2005): urban 32.1%; rural 67.9%.
Sex distribution (2005): male 49.48%; female 50.52%.
Age breakdown (2005): under 15, 47.2%; 15–29, 27.1%; 30–44, 14.2%; 45–59, 7.4%; 60–74, 3.4%; 75–84, 0.6%; 85 and over, 0.1%.
Population projection: (2010) 70,916,000; (2020) 95,605,000.
Doubling time: 23 years.
Ethnic composition (1983): Luba 18.0%; Kongo 16.1%; Mongo 13.5%; Rwanda 10.3%; Azande 6.1%; Bangi and Ngale 5.8%; Rundi 3.8%; Teke 2.7%; Boa 2.3%; Chokwe 1.8%; Lugbara 1.6%; Banda 1.4%; other 16.6%.
Religious affiliation (2004): Roman Catholic *c.* 50%; Protestant *c.* 20%; Kimbanguist (indigenous Christian) *c.* 10%; Muslim *c.* 10%; traditional beliefs and syncretic sects *c.* 10%.
Major urban areas (2004): Kinshasa 7,273,947; Lubumbashi 1,283,380; Mbuji-Mayi 1,213,726; Kananga 720,362; Kisangani 682,599; Bukavu 471,789.

Vital statistics

Birth rate per 1,000 population (2005): 49.6 (world avg. 20.3).
Death rate per 1,000 population (2005): 18.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 30.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 6.70.
Life expectancy at birth (2005): male 44.3 years; female 47.0 years.
Adult population (ages 15–49) *living with HIV* (2007): 1.2–1.5% (world avg. 0.8%).
Major causes of death per 100,000 population (2002): diarrheal diseases *c.* 219; HIV/AIDS-related *c.* 217; lower respiratory infections *c.* 211; malaria *c.* 191; war and violence *c.* 107.

National economy

Budget (2005). Revenue: FC 564,900,000,000 (grants 31.1%; customs and excise taxes 25.7%; direct and indirect taxes 19.7%; petroleum royalties and taxes 17.4%). Expenditures: FC 655,500,000,000 (current expenditure 65.3%, of which interest on external debt 14.8%; capital expenditure 17.4%; expenditure on demobilization and reintegration 14.8%).
Public debt (external, outstanding; 2006): U.S.$9,848,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 15,000,000, sugarcane 1,550,000, plantains 1,200,000, corn (maize) 1,155,000, rice 315,000, bananas 315,000, peanuts (groundnuts) 260,000, papayas 215,000, mangoes 200,000, pineapples 195,000, dried beans 100,000, avocados 62,000, melonseed 40,000, (2005) pimento, allspice 33,000, coffee 21,300; livestock (number of live animals) 4,000,000 goats, 957,000 pigs, game meat 89,000 metric tons; roundwood (2006) 75,779,000 cu m, of which fuelwood 95%; fisheries production 222,965 (from aquaculture 1%). Mining and quarrying (2005): copper (mine output, metal content) 92,000; cobalt (mine output, metal content) 22,000[4]; silver 53,553 kg; gold 4,200 kg; diamonds 30,300,000 carats[5]. Manufacturing (2004): cement 402,500; flour 199,000; steel 130,000; sugar 81,000; paints 67,000; printed fabrics 4,200,000 sq m; cigarettes 2,922,000,000 cartons; shoes 3,223,000 pairs; beer 1,690,000 hectolitres; soft drinks 1,160,000 hectolitres. Energy production (consumption): electricity (kW-hr; 2005) 7,419,000,000 (5,625,000,000); coal (metric tons; 2005) 120,000 (163,000); crude petroleum (barrels; 2005) 7,200,000 (negligible); petroleum products (metric tons; 2005) none (373,000); natural gas, none (none).
Household income and expenditure. Average household size, n.a.; expenditure (1995)[6]: food 61.4%, housing and energy 13.9%, clothing and footwear 4.8%, other 19.9%.
Gross national income (GNI; 2007): U.S.$8,573,000,000 (U.S.$140 per capita); purchasing power parity GNI (U.S.$290 per capita).

Structure of gross domestic product and labour force

	2004 in value FC '000,000	2004 % of total value	2003 labour force	2003 % of labour force
Agriculture	1,226,700	47.4	13,604,000	61.8
Mining	262,400	10.2		
Manufacturing	135,400	5.2		
Construction	110,000	4.3		
Public utilities	85,100	3.3		
Transp. and commun.	97,800	3.8	8,417,000	38.2
Trade	404,200	15.6		
Pub. admin., defense	44,600	1.7		
Finance and services	168,900	6.5		
Other	52,400[7]	2.0[7]		
TOTAL	2,587,500	100.0	22,021,000	100.0

Population economically active (2003)[8]: total 21,718,000; activity rate 40.0% (participation rates: ages 15–64, 77.1%; female 41.1%; unemployed, n.a.).

Price index (2000 = 100)

	1999	2000	2001	2002	2003	2004	2005
Consumer price index	15.4	100.0	413.7	571.3	644.6	670.9	813.6

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 1.0; remittances, n.a.; foreign direct investment (2004–06 avg.) 37[9]; official development assistance (2005) 1,828. Disbursements for (U.S.$'000,000): tourism (1997) 7.0; remittances, n.a.
Land use as % of total land area (2003): in temporary crops 3.0%, in permanent crops 0.5%, in pasture 6.6%; overall forest area (2005) 58.9%.

Foreign trade

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.$'000,000	+217	+73	−17	−156	−243	−423
%of total	13.8%	4.3%	0.8%	5.5%	6.3%	9.4%

Imports (2005): U.S.$2,465,000,000 (aid-related imports 22.9%, other imports 77.1%). *Major import sources* (2004): South Africa 18.5%; Belgium 15.6%; France 10.9%; U.S. 6.2%; Germany 5.9%; Kenya 4.9%.
Exports (2005): U.S.$2,042,000,000 (diamonds 48.4%, crude petroleum 20.0%, cobalt [2004] 15.0%, copper [2004] 3.3%, coffee [2004] 0.9%, gold [2004] 0.7%). *Major export destinations:* Belgium 42.5%; Finland 17.8%; Zimbabwe 12.2%; U.S. 9.2%; China 6.5%.

Transport and communications

Transport. Railroads (2004): length 5,138 km[10]; passenger-km (2003) 152,930,000; metric ton-km cargo (2003) 506,010,000. Roads (2004): total length 153,497 km (paved *c.* 2%). Vehicles (1999): passenger cars 172,600; trucks and buses 34,600. Air transport (1999): passenger-km 263,000,000; metric ton-km cargo 39,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	146	2.7	PCs	2005	...	...
Telephones				Dailies	2005	...	...
Cellular	2007	6,592[11]	105[11]	Internet users	2007	230	3.7
Landline	2006	9.7	0.2	Broadband	2007	1.5[11]	0.02[11]

Education and health

Educational attainment: n.a. *Literacy* (2003): percentage of total population age 15 and over literate 65.5%; males literate 76.2%; females literate 55.1%.

Education (1998–99)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	17,585	154,618	4,022,411	26.0
Secondary (age 12–17) / Voc., teacher tr.	6,007	89,461	1,234,528	13.8
Higher	..	3,788	60,341	15.9

Health: physicians (2004) 5,827 (1 per 9,585 persons); hospital beds, n.a.; infant mortality rate per 1,000 live births (2005) 116.5; undernourished population (2002–04) 39,000,000 (74% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2007): 134,484 (army 93.1%, air force 1.9%, navy 5.0%); UN peacekeepers (April 2008): 16,700 troops; 1,100 police. *Military expenditure as percentage of GDP* (2005): 2.4%; per capita expenditure U.S.$2.

[1]National languages are Kongo, Lingala, Swahili, and Tshiluba. [2]Most transactions are conducted outside of the banking system and often with U.S. dollars. [3]To be reorganized into 25 provinces and 1 city (Kinshasa) in 2008 or 2009. [4]Includes reprocessed tailings. [5]Mostly artisanally mined; 20% of diamonds are of gem quality. [6]Weights of consumer price index components. [7]Import duties and taxes. [8]Estimates of the ILO Employment Trends Unit. [9]Estimated figure. [10]Not all operational because of civil strife. [11]Subscribers.

Internet resources for further information:

- **Permanent Mission of the Democratic Republic of the Congo http://www.un.int/drcongo**
- **Central Bank of the Democratic Republic of the Congo http://www.bcc.cd**

Congo, Republic of the

Official name: République du Congo (Republic of the Congo).
Form of government: republic with two legislative houses (Senate [72[1]]; National Assembly [137[1]]).
Chief of state and government: President assisted by the Prime Minister[2].
Capital: Brazzaville.
Official language: French[3].
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Regions	Capitals	area sq mi	area sq km	population 2005[4] estimate
Bouenza	Madingou	4,733	12,258	229,820
Cuvette	Owando	18,861	48,850	135,767
Cuvette-Ouest	Ewo	10,039	26,000	55,765
Kouilou	Pointe-Noire	5,270	13,650	80,951
Lékoumou	Sibiti	8,089	20,950	81,672
Likouala	Impfondo	25,500	66,044	84,513
Niari	Dolisie	10,007	25,918	105,147
Plateaux	Djambala	14,826	38,400	170,978
Pool	Kinkala	13,110	33,955	362,357
Sangha	Ouesso	21,542	55,795	46,727
Communes				
Brazzaville	—	39	100	1,174,005
Dolisie	—	7	18	106,262
Mossendjo	—	2	5	18,209
Nkayi	—	3	8	56,686
Ouesso	—	2	5	24,322
Pointe-Noire	—	17	44	663,359
TOTAL		132,047	342,000	3,396,540

Demography

Population (2008): 3,847,000.
Density (2008): persons per sq mi 29.1, persons per sq km 11.2.
Urban-rural (2007): urban 61.0%; rural 39.0%.
Sex distribution (2006): male 49.68%; female 50.32%.
Age breakdown (2006): under 15, 46.4%; 15–29, 27.1%; 30–44, 14.9%; 45–59, 7.3%; 60–74, 3.5%; 75 and over, 0.8%.
Population projection: (2010) 4,011,000; (2020) 4,907,000.
Doubling time: 24 years.
Ethnic composition (2000): Kongo 21.2%; Yombe 11.5%; Teke 10.7%; Kougni 8.0%; Mboshi 5.4%; Ngala 4.2%; Sundi 4.0%; other 35.0%.
Religious affiliation (2005): Roman Catholic *c.* 49%; independent Christian *c.* 13%; Protestant *c.* 11%; Muslim *c.* 2%; other (mostly traditional beliefs and nonreligious) *c.* 25%.
Major cities (2005[4]): Brazzaville 1,174,005; Pointe-Noire 663,359; Dolisie 106,262; Nkayi 56,686; Ouesso 24,322.

Vital statistics

Birth rate per 1,000 population (2006): 42.6 (world avg. 20.3).
Death rate per 1,000 population (2006): 12.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 29.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 6.07.
Life expectancy at birth (2006): male 51.7 years; female 54.0 years.
Adult population (ages 15–49) *living with HIV* (2007): 3.5% (world avg. 0.8%).

National economy

Budget (2005). Revenue: CFAF 1,300,100,000,000 (petroleum revenue 80.6%; nonpetroleum receipts 16.9%; grants 2.5%). Expenditures: CFAF 736,400,000,000 (current expenditure 77.0%, of which interest 20.4%, wages and salaries 17.7%; capital expenditure 23.0%).
Public debt (external, outstanding; 2006): U.S.$5,328,000,000.
Household income and expenditure. Average household size (2000) 5.9.
Gross national income (GNI; 2007): U.S.$5,797,000,000 (U.S.$1,540 per capita).

Structure of gross domestic product and labour force

	2004 in value CFAF '000,000	2004 % of total value	2003 labour force	2003 % of labour force
Agriculture, forestry, fishing	132,800	5.7	575,000	38.1
Petroleum, mining	1,212,600	52.4		
Manufacturing	139,200	6.0		
Construction	92,600	4.0		
Public utilities	19,700	0.9	934,000	61.9
Trade	199,700	8.6		
Transp. and commun.	137,500	5.9		
Pub. admin., defense	153,500	6.6		
Services	157,000	6.8		
Other	71,300	3.1	—	—
TOTAL	2,315,900	100.0	1,509,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 915,000, sugarcane 550,000, oil palm fruit 90,000, bananas 87,000, plantains 62,000, mangoes 25,000, peanuts (groundnuts) 24,000, coffee 2,000, rubber 1,350, cacao beans 1,000; livestock (number of live animals) 290,000 goats, 110,000 cattle, 99,000 sheep; roundwood (2006) 2,152,000 cu m, of which fuelwood 58%; fisheries production (2006) 59,506 (from aquaculture, negligible). Mining and quarrying (2006): gold 100 kg; diamonds 50,000 carats[5]. Manufacturing (2001): residual fuel oil 206,000[6]; refined sugar 71,814; distillate fuel oils 62,000[6]; gasoline 40,000[6]; aviation gas 38,000[6]; wheat flour 35,000; kerosene 21,000[6]; soap 1,620[6]; cigarettes 4,000,000 cartons; beer 610,000 hectolitres; nonalcoholic drinks 349,000 hectolitres; veneer sheets 12,000 cu m. Energy production (consumption): electricity (kW-hr; 2005) 356,000,000 (774,000,000); coal, none (none); crude petroleum (barrels; 2005) 92,100,000 (4,140,000); petroleum products (metric tons; 2005) 430,000 (305,000); natural gas (cu m; 2005) 122,400,000 (122,400,000).
Population economically active (2000): total 1,232,000; activity rate of total population 35.7% (participation rates: ages 15–64, 60.3%; female [1997] 43.4%; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	100.0	103.7	106.1	107.2	112.8	116.7	119.8

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 34; remittances (2007) 11; foreign direct investment (2004–06 avg.) 352; official development assistance (2006) 254. Disbursements for (U.S.$'000,000): tourism (2005) 103; remittances (2007) 45.
Land use as % of total land area (2003): in temporary crops 1.4%, in permanent crops 0.2%, in pasture 29.3%; overall forest area (2005) 65.8%.

Foreign trade

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
CFAF '000,000,000	+1,320	+990	+1,118	+1,074	+1,074	+1,738
% of total	60.9%	49.8%	54.3%	52.7%	48.2%	53.8%

Imports (2005): CFAF 746,400,000,000 (nonpetroleum sector 85.9%; petroleum sector 14.1%). *Major import sources* (2002): France *c.* 26%; U.S. *c.* 11%; Italy *c.* 8%; Lebanon *c.* 6%; The Netherlands *c.* 5%.
Exports (2005): CFAF 2,484,300,000,000 (crude petroleum 92.5%, wood and wood products 4.6%, refined petroleum 1.2%). *Major export destinations* (2002): Taiwan *c.* 27%; North Korea *c.* 11%; U.S. *c.* 10%; South Korea *c.* 7%; France *c.* 7%; China *c.* 7%.

Transport and communications

Transport. Railroads (1998): length 894 km; passenger-km 242,000,000; metric ton-km cargo 135,000,000. Roads (2004): total length 17,289 km (paved 5%). Vehicles: passenger cars (2002) 30,000; trucks and buses (1997) 15,500. Air transport (2002): passenger-km 27,000,000; metric ton-km cargo 3,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	40	12	PCs	2005	19	4.8
Telephones				Dailies	2005		.
Cellular	2007	1,334[7]	354[7]	Internet users	2006	70	17
Landline	2005	16	4.0	Broadband	2006		.

Education and health

Educational attainment (2005). Percentage of population ages 15–49 having[8]: no formal schooling 5.6%; primary education 28.1%; lower secondary 47.2%; upper secondary/higher 19.1%. *Literacy* (2005): total population age 15 and over literate 87.4%; males literate 92.3%; females literate 82.9%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13)	2,741	7,038	603,180	85.7
Secondary (age 14–18)	869	4,650	195,355	42.0
Voc., teacher tr.[9]		1,746	23,606	13.5
Higher[10]		1,341[9]	16,862	12.4

Health: physicians (2000) 540 (1 per 5,745 persons); hospital beds (2001) 5,195 (1 per 623 persons); infant mortality rate per 1,000 live births (2006) 85.3; undernourished population (2002–04) 1,200,000 (33% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

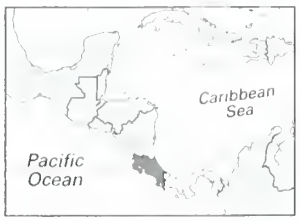
Total active duty personnel (November 2007): 10,000 (army 80.0%, navy 8.0%, air force 12.0%). *Military expenditure as percentage of GDP* (2005): 1.4%; per capita expenditure U.S.$22.

[1]Statutory number. [2]Post of prime minister is extraconstitutional creation from January 2005. [3]"Functional" national languages are Lingala and Monokutuba. [4]January 1 projection of the Congolese statistical office. [5]Republic of the Congo was a major illegal transshipment conduit for diamonds from nearby countries and was expelled from the Kimberley Process in 2004; it was readmitted in 2007. [6]2000. [7]Subscribers. [8]Survey of 9,975 persons only (including 7,051 females and 2,924 males). [9]1996–97. [10]1998.

Internet resources for further information:

- **La Banque de France: La Zone Franc**
  http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm
- **Republique du Congo: Centre National de la Statistique**
  http://www.cnsee.org

Costa Rica



Official name: República de Costa Rica (Republic of Costa Rica).
Form of government: unitary multiparty republic with one legislative house (Legislative Assembly [57]).
Head of state and government: President.
Capital: San José.
Official language: Spanish.
Official religion: Roman Catholicism.
Monetary unit: Costa Rican colón (₡); valuation (Sept. 8, 2008) 1 U.S.$ = ₡553.46; 1 £ = ₡977.79.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2007[1] estimate
Alajuela	Alajuela	3,766	9,753	810,165
Cartago	Cartago	1,207	3,125	484,186
Guanacaste	Liberia	3,915	10,141	298,897
Heredia	Heredia	1,026	2,657	398,865
Limon	Limon	3,547	9,188	392,616
Puntarenas	Puntarenas	4,354	11,277	408,654
San Jose	San José	1,915	4,959	1,505,851
TOTAL		19,730	51,100	4,299,234

Demography

Population (2008): 4,389,000.
Density (2008): persons per sq mi 222.5, persons per sq km 85.9.
Urban-rural (2003): urban 60.6%; rural 39.4%.
Sex distribution (2006[2]): male 50.76%; female 49.24%.
Age breakdown (2005): under 15, 28.4%; 15–29, 28.1%; 30–44, 21.5%; 45–59, 13.7%; 60–74, 5.9%; 75–84, 1.8%; 85 and over, 0.6%.
Population projection: (2010) 4,671,000; (2020) 5,362,000.
Doubling time: 56 years.
Ethnic composition (2000): white 77.0%; mestizo 17.0%; black/mulatto 3.0%; East Asian (mostly Chinese) 2.0%; Amerindian 1.0%.
Religious affiliation (2004): Roman Catholic (practicing) *c.* 47%; Roman Catholic (nonpracticing) *c.* 25%; Evangelical Protestant *c.* 13%; nonreligious *c.* 10%; other *c.* 5%.
Major cities (2006[2]): San José 344,747[3] (urban agglomeration 1,085,000[4]); Limón 68,215[5]; Alajuela 49,376[5]; San Isidro de El General 46,490[5]; San Francisco 45,972[5]; Liberia 45,365[5].

Vital statistics

Birth rate per 1,000 population (2007): 16.3 (world avg. 20.3); within marriage 40.1%; outside of marriage 59.9%.
Death rate per 1,000 population (2007): 3.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 12.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.97.
Marriage/divorce rates per 1,000 population: (2007) 5.8/(1998) 2.2.
Life expectancy at birth (2006): male 77.0 years; female 81.4 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 105.0; communicable diseases 92.3; malignant neoplasms (cancers) 78.1; accidents and violence 46.0.

National economy

Budget[6] (2004). Revenue: ₡1,860,988,000,000 (taxes on goods and services 38.5%, social security contributions 27.2%, income tax 14.4%, import duties 5.0%, grants 3.7%). Expenditures: ₡1,951,392,000,000 (current expenditures 92.9%, of which wages 37.7%, transfers 25.8%, interest on debt 17.2%; development expenditures 7.1%).
Public debt (external, outstanding; 2006): U.S.$3,669,000,000.
Gross national income (2007): U.S.$24,831,000,000 (U.S.$5,560 per capita).

Structure of gross domestic product and labour force

	2005 in value ₡'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	753,382	8.0	281,809	14.8
Mining	12,347	0.1	4,232	0.2
Manufacturing	1,895,002	20.0	259,565	13.6
Construction	407,312	4.3	125,337	6.6
Public utilities	261,120	2.8	21,136	1.1
Transp. and commun	815,033	8.6	115,931	6.1
Trade, restaurants	1,684,867	17.8	459,563	24.1
Finance, real estate	1,205,148	12.7	146,345	7.7
Public administration	344,121	3.6	83,263	4.4
Services	1,580,203	16.7	372,106	19.6
Other	509,695[7]	5.4[7]	33,781[8]	1.8[8]
TOTAL	9,468,230	100.0	1,903,068	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 4,300,000, bananas 2,240,000, pineapples 1,225,000, oil palm fruit 830,000, oranges 332,500, cassava 300,000, cantaloupes/other melons 245,000, rice 155,000, green coffee 110,400, plantains 80,000; livestock (number of live animals) 1,000,000 cattle, 550,000 pigs, 19,500,000 chickens; roundwood (2006) 4,622,000 cu m, of which fuelwood 74%; fisheries production (2006) 42,302 (from aquaculture 47%). Mining and quarrying (2005): limestone 920,000; gold 150 kg. Manufacturing (value added in U.S.$'000,000; 2003): food products 734; beverages 188; paints, soaps, and pharmaceuticals 169; plastic products 121; paper and paper products 96; bricks, tiles, and cement 95; printing and publishing 95; fabricated metal products 74. Energy production (consumption): electricity (kW-hr; 2005) 8,252,000,000 (8,263,000,000); coal (metric tons; 2005) none (63,000); crude petroleum (barrels; 2005) none (3,920,000); petroleum products (metric tons; 2005) 475,000 (1,948,000); natural gas, none (none).
Population economically active (2005): total 1,903,068; activity rate of total population 44.6% (participation rates: ages 12–59, 60.8%; female 36.2%; unemployed 6.6%[9]).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	111.3	121.5	132.9	149.3	169.9	189.3	207.1
Monthly earnings index	124.2	.			...	...	...

Household income and expenditure (2004–05). Average household size 3.7; average annual household income ₡4,225,680 (U.S.$9,214); sources of income: wages and salaries 67.9%, rent 11.0%, transfers 10.9%, self-employment 8.1%; expenditure: food, beverages, and tobacco 21.9%, housing and energy 19.3%, transportation 14.8%, recreation and culture 7.9%, wearing apparel 6.9%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,732; remittances (2007) 650; foreign direct investment (FDI; 2004–06 avg.) 1,041; foreign development assistance (2006) 24. Disbursements for (U.S.$'000,000): tourism (2006) 485; remittances (2007) 271; FDI (2004–06 avg.) 43.
Land use as % of total land area (2003): in temporary crops 4.4%, in permanent crops 5.9%, in pasture 45.8%; overall forest area (2005) 46.8%.

Foreign trade[10]

Balance of trade (current prices)[11]

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−1,547	−1,924	−1,561	−1,852	−2,489	−3,324
% of total	13.3%	15.5%	11.3%	12.6%	14.8%	16.8%

Imports (2005): U.S.$9,640,100,000 (machinery and apparatus 34.2%; chemicals and chemical products 11.0%; mineral fuels 10.5%; plastics 7.0%; fabricated metal products 6.8%). *Major import sources:* U.S. 40.1%; Japan 5.8%; Mexico 5.0%; Venezuela 4.9%; Ireland 4.5%.
Exports (2005): U.S.$7,150,690,000 (machinery and apparatus 29.8%; food products 24.8%, of which bananas 6.8%, pineapples 4.6%, coffee 3.7%; professional and scientific equipment 8.1%; textiles 7.5%; chemicals and chemical products 6.0%). *Major export destinations:* U.S. 40.2%; Hong Kong 6.8%; The Netherlands 6.3%; Guatemala 4.0%; Nicaragua 3.9%.

Transport and communications

Transport. Railroads (2004): 278 km[12]. Roads (2004): total length 21,953 mi, 35,330 km (paved 24%). Vehicles (2004): passenger cars 620,992; trucks and buses 220,456. Air transport (2005)[13]: passenger-km 2,284,000,000; metric ton-km cargo 10,351,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,068	257	PCs	2005	1,000	233
Telephones				Dailies	2004	477[14]	115[14]
Cellular	2007	1,508[15]	338[15]	Internet users	2007	1,500	336
Landline	2007	1,437	322	Broadband	2007	131[15]	29[15]

Education and health

Educational attainment (2004). Percentage of population age 5 and over having: no formal schooling 9.9%; incomplete primary education 23.3%; complete primary 24.5%; incomplete secondary 18.2%; complete secondary 8.5%; higher 12.7%; other/unknown 2.9%. *Literacy* (2003): total population age 15 and over literate 96.0%; males literate 95.9%; females literate 96.1%.

Education (2002–03)

	schools[16]	teachers	students	student/teacher ratio
Primary (age 7–12)	3,768	24,142	545,509	22.6
Secondary (age 13–17)	386	13,170	235,156	17.9
Voc., teacher tr	82	2,240	53,809	24.0
Higher	52	3,874[17]	77,283	...

Health (2004): physicians 6,600 (1 per 644 persons); hospital beds (2003) 5,908 (1 per 714 persons); infant mortality rate per 1,000 live births (2007) 10.1; undernourished population (2002–04) 200,000 (5% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

Military

Paramilitary expenditure as percentage of GDP (2005): 0.4%; per capita expenditure U.S.$24. The army was officially abolished in 1948. Paramilitary (police) forces had 9,800 members in November 2007.

[1]January 1. [2]July 1. [3]Population of San José canton. [4]2003 estimate. [5]District population. [6]General consolidated central and local government accounts. [7]Taxes less subsidies and imputed bank service charges. [8]Includes 7,197 not adequately defined and 24,578 unemployed, not previously employed. [9]Ages 12 and over. [10]Imports c.i.f.; exports f.o.b. [11]Includes goods imported for reassembly and reexported. [12]National rail service was not in regular service from 1995 through 2000. Limited service resumed in 2000. [13]Lacsa (Costa Rican Airlines) only. [14]Circulation of daily newspapers. [15]Subscribers. [16]1999. [17]2001–02.

Internet resources for further information:
- **Central Bank of Costa Rica http://www.bccr.fi.cr**
- **National Institute of Statistics and the Census http://www.inec.go.cr**

Côte d'Ivoire

Official name: République de Côte d'Ivoire (Republic of Côte d'Ivoire [Ivory Coast][1]).
Form of government: transitional regime[2] with one legislative house (National Assembly [223]).
Chief of state and government: President assisted by Prime Minister[3].
De facto capital: Abidjan.
Official language: French.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Regions	area sq km	population 2002 estimate	Regions	area sq km	population 2002 estimate
Agnebi	9,080	720,900	Moyen-Cavally	14,150	443,200
Bafing	8,720	178,400	Moyen-Comoé	6,900	488,200
Bas-Sassandra	25,800	443,200	N'zi-Comoe	19,560	909,800
Denguélé	20,600	277,000	Savanes	40,323	1,215,100
Dix-huit Montagnes	16,600	1,125,800	Sud-Bandama	10,650	826,300
Fromager	6,900	679,900	Sud-Comoé	6,250	536,500
Haut-Sassandra	15,200	1,186,600	Vallee du Bandama	28,530	1,335,500
Lacs	8,940	597,500	Worodougou	21,900	400,200
Lagunes	14,200	4,210,200	Zanzan	38,000	839,000
Marahoué	8,500	651,700	TOTAL	320,803	17,065,000

Demography

Population (2008): 19,624,000.
Density (2008): persons per sq mi 158.4, persons per sq km 61.2.
Urban-rural (2007): urban 48.1%; rural 51.9%.
Sex distribution (2007): male 50.75%; female 49.25%.
Age breakdown (2007): under 15, 41.2%; 15–29, 29.2%; 30–44, 16.5%; 45–59, 8.4%; 60–74, 3.9%; 75–84, 0.6%; 85 and over, 0.2%.
Population projection: (2010) 20,375,000; (2020) 24,315,000.
Ethnolinguistic composition (1998)[4]: Akan 42.1%; Mande 26.5%; other 31.4%.
Religious affiliation (2005): traditional beliefs *c.* 37%; Christian *c.* 32%, of which Roman Catholic *c.* 17%, Protestant *c.* 8%, independent Christian *c.* 7%; Muslim *c.* 28%; other *c.* 3%.
Major cities (2005): Abidjan (agglomeration) 3,576,000; Bouaké 573,700; Daloa 215,100; Yamoussoukro (2003) 185,600; Korhogo (2003) 115,000.

Vital statistics

Birth rate per 1,000 population (2007): 33.3 (world avg. 20.3).
Death rate per 1,000 population (2007): 11.6 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 4.33.
Life expectancy at birth (2007): male 53.3 years; female 54.5 years.
Adult population (ages 15–49) *living with HIV* (2007): 3.9%[5] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): HIV/AIDS-related *c.* 299; malaria *c.* 153; lower respiratory infections *c.* 132; diarrheal diseases *c.* 102; perinatal conditions *c.* 92.

National economy

Budget (2005). Revenue: CFAF 1,566,000,000,000 (tax revenue 79.9%; nontax revenue 14.1%; grants 6.0%). Expenditures: CFAF 1,536,600,000,000 (current expenditure 78.4%; interest on public debt 11.5%; remainder 10.1%).
Public debt (external, outstanding; 2006): U.S.$10,830,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): yams 4,900,000, cassava 2,110,000, plantains 1,590,000, oil palm fruit 1,448,000, cacao beans 1,300,000, sugarcane 1,100,000, rice 677,000, corn (maize) 600,000, taro 355,000, seed cotton 290,000, bananas 235,000, coffee 171,000, cashew nuts 130,000, natural rubber 128,000, peanuts (groundnuts) 85,000, fonio 9,700; livestock (number of live animals) 1,523,000 sheep, 1,500,000 cattle; roundwood (2006) 10,087,000 cu m, of which fuelwood 87%; fisheries production 33,461 (from aquaculture 2%). Mining and quarrying (2006): gold 1,324 kg; diamonds 420,000 carats[6]. Manufacturing (value added in CFAF '000,000,000; 1997): food 156.6, of which cocoa and chocolate 72.4, vegetable oils 62.7; chemicals 60.2; wood products 55.9; refined petroleum 46.0; textiles 37.9. Energy production (consumption): electricity (kW-hr; 2005) 5,578,000,000 (4,181,000,000); coal, none (none); crude petroleum (barrels; 2007) 18,800,000 ([2005] 30,000,000); petroleum products (metric tons; 2005) 3,136,000 (974,000); natural gas (cu m; 2005) 1,661,000,000 (1,661,000,000).
Population economically active (2003)[7]: total 6,544,000; activity rate of total population 37.2% (participation rates: ages 15–64, 65.5%; female 28.9%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.3	107.5	111.1	112.7	117.1	120.0	122.3

Household income and expenditure. Average household size (2004) 8.0; expenditure (1996)[8]: food 32.2%, housing and energy 13.9%, hotels and restaurants 12.3%, transportation 9.6%, clothing 7.4%, household equipment 5.7%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2003) 50; remittances (2007) 179; foreign direct investment (2004–06 avg.) 283; official development assistance (2006) 251. Disbursements for (U.S.$'000,000): tourism (2001) 192; remittances (2007) 19.
Gross national income (GNI; 2007): U.S.$17,543,000,000 (U.S.$910 per capita); purchasing power parity GNI (U.S.$1,590 per capita).

Structure of gross domestic product and labour force

	2004 in value CFAF '000,000,000	% of total value	labour force	% of labour force
Agriculture	1,895.9	23.2	3,107,000	44.8
Mining	116.4	1.4		
Manufacturing	1,331.3	16.3		
Public utilities	190.4	2.3		
Construction	248.9	3.0		
Transp. and commun.	381.2	4.7	3,827,000	55.2
Trade	1,141.1	14.0		
Public admin., defense; Finance, services	2,271.4	27.8		
Other	601.9[9]	7.4[9]		
TOTAL	8,178.5	100.0[10]	6,934,000	100.0

Land use as % of total land area (2003): in temporary crops 10.4%, in permanent crops 11.3%, in pasture 40.9%; overall forest area (2005) 32.7%.

Foreign trade

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
CFAF '000,000,000	+1,058	+1,120	+1,965	+1,486	+1,388	+1,263
% of total	23.6%	24.0%	36.5%	28.3%	23.4%	19.1%

Imports (2005): CFAF 2,687,000,000,000 (machinery and transport equipment 40.1%, crude and refined petroleum 32.3%, food products 17.0%). *Major import sources* (2004): France 24.3%; Nigeria 19.2%; U.K. 4.0%; China 4.0%; Italy 3.8%.
Exports (2005): CFAF 3,950,000,000,000 (cocoa beans and products 27.5%, crude petroleum and petroleum products 26.9%, wood and wood products 3.8%, coffee 2.1%). *Major export destinations* (2004): U.S. 11.6%; The Netherlands 10.3%; France 9.5%; Italy 5.5%; Belgium 4.7%; Germany 4.7%.

Transport and communications

Transport. Railroads (1999): route length (2004) 660 km; passenger-km 93,100,000; metric ton-km cargo 537,600,000. Roads (2004): total length 80,000 km (paved 8%). Vehicles: passenger cars (2002) 114,000; trucks and buses (2001) 54,900. Air transport (2002)[11]: passenger arrivals and departures 821,400; cargo unloaded and loaded 16,699 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	880	52	PCs	2004	262	16
Telephones				Dailies	2005	83[12]	4.7[12]
Cellular	2007	7,050[13]	366[13]	Internet users	2006	300	16
Landline	2006	261	14	Broadband	2005	1.2[13]	0.07[13]

Education and health

Educational attainment (1998–99)[14]. Percentage of population age 25 and over having: no formal schooling 62.3%; primary education 19.4%; secondary 14.3%; higher 3.3%; unknown 0.7%. *Literacy* (2007): percentage of population age 15 and over literate 55.5%; males 65.1%; females 45.5%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	7,599[15]	48,308	2,046,165	42.4
Secondary (age 12–18)	147[15]	23,184[16]	703,743	28.6[16]
Higher[17]	2	1,131	42,500	37.6

Health: physicians (2004) 2,081 (1 per 8,143 persons); hospital beds (2001) 5,981 (1 per 2,660 persons); infant mortality rate (2007) 71.6; undernourished population (2002–04) 2,200,000 (13% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2007): 17,050 (army 38.1%, navy 5.3%, air force 4.1%, presidential guard 7.9%, gendarmerie[18] 44.6%). *Military expenditure as percentage of GDP* (2005): 1.2%; per capita expenditure U.S.$11.[19]

[1]Côte d'Ivoire is the official protocol version of the country name since 1986. [2]Côte d'Ivoire was split between a government-controlled south and a rebel-held north from September 2002 through March 2007. The peace accord signed between the warring factions in March 2007 enabled the creation of a power-sharing transitional government in April 2007. [3]Both positions were transitional as of December 2008. [4]Local population only (in 1998 foreigners constituted 26% of the population). At least 1 million foreigners have been forced to leave southern Côte d'Ivoire from September 2002. [5]Statistically derived midpoint of range. [6]A UN embargo on rough diamond exports was in effect from November 2004 to November 2007. [7]Estimates of the ILO Employment Trends Unit. [8]Weights of consumer price index components. [9]Import duties and taxes. [10]Detail does not add to total given because of rounding. [11]Abidjan airport only. [12]Circulation of four daily newspapers only. [13]Subscribers. [14]Based on sample survey of 4,572 persons (38% urban, 62% rural). [15]1996–97. [16]2000–01. [17]Universities of Abobo-Adjamé and Cocody only. [18]The gendarmerie or the national police force reinforces the army. [19]Peacekeeping troops: UN (September 2008) 7,800, French (March 2008) 1,800; however, dismantling of the buffer zone occupied by the peacekeeping troops began in April 2007.

Internet resources for further information:

- **La Banque de France: La Zone Franc http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm**
- **Institut National de la Statistique http://www.ins.ci/accueil.htm**

Croatia

Official name. Republika Hrvatska (Republic of Croatia).
Form of government: multiparty republic with one legislative house (Croatian Parliament [153[1]]).
Head of state: President.
Head of government: Prime Minister.
Capital: Zagreb.
Official language: Croatian.
Official religion: none.
Monetary unit: kuna (kn; plural kune); valuation (Sept. 8, 2008) 1 U.S.$ = kn 5.00; 1 £ = kn 8.84.

Area and population

Counties	area sq km	population 2005 estimate
Bjelovar-Bilogora	2,640	128,800
Dubrovnik-Neretva	1,781	124,800
Istria	2,813	210,800
Karlovac	3,626	137,000
Koprivnica-Križevci	1,748	121,900
Krapina-Zagorje	1,229	139,100
Lika-Senj	5,353	52,300
Medimurje	729	118,500
Osijek-Baranja	4,155	326,200
Požega-Slavonia	1,823	84,500
Primorje-Gorski kotar	3,588	305,100
Šibenik-Knin	2,984	114,000
Sisak-Moslavina	4,468	180,000
Slavonski Brod-Posavina	2,030	175,000
Split-Dalmatia	4,540	477,300
Varaždin	1,262	182,000
Virovitica-Podravina	2,024	90,600
Vukovar-Srijem	2,454	200,400
Zadar	3,646	169,100
Zagreb	3,060	321,000
City		
Zagreb	641	783,500
TOTAL	56,594	4,441,900

Demography

Population (2008): 4,433,000.
Density (2008): persons per sq mi 202.9, persons per sq km 78.3.
Urban-rural (2005): urban 56.5%; rural 43.5%.
Sex distribution (2006): male 48.17%; female 51.83%.
Age breakdown (2004): under 15, 16.1%; 15–29, 20.2%; 30–44, 20.9%; 45–59, 20.7%; 60–74, 15.9%; 75–84, 5.3%; 85 and over, 0.9%.
Population projection: (2010) 4,415,000; (2020) 4,256,000.
Ethnic composition (2001): Croat 89.6%; Serb 4.5%; Bosniac 0.5%; Italian 0.4%; Hungarian 0.4%; other 4.6%.
Religious affiliation (2001): Christian 92.6%, of which Roman Catholic 87.8%, Eastern Orthodox 4.4%; Muslim 1.3%; nonreligious/atheist 5.2%; other 0.9%.
Major cities (2001): Zagreb 691,724; Split 175,140; Rijeka 143,800; Osijek 90,411; Zadar 69,556.

Vital statistics

Birth rate per 1,000 population (2006): 9.5 (world avg. 20.3); within marriage 89.0%; outside of marriage 11.0%.
Death rate per 1,000 population (2006): 11.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): –2.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.38.
Marriage/divorce rates per 1,000 population (2006): 5.8/1.0.
Life expectancy at birth (2005): male 71.8 years; female 78.8 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 561.8; malignant neoplasms (cancers) 279.3; diseases of the respiratory system 65.2; accidents, violence, and poisoning 64.6; diseases of the digestive system 53.3.

National economy

Budget (2006). Revenue: kn 95,236,000,000 (tax revenue 61.4%, of which VAT 36.7%, excise taxes 12.1%; social security contributions 35.6%; nontax revenue 2.8%; grants 0.2%). Expenditures: kn 95,948,000,000 (social security and welfare 43.5%; compensation of employees 25.3%; interest payments 4.9%).
Population economically active (2005): total 1,802,000; activity rate 40.5% (participation rates: ages 15–64, 58.3%; female 45.5%; unemployed [July 2005–June 2006] 12.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.8	105.5	107.4	109.5	113.2	116.8	120.2
Annual earnings index	106.5	111.8	118.5	125.5	131.6	138.4	145.5

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugar beets 1,582,606, corn (maize) 1,424,599, wheat 950,000, potatoes 215,333, grapes 180,000, barley 149,000, soybeans 90,637, apples 78,747, sunflower seed 54,303, tomatoes 43,600, olives 34,527, tobacco leaves 10,000; livestock (number of live animals) 1,489,000 pigs, 680,000 sheep, 483,000 cattle; roundwood (2006) 4,452,000 cu m, of which fuelwood 21%; fisheries production (2006) 52,750 (from aquaculture 28%). Mining and quarrying (2005): ceramic clay 200,000; ornamental stone 1,000,000 sq m. Manufacturing (value added in kn '000,000; 2004): food products and beverages 7,112; refined petroleum 4,005; chemicals and chemical products 2,774; bricks, cement, and ceramics 2,642; fabricated metals 2,623; printing and publishing 2,224. Energy production (consumption): electricity (kW-hr; 2007) 12,540,000,000 ([2005] 17,574,000,000); coal (metric tons; 2005) none (1,140,000); crude petroleum (barrels; 2007) 6,710,000 ([2005] 35,800,000); petroleum products (metric tons; 2005) 4,807,000 (4,478,000); natural gas (cu m; 2007) 2,713,000,000 ([2005] 2,834,000,000).

Gross national income (GNI; 2007): U.S.$46,426,000,000 (U.S.$10,460 per capita); purchasing power parity GNI (U.S.$15,050 per capita).

Structure of gross domestic product and labour force

	2005			
	in value kn '000,000	% of total value	labour force	% of labour force
Agriculture, forestry	13,176	5.8	271,000	15.0
Mining	45,587	19.9	9,000	0.5
Manufacturing			277,000	15.4
Public utilities			28,000	1.6
Construction	12,493	5.5	130,000	7.2
Transp. and commun.	19,206	8.4	97,000	5.4
Trade, restaurants	34,164	14.9	309,000	17.1
Finance, real estate	34,176	14.9	105,000	5.8
Pub. admin., defense	37,886	16.5	106,000	5.9
Services			232,000	12.9
Other	32,344[2]	14.1[2]	236,000[3]	13.1[3]
TOTAL	229,031[4]	100.0	1,802,000[4]	100.0[4]

Public debt (external, outstanding; December 2006): U.S.$8,350,000,000.
Household income and expenditure (2005). Average household size (2001) 3.0; average annual income per household kn 69,180 (U.S.$11,629); sources: wages 51.0%, pensions 17.9%, self-employment 16.5%; expenditure: food and nonalcoholic beverages 33.2%, housing and energy 13.6%, transportation 10.9%, clothing and footwear 7.7%, recreation and culture 6.2%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 7,990; remittances (2007) 1,788; foreign direct investment (FDI; 2004–06 avg.) 2,191; official development assistance (2006) 200. Disbursements for (U.S.$'000,000): tourism (2006) 737; remittances (2007) 86; FDI (2004–06 avg.) 267.
Land use as % of total land area (2003): in temporary crops 26.1%, in permanent crops 2.2%, in pasture 27.8%; overall forest area (2005) 38.2%.

Foreign trade[5]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–5,818	–8,022	–8,565	–9,788	–11,126	–13,469
% of total	37.2%	39.3%	34.7%	35.8%	34.9%	35.3%

Imports (2006): U.S.$21,503,000,000 (machinery and apparatus 20.0%, mineral fuels 15.9%, chemicals and chemical products 10.8%, road vehicles/parts 9.2%). *Major import sources:* Italy 16.7%; Germany 14.5%; Russia 10.1%; Slovenia 6.3%; Austria 5.4%.
Exports (2006): U.S.$10,377,000,000 (machinery and apparatus 15.7%, mineral fuels 15.1%, ships and boats [particularly tankers] 10.5%, chemicals and chemical products 9.2%, food 9.1%). *Major export destinations:* Italy 23.1%; Bosnia and Herzegovina 12.6%; Germany 10.3%; Slovenia 8.2%; Austria 6.0%.

Transport and communications

Transport. Railroads (2004): length 2,726 km; (2006) passenger-km 1,339,000,000; (2006) metric ton-km cargo 3,183,000,000. Roads (2005): total length 28,472 km (paved [2003] 85%). Vehicles (2007[6]): passenger cars 1,435,781; trucks and buses 174,612. Air transport (2007): passenger-km 1,080,000,000; metric ton-km cargo 2,220,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,401	315	PCs	2004	842	191
Telephones				Dailies	2004	382[7]	85[7]
Cellular	2007	5,035[8]	1,105[8]	Internet users	2007	1,995	438
Landline	2007	1,825	401	Broadband	2007	385[8]	87[8]

Education and health

Educational attainment (2001). Percentage of population age 15 and over having: no schooling or unknown 3.5%; incomplete primary education 15.8%; primary 21.7%; secondary 47.1%; postsecondary and higher 11.9%. *Literacy* (2003): population age 15 and over literate 98.5%; males 99.4%; females 97.8%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 7–14)	2,140	30,131	387,952	12.9
Secondary (age 15–18)	683	21,835	189,661	8.7
Higher	110	9,486	132,952	14.0

Health (2005): physicians 8,216 (1 per 541 persons); hospital beds 24,000 (1 per 185 persons); infant mortality rate per 1,000 live births 5.7; undernourished population (2002–04) 300,000 (7% of total population based on the consumption of a minimum daily requirement of 2,010 calories).

Military

Total active duty personnel (November 2007): 17,660 (army 69.6%, navy 9.6%, air force and air defense 10.2%, headquarters staff 10.6%). *Military expenditure as percentage of GDP* (2005): 1.6%; per capita expenditure U.S.$138.

[1]Includes 5 seats representing Croatians abroad and 8 seats for minorities. [2]Taxes less subsidies and less imputed bank service charges. [3]Unemployed. [4]Detail does not add to total given because of rounding. [5]Imports c.i.f.; exports f.o.b. [6]January 1. [7]Circulation. [8]Subscribers.

Internet resources for further information:
- **Croatian Bureau of Statistics http://www.dzs.hr/**
- **Croatian National Bank http://www.hnb.hr/eindex.htm**

Cuba

Official name: República de Cuba (Republic of Cuba).
Form of government: unitary socialist republic with one legislative house (National Assembly of the People's Power [614]).
Head of state and government: President.
Capital: Havana.
Official language: Spanish.
Official religion: none.
Monetary unit: Cuban peso (CUP); valuation (Sept. 8, 2008) 1 U.S.$ = CUP 23.15[1]; 1 £ = CUP 40.90[1].

Area and population

Provinces	Capitals	area[2] sq mi	area[2] sq km	population 2007 estimate
Camagüey	Camagüey	6,029	15,615	783,372
Ciego de Avila	Ciego de Avila	2,619	6,783	420,996
Cienfuegos	Cienfuegos	1,614	4,180	402,061
Ciudad de la Habana	—	278	721	2,156,650
Granma	Bayamo	3,234	8,375	833,600
Guantánamo	Guantánamo	2,381	6,168	511,063
Holguín	Holguín	3,588	9,293	1,035,744
La Habana[3]	Havana	2,213	5,732	739,967
Las Tunas	Las Tunas	2,544	6,588	533,127
Matanzas	Matanzas	4,557	11,803	684,319
Pinar del Río	Pinar del Río	4,210	10,904	731,232
Sancti Spíritus	Sancti Spíritus	2,601	6,737	464,221
Santiago de Cuba	Santiago de Cuba	2,377	6,156	1,044,698
Villa Clara	Santa Clara	3,248	8,412	809,231
Special municipality				
Isla de la Juventud	Nueva Gerona	934	2,419	86,509
TOTAL		42,427	109,886	11,236,790

Demography

Population (2008): 11,236,000.
Density (2008): persons per sq mi 264.8, persons per sq km 102.3.
Urban-rural (2005): urban 75.5%; rural 24.5%.
Sex distribution (2007): male 50.08%; female 49.92%.
Age breakdown (2005): under 15, 19.2%; 15–29, 20.5%; 30–44, 27.6%; 45–59, 17.0%; 60–74, 10.8%; 75–84, 3.6%; 85 and over, 1.3%.
Population projection: (2010) 11,228,000; (2020) 11,219,000.
Ethnic composition (1994): mixed 51.0%; white 37.0%; black 11.0%; other 1.0%.
Religious affiliation (2005): Roman Catholic *c.* 47%; Protestant *c.* 5%; nonreligious *c.* 22%; other *c.* 26%.[4]
Major cities (2006): Havana 2,174,790; Santiago de Cuba 425,990; Camagüey 306,702; Holguín 274,805; Santa Clara 208,739; Guantánamo 208,579.

Vital statistics

Birth rate per 1,000 population (2007): 10.0 (world avg. 20.3).
Death rate per 1,000 population (2007): 7.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 2.7 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.43.
Marriage/divorce rates per 1,000 population (2004): 4.5/3.2.
Life expectancy at birth (2006): male 75.1 years; female 79.0 years.
Major causes of death per 100,000 population (2002): malignant neoplasms (cancers) 162.7; ischemic heart disease 139.9; cerebrovascular disease 74.9; communicable diseases 61.8; accidents 41.6; suicide and violence 21.7.

National economy

Budget (2006). Revenue: CUP 30,012,400,000 (tax revenue 73.6%; nontax revenue 26.4%). Expenditures: CUP 31,742,400,000 (current revenue 84.2%, of which education 14.8%, social security contributions 11.2%, health 9.7%, housing and community services 7.2%; capital expenditure 15.8%).
Public debt (external, outstanding; 2004): U.S.$12,000,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 11,100,000, tomatoes 640,000, plantains 540,000, rice 500,000, cassava 460,000, pumpkins, squash, and gourds 450,000, oranges 420,000, corn (maize) 390,000, sweet potatoes 310,000, tobacco leaves 30,000; livestock (number of live animals) 3,750,000 cattle, 2,765,000 sheep, 1,765,000 pigs, 30,000,000 chickens; roundwood (2006) 2,345,000 cu m, of which fuelwood 68%; fisheries production (2006) 54,753 (from aquaculture 50%). Mining and quarrying (2006): nickel (metal content) 75,000; cobalt (metal content) 4,300. Manufacturing (2006): cement 1,713,900; steel 257,200; cigarettes (2004) 12,800,000,000 units; colour televisions 157,500 units; beer 2,298,100 hectolitres; other alcoholic beverages (excluding wine) 294,700 hectolitres. Energy production (consumption): electricity (kW-hr; 2006) 16,468,500,000 ([2005] 15,638,000,000); coal (metric tons; 2005) none (13,000); crude petroleum (barrels; 2006) 18,700,000 ([2005] 30,300,000); petroleum products (metric tons; 2005) 1,954,000 (4,925,000); natural gas (cu m; 2006) 1,085,000,000 ([2005] 754,000,000).
Population economically active (2004): total 4,729,386; activity rate 42.1% (participation rates: ages 15 and over, 52.3%; female 36.5%; unemployed [2006] 1.9%).

Price and earnings indexes (2000 = 100)

	1999	2000	2001	2002	2003	2004	2005
Consumer price index	97.2	100.0	95.9[5]	104.3[5]	105.0[5]	106.0[5]	110.5[5]
Monthly earnings index	96.2	100.0	104.7	112.4	123.2	132.6	…

Gross national income (2006): U.S.$51,504,000,000 (U.S.$4,571 per capita).

Structure of gross domestic product and labour force

	2006 in value CUP '000[6]	2006 % of total value[6]	2004 labour force[7]	2004 % of labour force[7]
Agriculture	1,597,700	3.6	982,400	21.2
Mining	459,000	1.0	27,600	0.6
Manufacturing	4,956,900	11.2	573,100	12.3
Public utilities	605,500	1.4	62,600	1.3
Construction	3,042,000	6.9	236,700	5.1
Transp. and commun.	3,458,600	7.8	278,200	6.0
Finance, real estate	2,534,200	5.8	104,000	2.2
Trade	10,588,100	24.0	610,300	13.1
Pub. admin., social security	1,470,800	3.3	1,766,800	38.1
Services	14,694,800	33.3		
Other	657,000	1.5	—	—
TOTAL	44,064,600	100.0[8]	4,641,700	100.0[8]

Household income and expenditure. Average household size (2002) 3.2.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 2,138; remittances (2003) 1,200; foreign direct investment (2004–06 avg.) 25[5]; official development assistance (2006) 78. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.
Land use as % of total land area (2003): in temporary crops 27.9%, in permanent crops 6.6%, in pasture 26.1%; overall forest area (2005) 24.7%.

Foreign trade[9]

Balance of trade (current prices)

	2001	2002	2003	2004	2005[5]	2006[5]
U.S.$'000,000	–3,586	–2,755	–2,985	–3,278	–5,539	–6,661
% of total	51.9%	49.2%	47.1%	41.3%	58.1%	54.7%

Imports (2004): U.S.$5,610,000,000 (food 18.4%, of which cereals 8.0%; machinery and apparatus 17.5%; refined petroleum 12.8%; chemicals and chemical products 9.6%; crude petroleum 9.4%). *Major import sources* (2006): Venezuela 23.5%; China 16.7%; Spain 9.0%; Germany 6.5%; U.S. 5.1%.
Exports (2004): U.S.$2,332,000,000 (nickel oxide 45.5%; food 19.7%, of which raw cane sugar 11.5%; cigars 8.7%; medicine 6.0%). *Major export destinations* (2006): The Netherlands 28.0%; Canada 19.8%; Venezuela 10.7%; China 8.9%; Spain 5.4%.

Transport and communications

Transport. Railroads (2003)[10]: length 2,651 mi, 4,226 km; (2001) passenger-km 1,766,600; metric ton-km cargo 806,900,000. Roads (2000): total length 37,814 mi, 60,856 km (paved 49%). Vehicles (1998): passenger cars 172,574; trucks and buses 185,495. Air transport (2003)[11]: passenger-km 2,044,000,000; metric ton-km cargo 40,933,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	3,000	267	PCs	2005	377	33
Telephones				Dailies	2004	400[12]	36[12]
Cellular	2007	198[13]	18[13]	Internet users	2007	1,310	116
Landline	2007	1,043	93	Broadband	2007	1.9[13]	0.2[13]

Education and health

Educational attainment (2002): Percentage of population age 25 and over having: no formal schooling 14.1%; primary education 17.2%; secondary 26.6%; vocational/technical/teacher training 32.8%; university 9.3%. *Literacy* (2004): total population age 15 and over literate 96.9%; males 97.0%; females 96.8%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	9,064	91,000	967,200	10.6
Secondary (age 12–17)	1,969	96,100	975,400	10.1
Voc., teacher tr.	…	27,267[14]	244,253[14]	9.0[14]
Higher	65	41,400	606,300	14.6

Health (2006): physicians 70,594 (1 per 160 persons); hospital beds (2004) 70,079 (1 per 160 persons); infant mortality rate per 1,000 live births (2007) 5.3; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 49,000 (army 77.6%, navy 6.1%, air force 16.3%); U.S. military forces at Naval Base Guantanamo Bay (November 2007) 903. *Military expenditure as percentage of GDP* (2005): 3.8%; per capita expenditure U.S.$151.

[1]Domestic transactions only; the Cuban convertible peso (CUC) is used for international transactions—1 U.S.$ = CUC 0.93; 1 £ = CUC 1.64. [2]Geographic areas: island of Cuba 40,369 sq mi (104,556 sq km); Isla de la Juventud 851 sq mi (2,204 sq km); numerous adjacent cays (administratively a part of provinces or the Isla de la Juventud) 1,207 sq mi (3,126 sq km). [3]Province bordering Ciudad de la Habana on the east, south, and west. [4]Up to 70% of the population also practice Santeria. [5]Estimated figure(s). [6]At constant 1997 prices. [7]Employed persons only. [8]Detail does not add to total given because of rounding. [9]Imports c.i.f.; exports f.o.b. [10]Cuban Railways only; length of railways exclusively for the transport of sugar equals 4,811 mi (7,742 km). [11]Cubana airline only. [12]Circulation of *Granma*, the one nationwide daily. [13]Subscribers. [14]1995–96.

Internet resources for further information:
- **Oficina Nacional de Estadísticas http://www.one.cu**
- **Naciones Unidas en Cuba http://www.onu.org.cu**

Cyprus

Island of Cyprus

Area: 3,572 sq mi, 9,251 sq km.
Population (2008): 1,076,000[1].

Two de facto states currently exist on the island of Cyprus: the Republic of Cyprus (ROC), predominantly Greek in character, occupying the southern two-thirds of the island, which is the original and still the internationally recognized de jure government of the whole island; and the Turkish Republic of Northern Cyprus (TRNC), proclaimed unilaterally Nov. 15, 1983, on territory originally secured for the Turkish Cypriot population by the July 20, 1974, intervention of Turkey. Only Turkey recognizes the TRNC. Provision of separate data below does not imply recognition of either state's claims but is necessitated by the lack of unified data.

Republic of Cyprus

Official name: Kipriakí Dhimokratía (Greek); Kıbrıs Cumhuriyeti (Turkish) (Republic of Cyprus).
Form of government: unitary multiparty republic with a unicameral legislature (House of Representatives [80[2]]).
Head of state and government: President.
Capital: Lefkosia (conventional Nicosia).
Official languages: Greek; Turkish.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24[3].

Demography

Area[4]: 2,276 sq mi, 5,896 sq km.
Population (2008): 805,000[5].
Age breakdown (2006[6]): under 15, 18.4%; 15–29, 23.9%; 30–44, 21.8%; 45–59, 19.2%; 60–74, 11.7%; 75–84, 3.9%; 85 and over, 1.1%.
Ethnic composition (2000): Greek Cypriot 91.8%; Armenian 3.3%; Arab 2.9%, of which Lebanese 2.5%; British 1.4%; other 0.6%.
Religious affiliation (2001): Greek Orthodox 94.8%; Roman Catholic 2.1%, of which Maronite 0.6%; Anglican 1.0%; Muslim 0.6%; other 1.5%.
Urban areas (2005[6]): Lefkosia 219,200[7]; Limassol 172,500; Larnaca 77,000.

Vital statistics

Birth rate per 1,000 population (2006): 11.2 (world avg. 20.3).
Death rate per 1,000 population (2006): 6.8 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2005): 1.42.
Life expectancy at birth (2004–05): male 77.0 years; female 81.7 years.

National economy

Budget (2005). Revenue: £C 3,273,700,000 (excises and import duties 41.4%, income tax 22.3%, social security contributions 19.9%). Expenditures: £C 3,459,300,000 (current expenditures 91.3%, development expenditures 8.7%).
Gross national income (GNI; 2007): U.S.$19,617,000,000 (U.S.$24,940 per capita); purchasing power parity GNI (U.S.$26,370 per capita).

Structure of gross domestic product and labour force

	2005			
	in value £C '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	221.9	2.9	16,500	4.5
Mining	24.6	0.3	800	0.2
Manufacturing	668.5	8.6	40,000	10.9
Construction	624.4	8.1	40,200	10.9
Public utilities	162.9	2.1	2,700	0.8
Transp. and commun.	605.6	7.8	18,500	5.0
Trade, restaurants	1,434.7	18.5	87,400	23.8
Finance, insurance	1,786.3	23.1	42,700	11.6
Pub. admin., defense	740.7	9.6	26,300	7.2
Services	1,032.2	13.3	69,900	19.0
Other	437.8[8]	5.7[8]	22,500	6.1
TOTAL	7,739.6	100.0	367,500	100.0

Production. Agriculture/livestock (in '000 metric tons; 2007): potatoes 135.0, pork 50.4, grapes 45.5, chicken meat 22.0, olives 18.0. Manufacturing (value added in U.S.$'000,000; 2005): food products, beverages, and tobacco 281; cement, bricks, and ceramics 98; base metals and fabricated metal products 67; paper and paper products 56. Energy production (consumption): electricity (kW-hr; 2005) 4,338,000,000 (3,931,000,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 2,240; remittances (2007) 172; foreign direct investment (FDI; 2004–06 avg.) 1,265. Disbursements for (U.S.$'000,000): tourism (2006) 982; remittances (2007) 371; FDI (2004–06 avg.) 636.
Land use as % of total land area (2003)[9]: in temporary crops 12.4%, in permanent crops 4.4%, in pasture 0.4%; overall forest area (2005) 18.9%.

Foreign trade[10]

Imports (2006): U.S.$7,046,000,000 (refined petroleum 17.2%, machinery and apparatus 16.4%, road vehicles 11.0%, food 9.2%). *Major import sources:* Greece 17.3%; Italy 11.4%; U.K. 8.9%; Germany 8.9%; Israel 6.2%.
Exports (2006): U.S.$1,414,900,000 (refined petroleum 18.2%, telecommunications equipment 9.9%, road vehicles 9.8%, vegetables and fruit 8.9%, medicine 8.6%, cigars/cigarettes 4.5%). *Major export destinations:* U.K. 14.6%; Greece 13.2%; France 7.4%; Germany 4.5%; unspecified 18.6%[11].

Transport and communications

Transport. Roads (2004): total length 12,059 km (paved *c.* 65%). Vehicles (2005[6]): cars 335,634; trucks and buses 121,024. Air transport (2007)[12]: passenger-km 3,385,000,000; metric ton-km cargo 53,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	276	384	PCs	2004	249	309
Telephones				Dailies	2004	77[13]	104[13]
Cellular	2007	962[9, 14]	1,126[9, 14]	Internet users	2007	380[9]	445[9]
Landline	2007	376[9]	440[9]	Broadband	2006	81[9, 14]	77[9, 14]

Education and health

Educational attainment (2004). Percentage of population age 20 and over having: no formal schooling/incomplete primary education 10%; complete primary 20%; secondary 45%; higher education 25%.
Health (2004): physicians 1,965 (1 per 375 persons); hospital beds 3,075 (1 per 240 persons); infant mortality rate per 1,000 live births (2005) 4.6.

Military

Total active duty personnel (2007): 10,000 (national guard 100%); Greek troops 950. *Military expenditure as percentage of GDP* (2005): 1.4%; per capita expenditure U.S.$241.

Internet resources for further information:
- **Central Bank of Cyprus http://www.centralbank.gov.cy**
- **Rep. of Cyprus Statistical Service http://www.pio.gov.cy/mof/cystat/statistics.nsf/index_en/index_en?OpenDocument**

Turkish Republic of Northern Cyprus

Official name: Kuzey Kıbrıs Türk Cumhuriyeti (Turkish) (Turkish Republic of Northern Cyprus).
Capital: Lefkoşa (conventional Nicosia).
Official language: Turkish.
Monetary unit: new Turkish lira (YTL); valuation (Sept. 8, 2008) 1 U.S.$ = YTL 1.24; 1 £ = YTL 2.20; 1 YTL = 1,000,000 (old) TL.
Population (2008): 271,100[1] (Lefkoşa 49,237[15]; Mağusa [Famagusta] 34,803[15]; Girne [Kyrenia] 24,122[15]; Güzelyurt [Morphou] 12,425[15]).
Sex distribution (2006): male 53.99%; female 46.01%.
Ethnic composition (2006): Turkish Cypriot/Turkish 96.8%; other 3.2%.
Birth rate per 1,000 population (2004): 16.0 (world avg. 21.1).
Death rate per 1,000 population (2004): 8.0 (world avg. 8.8).
Total fertility rate (avg. births per childbearing woman; 2004) 1.90.

Structure of gross domestic product and labour force

	2004		2003	
	in value TL '000,000,000	% of total value	labour force	% of labour force
Agriculture and fishing	222,993	9.1	14,339	14.9
Mining	13,109	0.5	1,177	1.2
Manufacturing	118,634	4.8	6,438	6.7
Construction	106,809	4.4	16,591	17.2
Public utilities	99,303	4.0	1,444	1.5
Transp. and commun.	257,580	10.5	8,396	8.7
Trade, restaurants	391,227	15.9	10,803	11.2
Pub. admin.	510,393	20.8	18,605	19.3
Finance, real estate	474,215	19.3	2,404	2.5
Services			14,828	15.4
Other	262,481[16]	10.7[16]	1,375[17]	1.4[17]
TOTAL	2,456,744	100.0	96,400	100.0

Budget (2004). Revenue: U.S.$885,187,000 (indirect taxes 21.4%, direct taxes 18.8%, foreign aid 13.9%, loans 11.8%). Expenditures: U.S.$885,187,000 (wages 29.7%, social transfers 22.9%, investments 10.3%, defense 6.2%).
Imports[10] (2004): U.S.$853,100,000 (machinery and transport equipment 35.7%, food 9.4%). *Major import sources:* Turkey 60.1%; U.K. 10.7%.
Exports[10] (2004): U.S.$62,000,000 (citrus fruits 32.4%, clothing 18.9%). *Major export destinations:* Turkey 46.3%; U.K. 21.8%.
Health (2004): physicians 422 (1 per 573 persons); hospital beds 1,291 (1 per 186 persons); infant mortality rate per 1,000 live births 10.0.

Internet resource for further information:
- **Turkish Republic of Northern Cyprus State Planning Organization http://www.devplan.org**

[1]Includes 140,000–150,000 immigrants (mostly from Turkey); excludes 3,300 British military in the Sovereign Base Areas (SBA) in the ROC and 850 UN peacekeeping troops. [2]Twenty-four seats reserved for Turkish Cypriots are not occupied. [3]The Cyprus pound (£C) was the former monetary unit; on Jan. 1, 2008, 1 £C = €1.71. [4]Area includes 99 sq mi (256 sq km) of British military SBA and *c.* 107 sq mi (*c.* 278 sq km) of the UN Buffer Zone. [5]Excludes British and UN military forces. [6]January 1. [7]ROC only. [8]Import duties and VAT less imputed bank service charges. [9]Island of Cyprus. [10]Imports c.i.f.; exports f.o.b. [11]May represent bunker and ships' stores. [12]Cyprus Airways. [13]Circulation of daily newspapers. [14]Subscribers. [15]2006 census. [16]Import duties. [17]Unemployed.

Czech Republic

Official name: Česká Republika (Czech Republic).
Form of government: unitary multiparty republic with two legislative houses (Senate [81]; Chamber of Deputies [200]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Prague.
Official language: Czech.
Official religion: none.
Monetary unit: koruna (Kč); valuation (Sept. 8, 2008) 1 U.S.$ = Kč 17.48; 1 £ = Kč 30.88.

Area and population

Regions	area sq km	population 2007[1] estimate	Regions	area sq km	population 2007[1] estimate
Central Bohemia	11,014	1,132,563	South Bohemia	10,056	630,006
Hradec Králové	4,757	549,643	South Moravia	7,067	1,175,254
Karlovy Vary	3,315	304,602	Ústí	5,335	823,265
Liberec	3,163	430,774	Vysočina	6,925	511,645
Moravia-Silesia	5,555	1,249,290	Zlín	3,965	589,839
Olomouc	5,139	639,894			
Pardubice	4,519	507,751	**Capital city**		
Plzeň	7,560	554,537	Prague (Praha)	496	1,188,126
			TOTAL	78,866	10,287,189

Demography

Population (2008): 10,408,000.
Density (2008): persons per sq mi 341.8, persons per sq km 132.0.
Urban-rural (2003): urban 74.3%; rural 25.7%.
Sex distribution (2006): male 48.83%; female 51.17%.
Age breakdown (2005[1]): under 15, 14.9%; 15–29, 22.1%; 30–44, 21.3%; 45–59, 22.0%; 60–74, 13.6%; 75–84, 5.2%; 85 and over, 0.9%.
Population projection: (2010) 10,517,000; (2020) 10,730,000.
Ethnic composition (2001): Czech 90.4%; Moravian 3.7%; Slovak 1.9%; Polish 0.5%; German 0.4%; Silesian 0.1%; Rom (Gypsy) 0.1%; other 2.9%.
Religious affiliation (2000): Christian 63.0%, of which Roman Catholic 40.4%, unaffiliated Christian 16.0%, Protestant (mostly Lutheran) 3.1%, independent Christian (mostly independent Catholic [Hussite Church of the Czech Republic]) 2.6%; atheist 5.0%; Jewish 0.1%; nonreligious 31.9%.
Major cities (2007[1]): Prague 1,188,126; Brno 366,680; Ostrava 309,098; Plzeň 163,392; Olomouc 100,168; Liberec 98,781.

Vital statistics

Birth rate per 1,000 population (2007): 11.1 (world avg. 20.3); (2007) within marriage 65.5%; outside of marriage 34.5%.
Death rate per 1,000 population (2007): 10.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 0.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.44.
Marriage/divorce rates per 1,000 population (2007): 5.5/3.0.
Life expectancy at birth (2007): male 73.7 years; female 79.9 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 538.9; malignant neoplasms (cancers) 276.1; accidents, poisoning, and violence 62.3; diseases of the respiratory system 59.0; diseases of the digestive system 47.1.

National economy

Budget (2005). Revenue: Kč 1,279,628,000,000 (tax revenue 82.8%, of which social security contributions 32.5%, taxes on goods and services 26.8%, taxes on income and profits 22.4%; nontax revenue 4.5%; grants 2.5%; other 10.2%). Expenditures: Kč 1,279,054,000,000 (social security and welfare 29.1%; health 14.5%; transportation and communications 9.8%; education 9.6%; defense 4.4%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cereals 7,065,752 (of which wheat 3,955,437, barley 1,919,712, corn [maize] 608,179), sugar beets 2,598,676, rapeseed 1,038,400, potatoes 784,661; livestock (number of live animals) 2,741,300 pigs, 1,389,600 cattle; roundwood (2006) 17,678,000,000 cu m, of which fuelwood 8%; fisheries production (2006) 25,077 (from aquaculture 81%). Mining and quarrying (2005): kaolin 3,882,000; feldspar 472,000. Manufacturing (value added in Kč '000,000; 2003): base and fabricated metals 93,380; food, beverages, and tobacco products 81,440; electrical and optical equipment 70,800; transport equipment 64,144; nonelectrical machinery and apparatus 57,837; glass, cement, and ceramics 46,589; rubber and plastic products 37,035. Energy production (consumption): electricity (kW-hr; 2007) 88,187,000,000 ([2005] 69,944,000,000); hard coal (metric tons; 2007) 12,900,000 ([2005] 9,220,000); lignite (metric tons; 2007) 49,300,000 ([2005] 47,600,000); crude petroleum (barrels; 2005) 3,860,000 (58,300,000); petroleum products (metric tons; 2005) 5,567,000 (6,811,000); natural gas (cu m; 2007) 223,000,000 ([2005] 9,217,000,000).
Household income and expenditure (2004). Average household size 2.5; average annual money income per household Kč 295,011 (U.S.$11,479); sources of income: wages and salaries 66.7%, transfer payments 20.6%, self-employment 8.8%, other 3.9%; expenditure: food and nonalcoholic beverages 21.3%, housing and energy 19.3%, transportation 11.0%, recreation and culture 10.9%, household furnishings 6.5%.
Population economically active (2005): total 5,174,000; activity rate of total population 50.6% (participation rates: ages 15–64, 70.4%; female 44.1%; unemployed [2006] 7.1%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.7	106.6	106.7	109.7	111.7	114.6	117.9
Annual earnings index	108.7	116.5	124.3	132.5	139.5	148.5	159.3

Public debt (external, outstanding; 2004): U.S.$12,020,000,000.
Gross national income (GNI; 2007): U.S.$149,378,000,000 (U.S.$14,450 per capita); purchasing power parity GNI (U.S.$22,020 per capita).

Structure of gross domestic product and labour force

	2005			
	in value Kč '000,000	% of total value	labour force	% of labour force
Agriculture, forestry	77,137	2.9	189,000	3.7
Mining	39,711	1.5	49,000	0.9
Manufacturing	689,880	25.9	1,296,000	25.0
Construction	176,982	6.6	459,000	8.9
Public utilities	112,798	4.2	77,000	1.5
Transportation and communications	275,063	10.3	360,000	7.0
Trade, hotels	327,256	12.3	797,000	15.4
Finance, real estate	454,994	17.1	385,000	7.4
Pub. admin., defense	150,666	5.7	333,000	6.4
Services	357,717	13.4	819,000	15.8
Other			410,000[2]	7.9[2]
TOTAL	2,662,204	100.0[3]	5,174,000	100.0[3]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 5,026; remittances (2007) 1,300; foreign direct investment (FDI; 2004–06 avg.) 7,530. Disbursements for (U.S.$'000,000): tourism (2006) 2,670; remittances (2007) 2,831; FDI (2004–06 avg.) 850.
Land use as % of total land area (2003): in temporary crops 39.6%, in permanent crops 3.1%, in pasture 12.6%; overall forest area (2005) 34.3%.

Foreign trade[4]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
Kč '000,000,000	−71.3	−69.8	−26.4	+64.0	+68.7	+122.1
% of total	2.7%	2.5%	0.8%	1.7%	1.6%	2.5%

Imports (2006): Kč 2,111,100,000,000 (machinery and apparatus 31.9%; chemicals and chemical products 10.2%; mineral fuels 9.0%; road vehicles/parts 8.5%). *Major import sources:* Germany 28.5%; China 6.1%; Russia 6.0%; Poland 5.6%; Slovakia 5.4%.
Exports (2006): Kč 2,149,800,000,000 (machinery and apparatus 34.7%, of which computers/office machines/parts 7.8%, general industrial machinery 6.8%; motor vehicles/parts 15.7%; chemicals and chemical products 5.8%; fabricated metals 5.5%). *Major export destinations:* Germany 31.9%; Slovakia 8.4%; Poland 5.7%; France 5.5%; Austria 5.1%.

Transport and communications

Transport. Railroads (2004): route length 9,441 km; passenger-km (2005) 6,667,000; metric ton-km cargo (2005) 14,866,000,000. Roads (2004): total length 127,781 km (paved 100%). Vehicles (2005): passenger cars 3,958,708; trucks and buses 435,235. Air transport (2007): passenger-km 6,288,000,000; metric ton-km cargo 32,508,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	5,488	538	PCs	2004	5,100	500
Telephones				Dailies	2004	1,861[5]	182[5]
Cellular	2007	13,075[6]	1,284[6]	Internet users	2007	4,400	432
Landline	2006	3,541	345	Broadband	2007	1,625[6]	158[6]

Education and health

Educational attainment (2001). Percentage of population age 15 and over having: no formal schooling 0.2%; primary education 21.6%; secondary 68.7%; higher 9.5%. *Literacy* (2001): 99.8%.

Education (2004–05)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–14)	3,785	63,267	917,738	14.5
Secondary (age 15–18)	345	12,118	143,238	11.8
Voc., teacher tr.	1,305	32,620	418,639	12.8
Higher	200	17,954	304,721	17.0

Health (2005): physicians 36,381 (1 per 282 persons); hospital beds 65,022[7] (1 per 158 persons); infant mortality rate per 1,000 live births (2007) 3.1; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 23,092 (army 73.5%, air force 26.5%). *Military expenditure as percentage of GDP* (2005): 1.8%; per capita expenditure U.S.$216.

[1]January 1. [2]Unemployed. [3]Detail does not add to total given because of rounding. [4]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [5]Circulation of daily newspapers. [6]Subscribers. [7]Excludes beds at resorts with mineral springs.

Internet resources for further information:
- **Czech Statistical Office http://www.czso.cz**
- **Czech National Bank http://www.cnb.cz/en/index.html**

Denmark[1]

Official name: Kongeriget Danmark (Kingdom of Denmark).
Form of government: constitutional monarchy with one legislative house (Folketing [179]).
Chief of state: Danish Monarch.
Head of government: Prime Minister.
Capital: Copenhagen.
Official language: Danish.
Official religion: Evangelical Lutheran.
Monetary unit: Danish krone (DKK; plural kroner); valuation (Sept. 8, 2008) 1 U.S.$ = DKK 5.23; 1 £ = DKK 9.23.

Area and population

Regions[2]	Capitals	area sq mi	area sq km	population 2008[3] estimate
Capital (Hovedstaden)	Hillerød	989	2,561	1,645,825
Central Jutland (Midtjylland)	Viborg	5,040	13,053	1,237,041
North Jutland (Nordjylland)	Aalborg	3,097	8,020	578,839
South Denmark (Syddanmark)	Vejle	4,707	12,191	1,194,659
Zealand (Sjælland)	Sorø	2,808	7,273	819,427
TOTAL		16,640[4]	43,098	5,475,791

Demography

Population (2008): 5,494,000.
Density (2008): persons per sq mi 330.2, persons per sq km 127.5.
Urban-rural (2004): urban 85.4%; rural 14.6%.
Sex distribution (2008[3]): male 49.54%; female 50.46%.
Age breakdown (2007[3]): under 15, 18.6%; 15–29, 17.3%; 30–44, 21.9%; 45–59, 20.2%; 60–74, 15.0%; 75–84, 5.1%; 85 and over, 1.9%.
Population projection: (2010) 5,542,000; (2020) 5,721,000.
Ethnic composition (2007[3])[5]: Danish 91.9%; Turkish 0.6%; German 0.5%; Iraqi 0.4%; Swedish 0.4%; Norwegian 0.3%; Bosnian 0.3%; other 5.6%.
Religious affiliation (2006): Evangelical Lutheran 83.0%; other Christian 1.3%; Muslim 3.7%; nonreligious 5.4%; atheist 1.5%; other 5.1%.
Major urban areas (2008[3]): Greater Copenhagen 1,153,615; Århus 237,551; Odense 158,163; Alborg 121,818; Esbjerb 70,880.

Vital statistics

Birth rate per 1,000 population (2007): 11.7 (world avg. 20.3); (2005) within marriage 54.3%; outside of marriage 45.7%.
Death rate per 1,000 population (2007): 10.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 1.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.85.
Marriage/divorce rates per 1,000 population (2005): 6.7/2.8.
Life expectancy at birth (2006–07): male 76.0 years; female 80.5 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 324.4; malignant neoplasms (cancers) 281.1; diseases of the respiratory system 96.6; mental disorders/diseases of the nervous system 71.1.

National economy

Budget (2005)[6]. Revenue: DKK 882,940,000,000 (income/wealth taxes 54.4%; import/production taxes 31.0%; other 14.6%). Expenditures: DKK 821,539,000,000 (social protection 41.9%, education 15.2%, health 13.4%, economic affairs 6.6%, defense 2.9%).
National debt (December 2006): U.S.$57,887,000,000.
Population economically active (2005): total 2,876,100[7]; activity rate of total population 53.1%[8] (participation rates: ages 15–64, 80.2%[7]; female 47.0%[7]; unemployed [July 2005–June 2006] 5.0%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.4	104.8	107.0	108.3	110.2	112.3	114.2
Hourly earnings index	104.2	108.3	112.3	115.7	119.1	122.8	127.4

Household income and expenditure. Average household size (2005) 2.2; average annual disposable income per household (2003) DKK 270,176 (U.S.$41,010); sources of gross income (2003): wages and salaries 63.8%, transfers 24.6%, property income 6.8%, self-employment 3.9%; expenditure (2003): housing 22.5%, transportation and communications 15.7%, food 11.1%, recreation and entertainment 11.1%, energy 7.5%.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 4,600,000, wheat 4,519,200, barley 3,104,200, sugar beets 2,255,300, potatoes 1,625,600, rapeseed 596,300, oats 311,600; livestock (number of live animals) 13,599,000 pigs, 1,579,000 cattle; roundwood (2006) 2,358,000 cu m, of which fuelwood 49%; fisheries production (2006) 904,894 metric tons (from aquaculture 4%). Mining and quarrying (2006): sand and gravel 28,600,000 cu m; chalk 1,900,000 metric tons. Manufacturing (value of sales in DKK '000,000; 2005): food products 121,040; nonelectrical machinery and apparatus 66,050; computer and telecommunications equipment 49,078; fabricated metals 35,716; pharmaceuticals 35,046; printing and publishing 27,387. Energy production (consumption): electricity (kW-hr; 2007) 37,394,000,000 ([2005] 37,644,000,000); coal (metric tons; 2006) none (9,436,000); crude petroleum (barrels; 2007) 111,300,000 ([2005] 57,100,000); petroleum products (metric tons; 2005) 7,495,000 (6,660,000); natural gas (cu m; 2006) 10,053,000,000 (4,918,000,000).

Gross national income (GNI; 2007): U.S.$299,804,000,000 (U.S.$54,910 per capita); purchasing power parity GNI (U.S.$36,300 per capita).

Structure of gross domestic product and labour force

	2005 in value DKK '000,000	% of total value	labour force[7]	% of labour force[7]
Agriculture, fishing	23,862	1.5	80,400	2.8
Mining	45,428	2.9	...	...
Manufacturing	176,801	11.4	442,300	15.4
Construction	73,881	4.8	192,500	6.7
Public utilities	28,537	1.8	15,200	0.5
Transp. and commun.	119,093	7.7	175,300	6.1
Trade, restaurants	173,433	11.2	470,500	16.4
Finance, real estate	315,502	20.3	342,300	11.9
Pub. admin., defense	82,205	5.3	166,700	5.8
Services	278,536	18.0	832,500	28.9
Other	234,231	15.1	158,400[9]	5.5[9]
TOTAL	1,551,509	100.0	2,876,100	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 5,587; remittances (2007) 987; foreign direct investment (FDI; 2004–06 avg.) 3,231. Disbursements for (U.S.$'000,000): tourism (2006) 7,428; remittances (2007) 2,933; FDI (2004–06 avg.) 4,282.
Land use as % of total land area (2003): in temporary crops 53.4%, in permanent crops 0.2%, in pasture 9.1%; overall forest area (2005) 11.8%.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
DKK '000,000	+58,044	+59,571	+52,275	+55,755	+33,346	+21,767
% of total	7.0%	7.5%	6.1%	5.9%	3.2%	2.0%

Imports (2006): DKK 502,587,000,000 (machinery and apparatus 25.9%, chemicals and chemical products 10.8%, food 9.2%, road vehicles 8.5%). *Major import sources:* Germany 21.5%; Sweden 14.3%; The Netherlands 6.2%; U.K. 5.8%; China 5.3%.
Exports (2006): DKK 535,933,000,000 (machinery and apparatus 23.3%, of which general industrial machinery 6.4%, power-generating machinery 4.5%; food 16.1%, of which meat 5.6% (including swine meat 3.8%); petroleum 9.3%; medicine and pharmaceuticals 7.3%). *Major export destinations:* Germany 15.5%; Sweden 13.8%; U.K. 8.4%; U.S. 6.0%; Norway 5.7%.

Transport and communications

Transport. Railroads (2005[3]): route length 2,644 km; passenger-km 6,132,000,000; metric ton-km cargo 1,976,000,000. Roads (2006): total length 72,362 km (paved 100%). Vehicles (2007[3]): passenger cars 2,020,013; trucks and buses 508,788. Air transport (2007)[11]: passenger-km 5,928,000,000; metric ton-km cargo 8,748,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	5,264	977	PCs	2004	3,543	659
Telephones				Dailies	2004	1,328[12]	246[12]
Cellular	2007	6,243[13]	1,147[13]	Internet users	2007	3,500	643
Landline	2007	6,243	1,147	Broadband	2007	1,977[13]	363[13]

Education and health

Educational attainment (2004). Percentage of population age 25–69 having: completed lower secondary or not stated 30.3%; completed upper secondary or vocational 43.9%; undergraduate 19.6%; graduate 6.2%. *Literacy:* 100%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary/lower secondary (age 7–15)	2,671	...	715,069	...
Upper secondary (age 16–18)	154	...	72,288	...
Vocational	186	...	180,514	...
Higher	169	...	184,495	...

Health: physicians (2004) 19,450 (1 per 278 persons); hospital beds (2005) 20,487 (1 per 265 persons); infant mortality rate per 1,000 live births (2007) 4.0; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 29,960 (army 47.5%, air force 12.2%, navy 12.8%, other 27.5%). *Military expenditure as percentage of GDP* (2005): 1.8%[14]; per capita expenditure U.S.$640[14].

[1]Data in this statistical presentation nearly always exclude the Faroe Islands and Greenland. [2]New administrative scheme as of Jan. 1, 2007. [3]January 1. [4]Detail does not add to total given because of rounding. [5]Based on native land. [6]General government. [7]De jure population only. [8]Percentage of de jure population economically active based on total population. [9]Includes 15,100 not adequately defined and 143,300 unemployed. [10]Imports c.i.f., exports f.o.b. [11]Danish share of Scandinavian Airlines System. [12]Circulation. [13]Subscribers. [14]Includes military pensions.

Internet resources for further information:
- **Statistics Denmark http://www.dst.dk/yearbook**
- **StatBank Denmark http://www.statbank.dk**

Djibouti

Official name: Jumhūriyah Jībūtī (Arabic); République de Djibouti (French) (Republic of Djibouti).
Form of government: multiparty republic with one legislative house (National Assembly [65]).
Head of state and government: President.
Capital: Djibouti.
Official languages: Arabic; French.
Official religion: none.
Monetary unit: Djibouti franc (FDJ); valuation (Sept. 8, 2008) 1 U.S.$ = FDJ 177.72; 1 £ = FDJ 313.98.

Area and population

Regions	Capitals	area sq mi	area sq km	population 2005 estimate
'Alī Sabīḥ (Ali-Sabieh)	'Alī Sabīḥ	850	2,200	.
Arta	Arta	700	1,800	.
Dikhil	Dikhil	2,775	7,200	...
Obock	Obock	1,800	4,700	. .
Tadjoura (Tadjourah)	Tadjoura	2,750	7,100	.
City				
Djibouti	—	75	200	...
TOTAL		8,950	23,200	476,703

Demography

Population (2008): 506,000[1].
Density (2008): persons per sq mi 56.5, persons per sq km 21.8.
Urban-rural (2007): urban 86.9%; rural 13.1%.
Sex distribution (2006): male 51.19%; female 48.81%.
Age breakdown (2006): under 15, 43.3%; 15–29, 28.0%; 30–44, 13.7%; 45–59, 9.2%; 60–74, 5.1%; 75 and over, 0.7%.
Population projection: (2010) 526,000; (2020) 627,000.
Doubling time: 35 years.
Ethnic composition (2000): Somali 46.0%; Afar 35.4%; Arab 11.0%; mixed African and European 3.0%; French 1.6%; other/unspecified 3.0%.
Religious affiliation (2000): Muslim (nearly all Sunnī) 94.1%; Christian 4.5%, of which Orthodox 3.0%, Roman Catholic 1.4%; nonreligious 1.3%; other 0.1%.
Major city and towns: Djibouti (2006) *c.* 325,000[2]; Dikhil (1991) 20,480; 'Alī Sabīḥ (1991) 16,423; Tadjoura (1991) 7,309.

Vital statistics

Birth rate per 1,000 population (2006): 39.5 (world avg. 20.3).
Death rate per 1,000 population (2006): 19.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 20.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 5.31.
Marriage/divorce rates per 1,000 population (1999): 8.9/2.8.
Life expectancy at birth (2006): male 41.9 years; female 44.5 years.
Major causes of death per 100,000 population (2002): communicable diseases 742; cardiovascular diseases 205; accidents, injuries, and violence 81; malignant neoplasms (cancers) 62; respiratory diseases 22.
Adult population (ages 15–49) *living with HIV* (2007): 3.1% (world avg. 0.8%).

National economy

Budget (2005). Revenue: FDJ 46,710,000,000 (tax revenue 65.8%, of which indirect taxes 26.3%, direct taxes 24.8%, transit taxes, harbour dues and other registration fees 14.7%; nontax revenue 17.5%; grants 16.7%). Expenditures: FDJ 46,378,000,000 (current expenditures 74.7%; capital expenditures 25.3%).
Public debt (external, outstanding; February 2006): U.S.$474,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): vegetables 25,597, lemons and limes 1,800, dry beans 1,500, tomatoes 1,200, dry chilies and peppers 300; livestock (number of live animals) 512,000 goats, 466,000 sheep, 297,000 cattle, 69,000 camels; roundwood, none; fisheries production (2006) 260 (from aquaculture, none). Mining and quarrying: mineral production limited to locally used construction materials such as basalt and evaporated salt (2006) 138,000. Manufacturing (2003): structural detail, n.a.; products of limited value include furniture, nonalcoholic beverages, meat and hides, light electromechanical goods, and mineral water. Energy production (consumption): electricity (kW-hr; 2005) 255,000,000 (255,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (135,000); natural gas (cu m; 2004) none (4,380,000); geothermal, wind, and solar resources are substantial but largely undeveloped.
Population economically active (2003): total 299,000[3]; activity rate of total population 39.1%[3] (participation rates: ages 15–64, 69.0%[3]; female 39.5%[3]; unemployed [2006] *c.* 60%).

Price index (2000 = 100)

	2000	2001	2002	2003
Consumer price index	100.0	101.8	102.4	104.5

Household income and expenditure. Average household size (2004) 6.4; income per household: n.a.; sources of income: n.a.; expenditure (1999)[4]: food 36.2%, housing and energy 18.1%, tobacco and related products 14.4%, transportation 8.8%, household furnishings 7.7%.
Gross national income (GNI; 2007): U.S.$908,000,000 (U.S.$1,090 per capita); purchasing power parity GNI (U.S.$2,260 per capita).

Structure of gross domestic product and labour force

	2005 in value FDJ '000,000	2005 % of total value	2003 labour force[5]	2003 % of labour force
Agriculture, Mining	4,051	3.2	270,000	77.4
Manufacturing	3,145	2.5		
Construction	9,314	7.4		
Public utilities	6,688	5.3		
Transp. and commun.	30,061	24.0	79,000	22.6
Trade	18,518	14.8		
Finance, insurance	14,961	11.9		
Pub. admin., defense, Services	22,252	17.7		
Other	16,384[6]	13.1[6]		
TOTAL	125,376[7]	100.0[7]	349,000	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 9.2; remittances (2007) 28; foreign direct investment (2004–06 avg.) 56; official development assistance (2006) 117. Disbursements for (U.S.$'000,000): tourism (2006) 3.5; remittances (2007) 5.
Land use as % of total land area (2003): in temporary crops 0.4%, in permanent crops, negligible, in pasture 73.3%; overall forest area (2005) 0.2%.

Foreign trade

Balance of trade (current prices)[8]

	2003	2004	2005	2006
U.S.$'000,000	−201.0	−223.4	−237.8	−280.5
% of total	73.0%	74.6%	75.1%	71.8%

Imports (1999): U.S.$152,700,000[9] ([9]food and beverages 25.0%; machinery and electric appliances 12.5%; khat 12.2%; petroleum products 10.9%; transport equipment 10.3%). *Major import sources* (2004)[8]: Saudi Arabia 21.9%; India 18.7%; China 10.2%; Ethiopia 4.8%; France 4.7%.
Exports (2001): U.S.$10,200,000[9] ([9]aircraft parts 24.5%; hides and skins of cattle, sheep, goats, and camels 20.6%; unspecified special transactions 8.8%; leather 7.8%; live animals 6.9%). *Major export destinations* (2005)[8]: Somalia 66.4%; Ethiopia 21.5%; Yemen 3.4%.

Transport and communications

Transport. Railroads (2006): length 62 mi, 100 km[10]; (1999) passenger-km 81,000,000; (2002) metric ton-km cargo 201,000,000. Roads (2002): total length 1,796 mi, 2,890 km (paved 13%). Vehicles (2002): passenger cars 15,700; trucks and buses 3,200. Air transport (2005): passenger arrivals and departures 219,119; metric tons of freight loaded and unloaded 10,973.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	53	114	PCs	2005	19	41
Telephones				Dailies	2005	0[11]	0[11]
Cellular	2007	45[12]	54[12]	Internet users	2006	11	23
Landline	2005	11	23	Broadband	2005	0.04[12]	0.09[12]

Education and health

Educational attainment: n.a. *Literacy* (2007): percentage of population age 15 and over literate 72.2%; males literate 81.2%; females literate 63.8%.

Education (2005–06)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–11)	82	1,288[13]	46,523	34.4[13]
Secondary (age 12–18)	.	623[13]	23,947	30.6[13]
Voc., teacher tr.	.	112[13]	2,336	12.9[13]
Higher[14]	1	96	1,746	18.2

Health: physicians (2004) 129 (1 per 3,619 persons); hospital beds (2000) 694 (1 per 621 persons); infant mortality rate per 1,000 live births (2006) 102.4; undernourished population (2002–04) 200,000[15] (24% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2007): 10,950[16] (army 73.1%, navy 1.8%, air force 2.3%, national security force 22.8%). Foreign troops: French (November 2007) 2,850; U.S. and German military personnel at Camp Lemonier (November 2007) 2,038 and 257, respectively. *Military expenditure as percentage of GDP* (2004): 4.0%; per capita expenditure U.S.$52.

[1]Estimate of the U.S. Bureau of the Census International Database. [2]About 2/3 of country's residents live in the capital city. [3]Estimate of the ILO Employment Trends Unit. [4]Weights of consumer price index components for Djibouti city only. [5]FAO estimate. [6]Indirect taxes. [7]Detail does not add to total given because of rounding. [8]Includes trade with Ethiopia (via rail). [9]Excludes Ethiopian trade via rail. [10]Djibouti portion of 492 mi (791 km) Chemins de Fer Djibouto-Ethiopien linking Djibouti city and Addis Ababa, Ethiopia. [11]Circulation of daily newspapers. [12]Subscribers. [13]2001–02. [14]2004–05. [15]Based on FAO population estimate. [16]Excluding foreign troops.

Internet resources for further information:
- **Banque Centrale de Djibouti**
  http://www.banque-centrale.dj
- **Ministère de l'Economie**
  http://www.ministere-finances.dj

Dominica

Official name: Commonwealth of Dominica.
Form of government: multiparty republic with one legislative house (House of Assembly [32[1]]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Roseau.
Official language: English.
Official religion: none.
Monetary unit: Eastern Caribbean dollar (EC$); valuation (Sept. 8, 2008) 1 U.S.$ = EC$2.70; 1 £ = EC$4.77.

Area and population

Parishes	area sq mi	area sq km	population 2001 census
St. Andrew	69.3	179.6	10,240
St. David	49.0	126.8	6,758
St. George	20.7	53.5	19,825
St. John	22.5	58.5	5,327
St. Joseph	46.4	120.1	5,765
St. Luke	4.3	11.1	1,571
St. Mark	3.8	9.9	1,907
St. Patrick	32.6	84.4	8,383
St. Paul	26.0	67.4	8,397
St. Peter	10.7	27.7	1,452
TOTAL	285.3[2]	739.0[2]	69,625[3]

Demography

Population (2008): 72,500.
Density (2008)[2]: persons per sq mi 250.0, persons per sq km 96.7.
Urban-rural (2003): urban 72.0%; rural 28.0%.
Sex distribution (2006): male 50.34%; female 49.66%.
Age breakdown (2006): under 15, 26.1%; 15–29, 23.8%; 30–44, 27.4%; 45–59, 12.4%; 60–74, 7.0%; 75 and over, 3.3%.
Population projection: (2010) 73,000; (2020) 74,000.
Doubling time: 82 years.
Ethnic composition (2000): black 88.3%; mulatto 7.3%; black-Amerindian 1.7%; British expatriates 1.0%; Indo-Pakistani 1.0%; other 0.7%.
Religious affiliation (2001): Roman Catholic *c.* 61%; four largest Protestant groups (including Seventh-day Adventist, Pentecostal groups, and Methodist) *c.* 28%; nonreligious *c.* 6%; other *c.* 5%.
Major towns (2006): Roseau 16,600; Portsmouth 3,600; Marigot 2,900; Berekua 2,600; Atkinson 2,500.

Vital statistics

Birth rate per 1,000 population (2006): 15.3 (world avg. 20.3); (1991) within marriage 24.1%; outside of marriage 75.9%.
Death rate per 1,000 population (2006): 6.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 8.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.94.
Marriage/divorce rates per 1,000 population: (1999) 4.7/(1998) 0.9.
Life expectancy at birth (2006): male 72.0 years; female 77.9 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 262.1; malignant neoplasms (cancers) 173.3; endocrine and metabolic diseases 61.6; diseases of the respiratory system 51.6; infectious and parasitic diseases 34.4.

National economy

Budget (2005–06). Revenue: EC$325,000,000 (tax revenue 73.7%, of which taxes on international trade and transactions 29.8%, taxes on goods and services 25.3%; grants 18.6%; nontax revenue 7.3%; development revenue 0.4%). Expenditures: EC$315,300,000 (current expenditures 76.2%, of which wages 33.4%, transfers 14.7%, debt payment 13.6%; development expenditures and net lending 23.8%).
Public debt (external, outstanding; 2005): U.S.$208,400,000.
Gross national income (GNI; 2007): U.S.$310,000,000 (U.S.$4,250 per capita).

Structure of gross domestic product and labour force

	2005 in value EC$'000,000	2005 % of total value	2001 labour force[4]	2001 % of labour force[4]
Agriculture, fishing	119.4	14.7	5,218	18.7
Mining	5.5	0.7	164	0.6
Manufacturing	52.4	6.5	1,933	6.9
Construction	54.1	6.7	2,420	8.7
Public utilities	41.2	5.1	410	1.5
Transportation and communications	82.8	10.2	1,558	5.6
Trade, hotels, restaurants	105.4	13.0	5,120	18.4
Finance, real estate	96.4	11.9	1,144	4.1
Services	11.3	1.4	6,801	24.4
Pub. admin., defense	129.5	16.0		
Other	112.7[5]	13.9[5]	3,097[6]	11.1[6]
TOTAL	810.7	100.0[7]	27,865	100.0

Land use as % of total land area (2003): in temporary crops *c.* 7%, in permanent crops *c.* 21%, in pasture *c.* 3%; overall forest area (2005) *c.* 61%.
Population economically active (2001)[4]: total 27,865; activity rate of total population 40.0% (participation rates: ages 15–64, 64.7%; female 38.9%; unemployed [2002] *c.* 25%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.5	101.8	103.3	105.4	107.7	110.3	113.7

Household income and expenditure. Average household size (2003) 3.0; income per household: n.a.; sources of income (2001)[8]: wages and salaries 68.2%, self-employment 24.4%, other 7.4%; expenditure (2001)[9]: food 32.9%, transportation and communications 19.4%, housing 11.2%, household furnishings 9.4%, clothing and footwear 8.2%, energy 5.9%.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 30,000, root crops 26,870 (of which taro 11,200, yams 8,000, yautia 4,550, sweet potatoes 1,850), grapefruit and pomelos 17,000, coconuts 12,000, oranges 7,200, plantains 5,775, sugarcane 4,800; livestock (number of live animals) 13,500 cattle, 9,700 goats, 7,600 sheep; roundwood, n.a.; fisheries production (2006) 694 (from aquaculture, negligible). Mining and quarrying: pumice, limestone, and sand and gravel are quarried primarily for local consumption. Manufacturing (value of production in EC$'000; 2004): toilet and laundry soap 24,588; toothpaste 8,774; crude coconut oil (2001) 1,758; other products include fruit juices, beer, garments, bottled spring water, and cardboard boxes. Energy production (consumption): electricity (kW-hr; 2005) 84,000,000 (84,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (37,000); natural gas, none (none).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 68; remittances (2007) 5; foreign direct investment (2004–06 avg.) 31; official development assistance (2006) 19. Disbursements for (U.S.$'000,000): tourism (2006) 10; remittances (2007) negligible.

Foreign trade[10]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−87.4	−73.8	−87.7	−103.8	−123.5	−125.4
% of total	50.1%	46.8%	52.7%	55.7%	59.6%	60.2%

Imports (2006): U.S.$166,900,000 (machinery and apparatus 17.1%; food 15.5%; refined petroleum 14.2%; chemicals and chemical products 12.2%; road vehicles 5.9%). *Major import sources:* U.S. 36.1%; Trinidad and Tobago 22.1%; U.K. 5.8%; Japan 4.0%; China 3.9%.
Exports (2006): U.S.$41,500,000 (food 32.8%, of which bananas 21.2%; soap 25.3%; dental/oral hygiene preparations 13.5%; stone, sand, and gravel 6.7%). *Major export destinations:* U.K. 18.6%; Jamaica 15.2%; Antigua and Barbuda 13.0%; France (including overseas departments) 8.2%; Trinidad and Tobago 7.5%.

Transport and communications

Transport. Railroads: none. Roads (1999): total length 485 mi, 780 km (paved 50%). Vehicles (1998): passenger cars 8,700; trucks and buses 3,400. Air transport (1997): passenger arrivals and departures 74,100; cargo unloaded 575 metric tons, cargo loaded 363 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	16	220	PCs	2004	13	182
Telephones				Dailies	2005	0[11]	0[11]
Cellular	2004	42[12]	589[12]	Internet users	2005	26	372
Landline	2004	21	295	Broadband	2004	3.3[12]	46[12]

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: primary education 62%; secondary 31%; vocational/university 7%. *Literacy* (1996): total population age 15 and over literate, 94.0%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 5–11)	63[13]	550	10,460	19.0
Secondary (age 12–16)	15[13]	460	7,455	17.1
Vocational			406	
Higher[14]	...	...	...	...

Health (2004): physicians 38 (1 per 1,824 persons); hospital beds (2002) 270 (1 per 257 persons); infant mortality rate per 1,000 live births (2006) 13.7; undernourished population (2002–04) 5,000 (8% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

Military

Total active duty personnel (2003): none[15].

[1]Includes 21 elective seats, 9 appointees of the president, the speaker (elected from outside of the House of Assembly membership as of the 2005 elections), and the attorney general serving ex officio. [2]Total area of Dominica per more recent survey is 290 sq mi (750 sq km). [3]The total population including institutionalized persons equals 71,474. [4]Excludes institutionalized population. [5]Taxes less imputed banking service charges and subsidies. [6]Includes 3,054 unemployed and 43 unclassified by economic activity. [7]Detail does not add to total given because of rounding. [8]For employed labour force only. [9]Weights of consumer price index components. [10]Imports c.i.f.; exports f.o.b. [11]Circulation of daily newspapers. [12]Subscribers. [13]1997–98. [14]Data not available for Dominican campus of Ross University School of Medicine. [15]300-member police force includes a coast guard unit.

Internet resource for further information:
- **Eastern Caribbean Central Bank**
  http://www.eccb-centralbank.org

Dominican Republic

Official name: República Dominicana (Dominican Republic).
Form of government: multiparty republic with two legislative houses (Senate [32]; Chamber of Deputies [178]).
Head of state and government: President.
Capital: Santo Domingo.
Official language: Spanish.
Official religion: none[1].
Monetary unit: Dominican peso (RD$); valuation (Sept. 8, 2008) 1 U.S.$ = RD$34.78; 1 £ = RD$61.44.

Area and population

Provinces	area sq km	population 2002 census
Azua	2,532	208,857
Baoruco	1,283	91,480
Barahona	1,739	179,239
Dajabón	1,021	62,046
Duarte	1,605	283,805
El Seibo (El Seybo)	1,786	89,261
Elías Piña	1,424	63,879
Espaillat	838	225,091
Hato Mayor	1,329	87,631
Hermanas Mirabal	440	96,356
Independencia	2,008	50,833
La Altagracia	3,010	182,020
La Romana	654	219,812
La Vega	2,286	385,101
María Trinidad Sánchez	1,271	135,727
Monseñor Nouel	992	167,618
Monte Cristi	1,925	111,014
Monte Plata	2,633	180,376
Pedernales	2,077	21,207
Peravia	998	169,865
Puerto Plata	1,857	312,706
Samaná	854	91,875
San Cristóbal	1,265	532,880
San José de Ocoa	650	62,368
San Juan	3,571	241,105
San Pedro de Macoris	1,255	301,744
Sánchez Ramírez	1,196	151,179
Santiago	2,836	908,250
Santiago Rodríguez	1,112	59,629
Santo Domingo	1,296	1,817,754
Valverde	823	158,293
National District		
Santo Domingo (city)	104	913,540
TOTAL	48,671[2,3]	8,562,541

Demography

Population (2008): 9,507,000.
Density (2008): persons per sq mi 505.9, persons per sq km 195.3.
Urban-rural (2005): urban 66.8%; rural 33.2%.
Sex distribution (2005): male 50.18%; female 49.82%.
Age breakdown (2002): under 15, 33.5%; 15–29, 26.6%; 30–44, 20.2%; 45–59, 11.7%; 60–74, 5.9%; 75–84, 1.6%; 85 and over, 0.5%.
Population projection: (2010) 9,794,000; (2020) 11,236,000.
Ethnic composition (2003)[4]: mulatto *c.* 73%; white *c.* 16%; black *c.* 11%.
Religious affiliation (2004): Roman Catholic 64.4%; other Christian 11.4%; nonreligious 22.5%; other 1.7%.
Major urban centres (2002): Santo Domingo 1,887,586[5]; Santiago 507,418; San Pedro de Macorís 193,713; La Romana 191,303; San Cristóbal 137,422.

Vital statistics

Birth rate per 1,000 population (2006): 23.2 (world avg. 20.3).
Death rate per 1,000 population (2006): 5.4 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 2.83.
Marriage/divorce rates per 1,000 population (2001): 2.8/1.0.
Life expectancy at birth (2006): male 71.0 years; female 74.5 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 202.1, of which ischemic heart disease 84.4; HIV/AIDS-related 98.9; malignant neoplasms (cancers) 76.6.

National economy

Budget (2005). Revenue: RD$157,585,000,000 (tax revenue 94.2%, of which taxes on goods and services 49.0%, import duties 24.0%, income taxes 18.8%; nontax revenue 5.8%). Expenditures: RD$161,612,000,000 (current expenditures 75.7%; development expenditures 24.3%).
Public debt (external, outstanding; 2006): U.S.$6,571,000,000.
Gross national income (GNI; 2007): U.S.$34,611,000,000 (U.S.$3,550 per capita); purchasing power parity GNI (U.S.$6,350 per capita).

Structure of gross domestic product and labour force

	2005			
	in value RD$'000[6]	% of total value	labour force	% of labour force
Agriculture	904,000	11.4	477,820	12.0
Mining	113,300	1.4	5,895	0.1
Manufacturing	1,059,200	13.4	486,728	12.2
Construction	823,400	10.4	213,378	5.3
Public utilities	137,100	1.7	26,194	0.7
Transp. and commun.	1,519,700	19.2	238,491	6.0
Trade, restaurants	1,529,400	19.3	899,065	22.5
Pub. admin., defense	581,100	7.4	147,545	3.7
Finance, real estate	568,700	7.2	781,259	19.6
Services	563,500	7.1		
Other	117,700[7]	1.5[7]	715,837[8]	17.9[8]
TOTAL	7,890,100[9]	100.0	3,992,210[10]	100.0

Household income and expenditure (1997–98). Average household size (2002) 3.9; average annual household income[11] RD$130,394 (U.S.$8,745); sources of income: wages and salaries 32.1%, self-employment 31.0%, nonmonetary income 22.8%, transfers 12.0%; expenditure: food, beverages, and tobacco 33.2%, transportation 16.0%, housing 9.3%, clothing/footwear 7.9%.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 5,700,000, rice 710,000, bananas 552,500, plantains 415,000, tomatoes 292,000, avocados 115,000, coffee 44,000; livestock (number of live animals) 2,210,000 cattle, 47,500,000 chickens; roundwood (2006) 892,000 cu m, of which fuelwood 98%; fisheries production (2006) 13,894 (from aquaculture 7%). Mining (2006): nickel (metal content) 46,526; marble 6,000 cu m; gold, none[12]. Manufacturing (2005): cement 2,779,000; refined sugar 139,203; beer 4,541,000 hectolitres; rum 499,000 hectolitres; cigarettes 165,015,000 packets of 20 units. Energy production (consumption): electricity (kW-hr; 2005) 12,961,000,000 (12,961,000,000); coal (metric tons; 2005) none (476,000); crude petroleum (barrels; 2005) none (15,800,000); petroleum products (metric tons; 2005) 1,970,000 (5,084,000); natural gas (cu m; 2005) none (9,300,000).
Population economically active (2004): total 3,701,804; activity rate of total population 43.1% (participation rates: ages 10 and over, 55.1%; female 38.7%; unemployed [2006] 16.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	108.9	114.6	146.0	221.2	230.4	247.9	263.1
Hourly earnings index	106.1	107.9	127.4	141.0	. .	.	.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 3,792; remittances (2007) 3,414; foreign direct investment (2004–06 avg.) 1,038; official development assistance (2006) 53. Disbursements for (U.S.$'000,000): tourism (2006) 333; remittances (2007) 28.
Land use as % of total land area (2003): in temporary crops 22.7%, in permanent crops 10.3%, in pasture 43.4%; overall forest area (2005) 28.4%.

Foreign trade[13]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−677	−1,072	+375	+568	−1,221	−2,305
% of total	6.0%	9.4%	3.5%	5.0%	9.0%	16.2%

Imports (2006): U.S.$8,745,000,000 (consumer goods 50.7%, of which refined petroleum 21.0%, food products 5.8%; capital goods 15.4%; crude petroleum 10.9%). *Major import sources* (2005): U.S. 50.0%; Colombia 6.2%; Mexico 5.8%.
Exports (2006): U.S.$6,440,000,000 (reexports of free zones 70.0%, of which assembled clothing 24.8%, electronics 10.3%, jewelry 9.8%; ferronickel 11.0%; fuels 5.6%; raw sugar 1.6%). *Major export destinations* (2005): U.S. 78.9%; The Netherlands 2.4%; Mexico 1.9%.

Transport and communications

Transport. Railroads (2004)[14]: route length 382 mi, 615 km. Roads (2002): total length 12,244 mi, 19,705 km (paved 51%). Vehicles (2005): passenger cars 690,027; trucks and buses 335,294. Air transport: (1999) passenger-km 4,900,000; (2003) metric ton-km cargo 200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,950	209	PCs	2005	206	22
Telephones				Dailies	2005	283[15]	30[15]
Cellular	2007	5,513[16]	565[16]	Internet users	2007	1,677	172
Landline	2007	907	93	Broadband	2007	154[16]	16[16]

Education and health

Educational attainment (2002). Percentage of population age 25 and older having: no formal education 1.7%; incomplete/complete primary education 53.1%; secondary 25.9%; undergraduate 15.9%; graduate 1.0%; unknown/other 2.4%. *Literacy* (2003): total population age 15 and over literate 84.7%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13)	...	35,867	1,374,624	38.3
Secondary (age 14–17)	...	24,723	658,164	26.6
Voc., teacher tr.				
Higher	...	11,111	286,957	25.8

Health: physicians (2005) 12,966[17] (1 per 730 persons); hospital beds (2005) 9,640 (1 per 982 persons); infant mortality rate (2006) 29.0; undernourished population (2002–04) 2,500,000 (29% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

Military

Total active duty personnel (November 2007): 49,910 (army 81.0%, navy 8.0%, air force 11.0%). *Military expenditure as percentage of GDP* (2005): 0.5%; per capita expenditure U.S.$20.

[1]Roman Catholicism is the state religion per concordat with Vatican City. [2]Detail does not add to total given because of rounding. [3]Mainland total is 48,512 sq km and offshore islands total is 159 sq km. [4]Significantly excludes data for Haitians. About 10% of the population of the Dominican Republic is a mix of legally and illegally resident Haitians. [5]2002 census population for national district region (combined population of Santo Domingo province and the national district) is 2,731,294. [6]At prices of 1970. [7]Data for free-zone sector for reexport (significantly ready-made garments but also electronics, tobacco products, and jewelry). [8]Unemployed. [9]Reported total; summed total equals RD$7,917,100,000. [10]Reported total; summed total equals 3,992,212. [11]Includes nonmonetary income. [12]The mining of gold was suspended in 1999 and had not resumed in 2006. [13]Includes free zones. [14]Includes 149 mi (240 km) of track that is privately owned and serves the sugar industry only. [15]Circulation of daily newspapers. [16]Subscribers. [17]Public sector only.

Internet resources for further information:
- **Banco Central de la República Dominicana http://www.bancentral.gov.do**
- **Oficina Nacional de Estadística http://www.one.gov.do**

East Timor[1]

Official name: República Demokrátika Timor Lorosa'e (Tetum); República Democrática de Timor-Leste (Portuguese) (Democratic Republic of Timor-Leste)[1].
Form of government: republic with one legislative body (National Parliament [65]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Dili.
Official languages: Tetum; Portuguese[2].
Official religion: none.
Monetary unit: dollar (U.S.$); valuation (Sept. 8, 2008) 1 U.S.$ = £0.57.

Area and population

Districts	Capitals	area sq mi	area sq km	population 2004 census[3]
Aileu	Aileu	285	737	37,967
Ainaro	Ainaro	310	804	52,480
Ambeno (Ocussi) exclave	Pante Macassar	314	814	57,616
Baucau (Baukau)	Baucau	581	1,506	100,748
Bobonaro	Maliana	531	1,376	83,579
Cova Lima	Suai	464	1,203	53,063
Dili	Dili	142	367	175,730
Ermera	Ermera	297	768	103,322
Lautem	Los Palos	701	1,813	56,293
Liquiça	Liquiça	212	549	54,973
Manatuto	Manatuto	688	1,782	36,897
Manufahi	Same	511	1,323	45,081
Viqueque	Viqueque	725	1,877	65,449
TOTAL		5,760[4]	14,919	923,198

Demography

Population (2008): 1,078,000.
Density (2008): persons per sq mi 187.2, persons per sq km 72.3.
Urban-rural (2005): urban 7.8%; rural 92.2%.
Sex distribution (2004): male 50.90%; female 49.10%.
Age breakdown (2004): under 15, 43.2%; 15–29, 24.7%; 30–44, 17.0%; 45–59, 9.4%; 60–74, 4.5%; 75 and over, 1.2%.
Population projection: (2010) 1,143,000; (2020) 1,467,000.
Doubling time: 33 years.
Ethnic composition (1999): East Timorese *c.* 80%; other (nearly all Indonesian, and particularly West Timorese) *c.* 20%.
Religious affiliation (2005): Roman Catholic *c.* 98%[5]; Protestant *c.* 1%[6]; Muslim *c.* 1%[6].
Major urban areas (2004): Dili 151,026; Los Palos (Lospalos) 12,612; Same 9,966; Pante Macassar 9,754; Maliana 9,721.

Vital statistics

Birth rate per 1,000 population (2006): 27.0 (world avg. 20.3).
Death rate per 1,000 population (2006): 6.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 20.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 3.53.
Marriage/divorce rates per 1,000 population (1997–98): 0.4/0.1.
Life expectancy at birth (2006): male 64.0 years; female 68.7 years.
Major causes of death per 100,000 population (2002): communicable diseases 308; cardiovascular diseases 181; accidents 87; malignant neoplasms (cancers) 59; respiratory diseases 41.

National economy

Budget (2005–06). Revenue: U.S.$485,000,000 (oil and gas revenue 93.1%, of which taxes 74.8%, royalties 15.5%; domestic revenue 6.9%). Expenditures: U.S.$93,000,000 (current expenditure 71.3%; capital expenditure 16.9%; previous year spending 11.8%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 63,430, cassava 49,720, rice 41,386, sweet potatoes 26,000, coffee 14,000, coconuts 14,000, peanuts (groundnuts) 4,000, candlenut (2001) 1,063, cinnamon 75; livestock (number of live animals) 346,000 pigs, 171,000 cattle, 110,000 buffalo, 20,000 beehives, 2,200,000 chickens; roundwood, n.a.; sandalwood exports were formerly more significant; fisheries production (2006) 350 (from aquaculture, none). Mining and quarrying (2006): commercial quantities of marble are exported. Manufacturing (2001): principally the production of textiles, garments, handicrafts, bottled water, and processed coffee. Energy production (consumption): electricity (kW-hr; 2005) 300,000,000 (300,000,000); coal, n.a. (n.a.); crude petroleum (barrels; 2005) 1,130,000 (negligible); petroleum products (metric tons; 2005) 6,725,000 (57,000); natural gas, n.a. (n.a.).
Household income and expenditure. Average household size (2004) 4.7; average annual income per household, n.a.[7]; sources of income, n.a.; expenditure (2001)[8]: food 56.7%, housing 10.2%, clothing and footwear 8.9%, household furnishings 7.9%, alcohol and tobacco products 4.8%.
Population economically active (2001): total 232,000[9]; activity rate of total population 28%[9] (participation rates: ages 15–64, 57%[9]; female, n.a.; unemployed *c.* 50%).

Price index (2002 = 100)

	2002	2003	2004	2005	2006	2007
Consumer price index	100.0	107.2	110.6	111.9	116.3	128.2

Gross national income (GNI; 2007): U.S.$1,604,000,000 (U.S.$1,510 per capita).

Structure of gross domestic product and labour force

	2004 in value U.S.$'000,000[10]	2004 % of total value[10]	2003 labour force	2003 % of labour force
Agriculture	107.1	31.6	340,000	81.3
Mining	2.8	0.8		
Manufacturing	12.5	3.7		
Public utilities	3.3	1.0		
Construction	31.9	9.4		
Transp. and commun.	31.8	9.4	78,000	18.7
Trade, hotels	25.4	7.5		
Finance, insurance	29.4	8.7		
Services	2.1	0.6		
Pub. admin., defense	92.7	27.3		
Other	—	—		
TOTAL	339.0	100.0	418,000	100.0

Public debt (external, outstanding): n.a.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism[11], n.a.; remittances, n.a.; foreign direct investment (2004–06 avg.) 2[9]; official development assistance (2006) 210. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.
Land use as % of total land area (2003): in temporary crops 8.2%, in permanent crops 4.6%, in pasture 10.1%; overall forest area (2005) 53.7%.

Foreign trade

Balance of trade (current prices)[12, 13]

	2004	2005	2006	2007
U.S.$'000,000	−106.5	−93.5	−79.2	−158.8
% of total	88.4%	85.2%	82.4%	90.5%

Imports (2005): U.S.$101,600,000 (mineral fuels 34.6%, machinery and apparatus 13.1%, food 11.0%, road vehicles 6.9%, iron and steel 4.7%). *Major import sources:* Indonesia 47.0%; Singapore 14.6%; Australia 13.9%; Japan 10.4%; Vietnam 4.5%.
Exports (2005)[13]: U.S.$8,100,000 (coffee 94.3%, remainder 5.7%). *Major export destinations:* U.S. 49.2%; Germany 20.7%; Portugal 12.0%; Australia 5.5%; Indonesia 5.0%.

Transport and communications

Transport. Railroads: none. Roads (2005): total length 3,107 mi, 5,000 km (paved 50%[14]). Vehicles (1998): passenger cars 3,156; trucks and buses 7,140.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002[15]	.	. .	PCs	2005	...	...
Telephones				Dailies	2004	0.6[16]	0.7[16]
Cellular	2007	69[17]	60[17]	Internet users	2004	1.0	1.1
Landline	1996	6.6	8.0	Broadband	2004	...	...

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: no formal education 54.3%, some primary education 14.4%, complete primary 6.2%, lower secondary 10.4%, upper secondary and higher 14.7%. *Literacy* (2005): percentage of population age 15 and over literate 49%; males literate 54%; females literate 45%.

Education (2003)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	. .	4,080	183,600[18]	45.0[18]
Lower secondary (age 13–15)		1,103	38,180	34.6
Upper secondary (age 16–18)	.	...	...	...
Higher[19]	1	123	6,349	51.6

Health: physicians (2002) 47 (1 per 17,355 persons); hospital beds (1999) 560 (1 per 1,277 persons); infant mortality rate per 1,000 live births (2006) 45.9; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 1,286 (army 97%, navy 3%); Australian peacekeeping troops (August 2008) 750. *Military expenditure as percentage of GDP* (2003): 1.3%; per capita expenditure U.S.$5.

[1]Per U.S. Board on Geographic Names; conventional short-form name is East Timor, conventional long-form name is Democratic Republic of Timor-Leste. [2]Indonesian and English are "working" languages. [3]Revised final. [4]Detail does not add to total given because of rounding. [5]Some vestiges of traditional beliefs are also practiced in conjunction with Roman Catholicism. [6]Most Protestants and Muslims left East Timor after 1999. [7]Minimum annual wage (1999) U.S.$276; average public administration wage (2003) U.S.$1,500. [8]Weights of consumer price index components for Dili only. [9]Estimated figure. [10]Figures do not include value added from petroleum (part of the GNI but not GDP), which in 2004 equaled U.S.$168,000,000. [11]In 1998 there were 580 beds available for tourists. [12]Excludes revenues associated with the development of petroleum/natural gas fields shared with Australia. [13]Excludes reexports. [14]57% of paved roads were in poor or damaged condition in late 1999; gravel roads were not usable for most vehicles. [15]Locally produced television service commenced in May 2002. [16]Circulation of *Timor Post.* [17]Subscribers. [18]Rounded figures. [19]2002.

Internet resources for further information:
- **Banking and Payments Authority of Timor-Leste**
  http://www.bancocentral.tl/en
- **Direcção Nacional de Estatística**
  http://dne.mopf.gov.tl

Ecuador

Official name: República del Ecuador (Republic of Ecuador).
Form of government: unitary multiparty republic with one acting legislative body (Constituent Assembly [130][1]).
Head of state and government: President.
Capital: Quito.
Official language: Spanish[2].
Official religion: none.
Monetary unit: dollar (U.S.$); valuation (Sept. 8, 2008) 1 U.S.$ = £0.57.

Area and population

Regions / Provinces	area sq km	population 2006 projection	Regions / Provinces	area sq km	population 2006 projection
Amazonica	130,832	644,856	Insular	8,010	22,009
Morona-Santiago	33,930	129,374	Galápagos	8,010	22,009
Napo / Orellana	25,690	93,336 / 106,525	Sierra	63,268	6,021,236
Pastaza	29,774	73,495	Azuay	8,125	666,085
Sucumbios	18,327	157,497	Bolivar	3,940	179,358
Zamora-Chinchipe	23,111	84,629	Cañar	3,122	223,566
Costa	67,646	6,634,904	Carchi	3,605	164,507
El Oro	5,850	595,262	Chimborazo	6,569	438,097
Esmeraldas	15,239	430,792	Cotopaxi	6,072	391,947
Guayas[3]	20,503	3,581,579	Imbabura	4,559	388,544
Los Rios	7,175	728,647	Loja	11,026	431,077
Manabí	18,879	1,298,624	Pichincha[4]	12,915	2,646,426
			Tungurahua	3,335	491,629
			NON-DELIMITED AREAS	2,289	85,265
			TOTAL	272,045	13,408,270

Demography

Population (2008): 13,481,000.
Density (2008): persons per sq mi 128.3, persons per sq km 49.6.
Urban-rural (2005): urban 62.8%; rural 37.2%.
Sex distribution (2005): male 50.15%; female 49.85%.
Age breakdown (2005): under 15, 32.6%; 15–29, 27.4%; 30–44, 19.5%; 45–59, 12.1%; 60–74, 6.1%; 75–84, 1.8%; 85 and over, 0.5%.
Doubling time: 41 years.
Population projection: (2010) 13,775,000; (2020) 15,376,000.
Ethnic composition (2000): mestizo 42.0%; Amerindian 40.8%; white 10.6%; black 5.0%; other 1.6%.
Religious affiliation (2005): Roman Catholic (practicing) *c.* 35%; Roman Catholic (non-practicing) *c.* 50%; other (significantly Evangelical Protestant) *c.* 15%.
Major cities (2003): Guayaquil 2,387,000[5]; Quito 1,514,000[5]; Cuenca 303,994; Machala 217,266; Santo Domingo de los Colorados 211,689; Portoviejo 194,916.

Vital statistics

Birth rate per 1,000 population (2005): 22.1 (world avg. 20.3).
Death rate per 1,000 population (2005): 5.0 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2005): 2.70.
Marriage/divorce rates per 1,000 population (2005): 5.0/0.9.
Life expectancy at birth (2005): male 71.7 years; female 77.6 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 94.0; malignant neoplasms (cancers) 51.9; accidents and violence 44.6; diabetes mellitus 21.1; pneumonia and influenza 20.8.

National economy

Budget (2006). Revenue: U.S.$6,895,000,000 (nonpetroleum revenue 75.1%, of which value-added tax 32.3%, income tax 15.5%, customs duties 9.0%; petroleum export revenue 24.9%). Expenditures: U.S.$7,011,000,000 (current expenditure 76.2%; capital expenditure 23.8%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 7,300,000, bananas 6,130,000, oil palm fruit 2,100,000, rice 1,300,000, corn (maize) 880,000, plantains 590,000, cocoa beans 87,600, coffee 32,500, pyrethrum and dried flowers (2004) 105; livestock (live animals) 5,050,000 cattle, 1,300,000 pigs, 1,050,000 sheep, 110,000,000 chickens; roundwood (2006) 6,785,000 cu m, of which fuelwood 82%; fisheries production (2006) 527,128 (from aquaculture 15%). Mining and quarrying (2004): limestone 5,160,000; gold 5,300 kg. Manufacturing (value added in U.S.$'000,000; 2004): refined petroleum 1,794; food products 870; beverages 845; plastics 341; printing and publishing 233; bricks, cement, and ceramics 213. Energy production (consumption): electricity (kW-hr; 2005) 13,404,000,000 (15,127,000,000); coal, none (none); crude petroleum (barrels; 2007) 187,000,000 ([2006] 55,500,000); petroleum products (metric tons: 2005) 7,419,000 (7,221,000); natural gas (cu m; 2005) 756,000,000 (756,000,000).
Population economically active (2005): total 4,225,400; activity rate of total population 47.9% (participation rates: ages 15–64, 70.6%; female 41.5%; unemployed [March 2006–February 2007] 10.1%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	137.7	154.9	167.1	171.7	175.9	181.2	185.3

Household income and expenditure (2003)[6]. Average household size 4.2; average annual income per household U.S.$8,161; sources of income: wages 47.0%, self-employment 25.6%, transfer payments 15.7%, rent 11.7%; expenditure: food, beverages, and tobacco 23.8%, housing and energy 19.1%, transportation and communications 12.9%, restaurants and hotels 10.4%.
Public debt (external, outstanding; December 2006): U.S.$10,108,000,000.
Gross national income (GNI; 2007): U.S.$41,148,000,000 (U.S.$3,080 per capita); purchasing power parity GNI (U.S.$7,040 per capita).

Structure of gross domestic product and labour force

	2005 in value U.S.$'000,000	% of total value	labour force	% of labour force
Agriculture	2,281	6.8	324,600	7.7
Crude petroleum, nat. gas	5,342	15.9	10,700	0.3
Other mining	127	0.4		
Manufacturing	3,246[7]	9.6[7]	537,200	12.7
Construction	2,319	6.9	258,700	6.1
Public utilities	520	1.5	18,800	0.4
Transp. and commun.	5,132	15.3	280,100	6.6
Trade, restaurants, hotels	4,792	14.2	1,289,800	30.5
Finance, real estate	3,366	10.0	251,600	6.0
Pub. admin., defense	1,576	4.7	168,200	4.0
Services	2,373	7.1	752,100	17.8
Other	2,551	7.6	333,600[8]	7.9[8]
TOTAL	33,625	100.0	4,225,400	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 490; remittances (2007) 3,080; foreign direct investment (2004–06 avg.) 1,631; official development assistance (2006) 189. Disbursements for (U.S.$'000,000): tourism (2006) 466; remittances (2006) 62.
Land use as % of total land area (2003): in temporary crops 4.7%, in permanent crops 4.3%, in pasture 17.2%; overall forest area (2005) 39.2%.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–911	–6	+198	+551	+1,462	+1,177
% of total	8.3%	0.05%	1.3%	2.8%	6.1%	4.5%

Imports (2006): U.S.$12,114,000,000 (mineral fuels 21.1%; machinery and apparatus 20.0%; chemicals and chemical products 15.3%; road vehicles/parts 11.5%; iron and steel 6.0%). *Major import sources:* U.S. 22.6%; Colombia 12.8%; Brazil 7.3%; China 6.8%; Chile 4.0%.
Exports (2006): U.S.$12,728,000,000 (crude petroleum 54.5%; bananas and plantains 9.5%; fish 5.4%; shrimp 4.6%; refined petroleum 3.9%; cut flowers 3.4%). *Major export destinations:* U.S. 53.6%; Peru 8.2%; Colombia 5.6%; Chile 4.4%; Italy 3.4%.

Transport and communications

Transport. Railroads (2005): route length 965 km; passenger-km (2004) 3,000,000; metric ton-km cargo (2004) 2,000. Roads (2004): total length 43,197 km (paved 15%). Vehicles (2004): passenger cars 413,432; trucks and buses 310,009. Air transport (2005): passenger-km 867,100,000; metric ton-km cargo 5,400,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	3,298	253	PCs	2005	866	65
Telephones				Dailies	2005	901[10]	68[10]
Cellular	2007	10,086[11]	756[11]	Internet users	2006	1,549	115
Landline	2007	1,805	135	Broadband	2007	319[11]	24[11]

Education and health

Educational attainment (1995). Percentage of population age 25 and over having: no formal schooling/incomplete primary education 18.8%; complete primary/incomplete secondary 47.2%; complete secondary 16.1%; higher 17.9%.
Literacy (2003): total population age 15 and over literate 92.5%; males 94.0%; females 91.0%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	.	86,012	1,989,665	23.1
Secondary (age 12–17) / Vocational		74,685	996,535	13.3
Higher		..	115,554[12]	.

Health: physicians (2004) 21,625 (1 per 603 persons); hospital beds (2004) 21,200 (1 per 615 persons); infant mortality rate (2005) 23.0; undernourished population (2002–04) 700,000 (6% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

Military

Total active duty personnel (November 2007): 57,100 (army 82.3%, navy 10.7%, air force 7.0%). *Military expenditure as percentage of GDP* (2005): 2.6%; per capita expenditure U.S.$66.

[1]Permanent legislature to be reinstated with April 2009 elections based on new constitution effective from October 20, 2008. [2]Quechua and Shuar are also official languages for the indigenous peoples. [3]Includes Santa Elena province created in October 2007. [4]Includes Santo Domingo de los Tsáchilas province created in October 2007. [5]2005 population of urban agglomeration. [6]Based on a survey of urban households only. [7]Excludes refined petroleum equaling U.S.$1,592,000,000. [8]Unemployed. [9]Import figures are f.o.b. in balance of trade and c.i.f. for commodities and trading partners. [10]Circulation. [11]Subscribers. [12]2000.

Internet resources for further information:
- **Instituto Nacional de Estadística y Censos http://www.inec.gov.ec/default.asp**
- **Banco Central del Ecuador http://www.bce.fin.ec**

Egypt

Official name. Jumhūrīah Misr al-'Arabīyah (Arab Republic of Egypt).
Form of government: republic with two legislative houses (Shoura Assembly [264[1]]; People's Assembly [454]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Cairo.
Official language: Arabic.
Official religion: Islam.
Monetary unit: Egyptian pound (LE); valuation (Sept. 8, 2008) 1 U.S.$ = LE 5.40; 1 £ = LE 9.54.

Area and population

Regions Governorates	area sq km	population 2006 census[2]
Frontier		
Al-Bahr al-Ahmar	203,685	288,661
Janūb Sīnā'	33,140	150,088
Matrūh	212,112	323,381
Shamāl Sīnā'	27,574	343,681
Al-Wādī al-Jadīd	376,505	187,263
Lower Egypt		
Al-Buhayrah	10,130	4,747,283
Ad-Daqahlīyah	3,471	4,989,997
Dumyāt	589	1,097,339
Al-Gharbīyah	1,942	4,011,320
Al-Ismā'īlīyah (Ismailia)	1,442	953,006
Kafr ash-Shaykh	3,437	2,620,208
Al-Minūfīyah	1,532	3,270,431
Al-Qalyubīyah	1,001	4,251,672
Ash-Sharqīyah	4,180	5,354,041
Upper Egypt		
Aswān	679	1,186,482
Asyūt	1,553	3,444,967
Banī Suwayf	1,322	2,291,618
Al-Fayyūm	1,827	2,511,027
Al-Jīzah[3]	85,153	5,724,545
Al-Minyā	2,262	4,166,299
Qinā	1,851	3,001,681
Sawhāj	1,547	3,747,289
Urban		
Būr Sa'īd (Port Said)	72	570,603
Al-Iskandarīyah (Alexandria)	2,679	4,123,869
Al-Qāhirah (Cairo)[4]	214	8,471,859
As-Suways (Suez)	17,840	512,135
Al-Uqsur (Luxor)	55	457,286
TOTAL	997,793[5]	72,798,031[6]

Demography

Population (2008): 74,805,000[7].
Density (2008): persons per sq mi 194.2, persons per sq km 75.0.
Urban-rural (2006): urban 42.6%; rural 57.4%.
Sex distribution (2006): male 51.11%; female 48.89%.
Age breakdown (2005): under 15, 33.0%; 15–29, 28.0%; 30–44, 19.8%; 45–59, 12.3%; 60–74, 5.7%; 75 and over, 1.2%.
Population projection: (2010) 77,450,000; (2020) 90,149,000.
Doubling time: 37 years.
Ethnic composition (2000): Egyptian Arab 84.1%; Sudanese Arab 5.5%; Arabized Berber 2.0%; Bedouin 2.0%; Rom (Gypsy) 1.6%; other 4.8%.
Religious affiliation (2000): Muslim 84.4%[8]; Christian 15.1%, of which Orthodox 13.6%, Protestant 0.8%, Roman Catholic 0.3%; nonreligious 0.5%.
Major cities ('000; 2006): Cairo 6,759 (11,128[9]); Alexandria 4,085; Al-Jīzah 2,891; Shubrā al-Khaymah 1,026; Port Said 571; Suez 418[10].

Vital statistics

Birth rate per 1,000 population (2005): 25.5 (world avg. 20.3).
Death rate per 1,000 population (2005): 6.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 19.1 (world avg. 11.7).
Marriage/divorce rates per 1,000 population (2005): 8.0/0.9.
Total fertility rate (avg. births per childbearing woman; 2006): 2.83.
Life expectancy at birth (2006): male 69.2 years; female 73.6 years.

National economy

Budget (2003–04). Revenue: LE 116,490,000,000 (income and profits taxes 28.3%, sales taxes 19.4%, customs duties 13.0%, Suez Canal fees 4.4%, petroleum revenue 3.5%). Expenditures: LE 159,600,000,000 (current expenditure 76.6%; capital expenditure 23.4%).
Population economically active (2005): total 22,310,000; activity rate 31.3% (participation rates: ages 15–64 [2001] 46.9%; female 23.3%; unemployed [2006] 9.3%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.3	105.1	109.8	122.2	128.1	137.9	150.8

Production ('000; metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 16,200, tomatoes 7,550, wheat 7,379, corn (maize) 7,045, rice 6,665, potatoes 2,600, oranges 1,800, grapes 1,250, dates 1,130, eggplants 1,000, seed cotton 560, figs 170; livestock ('000; number of live animals) 5,180 sheep, 4,550 cattle, 3,950 buffalo, 120 camels; roundwood 17,327,000 cu m, of which fuelwood 98%; fisheries production (2006) 970,924 (from aquaculture 61%). Mining and quarrying (2006): gypsum 3,300; iron ore 2,600; phosphate rock 2,200; salt 1,200; kaolin 416. Manufacturing (value added in U.S.$'000,000; 2002): chemicals (all forms) 2,823; food products 1,016; textiles and wearing apparel 618; bricks, cement, ceramics 466; paper products 160. Energy production (consumption): electricity ('000,000 kW-hr; 2005) 108,690 (107,912); coal ('000 metric tons; 2005) 33 (1,850); crude petroleum ('000 barrels; 2007) 221,000 ([2005] 237,000); petroleum products ('000 metric tons; 2005) 31,202 (30,025); natural gas ('000,000 cu m; 2006) 54,000 (37,000).
Household income and expenditure. Average household size (2006) 4.2; average annual income per household: n.a.; sources of income: n.a.; expenditure: n.a.
Gross national income (GNI; 2007): U.S.$119,405,000,000 (U.S.$1,580 per capita); purchasing power parity GNI (U.S.$5,400 per capita).

Structure of gross domestic product and labour force

	2005–06[11]		2003	
	in value LE '000,000	% of total value	labour force	% of labour force
Agriculture	81,766.2	14.1	5,401,300	26.5
Mining (petroleum)	188,527.3	32.4	32,000	0.2
Manufacturing			1,976,900	9.7
Construction	23,763.0	4.1	1,341,000	6.6
Public utilities	11,037.8	1.9	228,700	1.1
Transp. and commun.	59,891.8[12]	10.3[12]	1,145,300	5.6
Trade, hotels	82,380.6	14.2	2,452,600	12.0
Finance	60,350.6	10.4	547,100	2.7
Pub. admin., defense	56,930.1	9.8	2,025,100	9.9
Services	16,497.5	2.8	2,957,300	14.5
Other	—	—	2,252,000[13]	11.1[13]
TOTAL	581,144.9	100.0	20,359,300	100.0[5]

Public debt (external, outstanding; 2006): U.S.$28,000,000,000.
Land use as % of total land area (2003): in temporary crops 2.9%, in permanent crops 0.5%, in pasture, n.a.; overall forest area (2005) 0.1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 7,591; remittances (2007) 5,865; foreign direct investment (FDI; 2004–06 avg.) 5,859; official development assistance (2006) 873. Disbursements for (U.S.$'000,000): tourism (2006) 1,784; remittances (2007) 135; FDI (2004–06 avg.) 133.

Foreign trade[14]

Balance of trade (current prices)

	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06
U.S.$'000,000	–9,363	–7,516	–6,615	–7,834	–10,359	–11,986
% of total	39.8%	34.5%	28.7%	27.3%	27.2%	24.5%

Imports (2005–06): U.S.$30,441,000,000 (petroleum 17.6%; machinery and apparatus 10.9%; food products 9.7%; metal products 7.3%; chemicals and chemical products 6.0%). *Major import sources* (2006): free zones *c.* 14%; U.S. *c.* 8%; Saudi Arabia *c.* 7%; China *c.* 6%; Kuwait *c.* 5%; Germany *c.* 5%.
Exports (2005–06): U.S.$18,455,100,000 (petroleum 55.4%, of which crude petroleum 17.4%; finished goods 28.0%; semi-manufactured goods 6.4%; raw cotton 0.8%). *Major export destinations* (2006): free zones *c.* 12%; India *c.* 10%; Italy *c.* 9%; U.S. *c.* 9%; Spain *c.* 8%; bunkers and ships' stores *c.* 6%.

Transport and communications

Transport. Railroads (2005): length 9,525 km; passenger-km 54,853,000,000; metric ton-km cargo 4,234,000,000. Roads (2004): length 92,370 km (paved 81%). Vehicles: passenger cars (2004) 1,960,000; trucks and buses (2002) 650,000. Inland water (2006): Suez Canal, number of transits 18,664; metric ton cargo 742,708,000. Air transport (2006): passenger-km 10,332,000,000; metric ton-km cargo 323,160,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	17,500	253	PCs	2005	2,800	40
Telephones				Dailies	2005	3,577[15]	51[15]
Cellular	2007	30,065[16]	398[16]	Internet users	2007	8,620	114
Landline	2007	11,229	149	Broadband	2007	427[16]	5.8[16]

Education and health

Educational attainment (2006). Percentage of population ages 10 and over having: no formal schooling 42.9%; incomplete primary 19.4%; complete primary 24.9%; secondary 3.2%; higher 9.6%. *Literacy* (2001): total population age 15 and over literate 56.1%; males 67.2%; females 44.8%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–15)[17, 18]	24,198	533,831	11,433,939	21.4
Secondary (age 16–18)[17]	1,942	91,458	1,249,706	13.7
Vocational	1,959	151,792	2,214,152	14.6
Higher	293	. .	1,239,441	...

Health (2006): physicians 161,000 (1 per 451 persons); hospital beds (2007) 185,000 (1 per 393 persons); infant mortality rate (2005) 20.5; undernourished population (2002–04) 2,600,000 (4% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

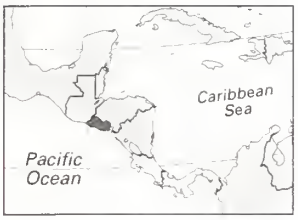
Military

Total active duty personnel (November 2007): 468,500 (army 72.6%, navy 3.9%, air force [including air defense] 23.5%). *Military expenditure as percentage of GDP* (2005): 2.8%; per capita expenditure U.S.$37.

[1]Has limited legislative authority. [2]Final. [3]Includes Sittah Uktūbar governorate created in April 2008. [4]Includes Helwan governorate created in April 2008. [5]Detail does not add to total given because of rounding. [6]Excludes an estimated 3,901,396 Egyptians living abroad. [7]De facto population. [8]Nearly all Sunnī; Shī'ī make up less than 1% of population. [9]2005 urban agglomeration. [10]1996. [11]At factor cost. [12]Transportation includes earnings from traffic on the Suez Canal. [13]Including 2,240,700 unemployed not previously employed. [14]Imports c.i.f.; exports f.o.b. [15]Circulation of daily newspapers. [16]Subscribers. [17]Data exclude 1,090,022 primary and 278,134 secondary students in the Al-Azhar education system. [18]Includes preparatory; excludes an estimated 55,602 (primarily female) students in public one-classroom schools.

Internet resources for further information:
- **CAPMAS http://www.capmas.gov.eg**
- **Central Bank of Egypt http://www.cbe.org.eg**

El Salvador



Official name: República de El Salvador (Republic of El Salvador).
Form of government: republic with one legislative house (Legislative Assembly [84]).
Chief of state and government: President.
Capital: San Salvador.
Official language: Spanish.
Official religion: none[1].
Monetary unit: dollar (U.S.$)[2]; valuation (Sept. 8, 2008) 1 U.S.$ = £0.57.

Area and population

Departments	Capitals	area sq mi	area sq km	population 2007 census
Ahuachapán	Ahuachapán	479	1,240	319,503
Cabañas	Sensuntepeque	426	1,104	149,326
Chalatenango	Chalatenango	779	2,017	192,788
Cuscatlán	Cojutepeque	292	756	231,480
La Libertad	Santa Tecla	638	1,653	660,652
La Paz	Zacatecoluca	473	1,224	308,087
La Unión	La Unión	801	2,074	238,217
Morazán	San Francisco	559	1,447	174,406
San Miguel	San Miguel	802	2,077	434,003
San Salvador	San Salvador	342	886	1,567,156
San Vicente	San Vicente	457	1,184	161,645
Santa Ana	Santa Ana	781	2,023	523,655
Sonsonate	Sonsonate	473	1,226	438,960
Usulután	Usulután	822	2,130	344,235
TOTAL		8,124	21,041	5,744,113

Demography

Population (2008): 5,794,000.
Density (2008): persons per sq mi 713.2, persons per sq km 275.4.
Urban-rural (2007): urban 62.7%; rural 37.3%.
Sex distribution (2007): male 47.34%; female 52.66%.
Age breakdown (2007): under 15, 33.9%; 15–29, 26.9%; 30–44, 18.5%; 45–59, 11.3%; 60–74, 6.5%; 75–84, 2.1%; 85 and over, 0.8%.
Population projection: (2010) 5,885,000; (2020) 6,366,000.
Doubling time: 59 years.
Ethnic composition (2000): mestizo 88.3%; Amerindian 9.1%, of which Pipil 4.0%; white 1.6%; other/unknown 1.0%.
Religious affiliation (2005): Roman Catholic *c.* 71%; independent Christian *c.* 11%; Protestant *c.* 10%; Jehovah's Witness *c.* 2%; other *c.* 6%.
Major cities (2007): San Salvador 316,090 (urban agglomeration 1,433,000); Santa Ana 245,421; Soyapango 241,403[3]; San Miguel 218,410; Mejicanos 140,751[3].

Vital statistics

Birth rate per 1,000 population (2005): 16.3 (world avg. 20.3); (1998) within marriage 27.2%; outside of marriage 72.8%.
Death rate per 1,000 population (2005): 4.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 11.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 3.12.
Marriage/divorce rates per 1,000 population (2005): 3.6/0.7.
Life expectancy at birth (2006): male 67.9 years; female 75.3 years.
Major causes of death per 100,000 population (2001): diseases of the circulatory system 88.3; malignant neoplasms (cancers) 49.4; accidents 47.4; diseases of the respiratory system 45.0; homicide and suicide 43.1.

National economy

Budget (2005). Revenue: U.S.$2,307,500,000 (VAT 47.8%, individual income taxes 29.0%, import duties 7.8%, nontax revenue 5.5%, other 9.9%). Expenditures: U.S.$2,484,600,000 (education 18.6%, defense and public security 11.4%, public health and welfare 9.8%, public works 6.3%, other 53.9%).
Public debt (external, outstanding; 2006): U.S.$5,504,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 5,400,000, corn (maize) 836,695, sorghum 181,694, dry beans 99,305, coffee 94,514, plantains 88,526, papayas 78,900, oranges 66,978, tobacco 1,100; livestock (number of live animals) 1,380,112 cattle, 451,482 pigs, 96,000 horses; roundwood (2006) 4,886,196 cu m, of which fuelwood 86%; fisheries production (2006) 46,296 (from aquaculture 7%). Mining and quarrying (2004): limestone 1,161,000. Manufacturing (value added in U.S.$'000,000; 2004): food products 875; textiles and wearing apparel 262; chemicals and chemical products 262; refined petroleum 234; beverages 217; printing and publishing 167. Energy production (consumption): electricity (kW-hr; 2006) 5,293,000,000 (5,204,000,000); coal, none (none); crude petroleum (barrels; 2005) none (7,280,000); petroleum products (metric tons; 2005) 1,012,000 (1,898,000); natural gas, none (none).
Household income and expenditure. Average household size (2007) 4.2; average income per household (2004) U.S.$5,016; expenditure (June 2005)[4]: food, beverages, and tobacco 36.4%, housing and energy 16.8%, transportation and communications 10.2%, household furnishings 8.4%.
Land use as % of total land area (2003): in temporary crops 31.9%, in permanent crops 12.1%, in pasture 38.3%; overall forest area (2005) 14.4%.
Population economically active (2004): total 2,710,237; activity rate of total population 40.1% (participation rates: ages 15–64, 63.2%; female 39.6%; unemployed [2005] 7.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.8	105.7	107.9	112.7	118.0	122.8	128.4
Monthly earnings index[5]	97.8	102.0	102.4	98.9	. .	...	

Gross national income (GNI; 2007): U.S.$19,520,000,000 (U.S.$2,850 per capita); purchasing power parity GNI (U.S.$5,590 per capita).

Structure of gross domestic product and labour force

	2004 in value U.S.$'000,000	2004 % of total value	2005 labour force	2005 % of labour force
Agriculture	1,390	8.8	518,016	18.5
Mining	80	0.5	2,514	0.1
Manufacturing	3,550	22.4	418,875	15.0
Construction	670	4.2	146,811	5.3
Public utilities	270	1.7	7,315	0.3
Transp. and commun.	1,540	9.7	120,868	4.3
Trade	3,020	19.1	764,873	27.4
Finance, real estate	2,580	16.3	122,790	4.4
Public admin., defense	1,060	6.7	100,265	3.6
Services	1,170	7.4	388,749	13.9
Other	500[6]	3.2[6]	201,556[7]	7.2[7]
TOTAL	15,824[8]	100.0	2,792,632	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 871; remittances (2007) 3,695; foreign direct investment (FDI; 2004–06 avg.) 366; official development assistance (2006) 157. Disbursements for (U.S.$'000,000): tourism (2006) 518; remittances (2007) 29; FDI (2004–06 avg.) 38.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–2,190	–2,626	–2,974	–3,448	–4,114	–4,281
% of total	26.8%	29.6%	31.1%	33.7%	36.9%	37.0%

Imports (2006): U.S.$7,627,000,000 (food, beverages, and tobacco 16.2%, imports for reexport 15.8%, machinery and apparatus 14.4%, petroleum 13.7%). *Major import sources:* U.S. 40.5%; Guatemala 8.0%; Mexico 7.7%; Brazil 4.0%; Costa Rica 2.9%.
Exports (2006): U.S.$3,513,000,000 (reexports [mostly clothing] 45.6%, fabricated metal products 5.9%, coffee 5.4%, distilled spirits 4.5%, paper and paper products 4.2%). *Major export destinations:* U.S. 57.1%; Guatemala 13.0%; Honduras 8.0%; Nicaragua 4.8%; Costa Rica 3.4%.

Transport and communications

Transport. Railroads (2007)[10]: length 562 km. Roads (2002): total length 11,458 km (paved 23%). Vehicles (2000): passenger cars 148,000; trucks and buses 250,800. Air transport (2005)[11]: passenger-km 8,117,465,000; metric ton-km cargo 37,883,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,560	233	PCs	2005	350	51
Telephones				Dailies	2004	250[12]	37[12]
Cellular	2007	6,137[13]	895[13]	Internet users	2006	700	100
Landline	2007	1,080	158	Broadband	2007	90[13]	13[13]

Education and health

Educational attainment (2004). Percentage of population over age 25 having: no formal schooling 22.0%; primary education: grades 1–3 19.1%, grades 4–6 19.9%; secondary: grades 7–9 13.9%, grades 10–12 14.6%; higher 10.5%. *Literacy* (2007): total population age 15 and over literate 74.0%; males literate 72.7%; females literate 75.2%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	5,090[14]	26,209[14]	987,676	46.3[14]
Secondary (age 13–18)	. .		462,501	. .
Higher		7,331	113,366	15.5

Health (2005): physicians 8,670 (1 per 794 persons); hospital beds 4,816 (1 per 1,429 persons); infant mortality rate per 1,000 live births (2004) 10.5; undernourished population (2002–04) 700,000 (11% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2007): 15,660 (army 88.4%, navy 5.5%, air force 6.1%). *Military expenditure as percentage of GDP* (2007): 0.6%; per capita expenditure U.S.$16.

[1]Roman Catholicism, although not official, enjoys special recognition in the constitution. [2]The U.S. dollar was legal tender in El Salvador from Jan. 1, 2001 (along with the colón) at a pegged rate of 1 U.S.$ = ₡8.75; the colón was hardly used by mid-2004. [3]Within San Salvador urban agglomeration. [4]Weights of consumer price index components. [5]Manufacturing only. [6]Import duties and VAT less imputed bank service charges. [7]Unemployed. [8]Detail does not add to total given because of rounding. [9]Imports c.i.f., exports f.o.b. (including assembled components for reexport). [10]Rail service was suspended in 2005. [11]TACA International Airlines only. [12]Circulation of daily newspapers. [13]Subscribers. [14]2000.

Internet resources for further information:
- **Banco Central de Reserva de El Salvador http://www.bcr.gob.sv**
- **Dirección General de Estadística y Censos http://www.digestyc.gob.sv**

Equatorial Guinea

Official name. República de Guinea Ecuatorial (Spanish); République du Guinée Équatoriale (French) (Republic of Equatorial Guinea).
Form of government: republic with one legislative house (House of People's Representatives [100]).
Head of state and government: President assisted by the Prime Minister.
Capital: Malabo.
Official languages: Spanish; French.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42[1].

Area and population

Regions Provinces	Capitals	area sq mi	area sq km	population 2002 census
Insular		785[2]	2,034	265,470
Annobón	Palé	7	17	5,008
Bioko Norte	Malabo	300	776	231,428
Bioko Sur	Luba	479	1,241	29,034
Continental		10,045[2]	26,017	749,529
Centro-Sur	Evinayong	3,834	9,931	125,856
Kie-Ntem	Ebebiyin	1,522	3,943	167,279
Litoral[3]	Bata	2,573	6,665	298,414
Wele-Nzas	Mongomo	2,115	5,478	157,980
TOTAL		10,831[2]	28,051	1,014,999[4]

Demography

Population (2008): 616,000[5].
Density (2008): persons per sq mi 56.9, persons per sq km 22.0.
Urban-rural (2006): urban 50.9%; rural 49.1%.
Sex distribution (2005): male 48.82%; female 51.18%.
Age breakdown (2005): under 15, 42.4%; 15–29, 26.2%; 30–44, 15.5%; 45–59, 9.5%; 60–74, 5.0%; 75–84, 1.2%; 85 and over 0.2%.
Population projection: (2010) 651,000[5]; (2020) 836,000[5].
Doubling time: 30 years.
Ethnic composition (2000): Fang 56.6%; migrant labourers from Nigeria 12.5%, of which Yoruba 8.0%, Igbo 4.0%; Bubi 10.0%; Seke 2.9%; Spaniard 2.8%; other 15.2%.
Religious affiliation (2000): Roman Catholic 79.9%; Sunnī Muslim 4.1%; independent Christian 3.7%; Protestant 3.2%; traditional beliefs 2.1%; nonreligious/atheist 4.9%; other 2.1%.
Major cities (2003): Malabo 92,900; Bata 66,800; Mbini 11,600; Ebebiyin 9,100; Luba 6,800.

Vital statistics

Birth rate per 1,000 population (2005): 39.1 (world avg. 20.3).
Death rate per 1,000 population (2005): 15.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 23.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 5.50.
Life expectancy at birth (2005): male 49.2 years; female 51.7 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 812.5, of which HIV/AIDS 274.3, malaria 178.4, diarrheal diseases 94.9, respiratory infections 89.5; diseases of the circulatory system 197.5; accidents, poisoning, and violence 124.3.
Adult population (ages 15–49) *living with HIV* (2007): 3.4% (world avg. 0.8%).

National economy

Budget (2005). Revenue: CFAF 1,528,825,000,000 (oil revenue 94.3%, of which profit sharing 32.1%, royalties 30.1%; non-oil revenue 5.6%, of which tax revenue 3.8%, nontax revenue 1.8%; grants 0.1%). Expenditures: CFAF 697,948,000,000 (capital expenditure 63.9%; current expenditure 22.8%; net lending 13.3%).
Public debt (external, outstanding; 2006): U.S.$156,800,000.
Gross national income (GNI; 2007): U.S.$6,527,000,000 (U.S.$12,860 per capita); purchasing power parity GNI (U.S.$21,230 per capita).

Structure of gross domestic product and labour force

	2004 in value CFAF '000,000	2004 % of total value	2003 labour force	2003 % of labour force
Agriculture, fishing	47,760	2.0	141,000	69.1
Forestry	23,770	1.0		
Crude petroleum	2,055,409	86.0		
Manufacturing	110,766	4.6		
Construction	26,567	1.1		
Public utilities	10,255	0.4		
Transportation and communications	4,144	0.2	63,000	30.9
Trade, hotels	21,112	0.9		
Finance, real estate	5,896	0.3		
Pub. admin., defense	34,128	1.4		
Services	12,463	0.5		
Other	37,257[6]	1.6[6]		
TOTAL	2,389,528[2]	100.0	204,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): roots and tubers 105,000 (of which cassava 45,000, sweet potatoes 36,000), oil palm fruit 35,000, plantains 31,000, bananas 20,000, coconuts 6,000, coffee 4,500, cacao beans 3,000; livestock (number of live animals) 37,600 sheep, 9,000 goats, 6,100 pigs, 5,050 cattle; roundwood (2006) 866,000 cu m, of which fuelwood 52%; fisheries production (2006) 2,500 (from aquaculture, none). Mining and quarrying: gold (2006) 200 kg. Manufacturing (2004): methanol 1,027,300; processed timber 31,200 cu m. Energy production (consumption): electricity (kW-hr; 2005) 27,000,000 (27,000,000); coal, none (none); crude petroleum (barrels; 2007) 133,000,000 ([2005] negligible); petroleum products (metric tons; 2005) none (47,000); natural gas (cu m; 2005) 1,247,000,000 (1,247,000,000).
Population economically active (1997): total 177,000; activity rate of total population 40.0% (participation rates: ages 15–64, 74.7%; female 35.4%; unemployed [1998] 30%).

Price index (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	108.8	117.0	125.6	130.9	139.0	144.5

Household income and expenditure. Average household size, n.a.; income per household: n.a.; sources of income: n.a.; expenditure (2000)[7]: food and beverages 60.4%, clothing 14.7%, household furnishings 8.6%.
Land use as % of total land area (2003): in temporary crops 4.6%, in permanent crops 3.6%, in pasture 3.7%; overall forest area (2005) 58.2%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 5; remittances, n.a.; foreign direct investment (2004–06 avg.) 1,727; official development assistance (2006) 27. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006
CFAF '000,000,000	+1,122.0	+909.8	+1,600.1	+2,651.7	+3,346.5
% of total	61.4%	38.8%	49.2%	54.4%	56.1%

Imports (2005): CFAF 1,112,500,000,000 (for petroleum sector 55.8%; for public sector 33.0%; petroleum products 4.5%). *Major import sources* (2005): U.S. 26.8%; Côte d'Ivoire 21.4%; Spain 13.6%; France 8.8%; U.K. 7.8%; Italy 4.4%.
Exports (2005): CFAF 3,764,200,000,000 (crude petroleum 92.1%; methanol 6.9%; timber 0.7%). *Major export destinations* (2005): U.S. 24.6%; China 21.8%; Spain 10.8%; Canada 7.3%; The Netherlands 5.2%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 1,790 mi, 2,880 km (paved 13%). Vehicles (2002): passenger cars 8,380; trucks and buses 6,618. Air transport (2006): n.a.[8].

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	55	116	PCs	2004	7.0	3.3
Telephones				Dailies	2005	0[9]	0[9]
Cellular	2007	220[10]	434[10]	Internet users	2006	8.0	16
Landline	2005	10	20	Broadband	2006	—	—

Education and health

Educational attainment: n.a. *Literacy* (2006): percentage of total population age 15 and over literate 87.0%; males literate 93.4%; females literate 80.5%.

Education (2001–02)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	895	2,190	78,390	35.8
Secondary (age 12–17)	59	1,228	19,748	16.1
Voc., teacher tr	..	..	1,425	...
Higher	...		1,003[11]	...

Health: physicians (2004) 101 (1 per 5,020 persons); hospital beds (1998) 907 (1 per 472 persons); infant mortality rate per 1,000 live births (2005) 96.5; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 1,320 (army 83.3%, navy 9.1%, air force 7.6%). *Military expenditure as percentage of GDP* (2005): 0.1%; per capita expenditure U.S.$14.

[1]Formerly pegged to the French franc and since Jan. 1, 2002, to the euro at the rate of CFAF 655.96 = €1. [2]Detail does not add to total given because of rounding. [3]Includes three islets in Corisco Bay. [4]Official government census figures; credible estimates are significantly lower. [5]Estimate of the U.S. Bureau of the Census International Database (March 2008 update). [6]Import duties. [7]Weights of consumer price index components. [8]In March 2006 the EU banned most airlines based in Equatorial Guinea from flying into the EU. [9]Circulation of daily newspapers. [10]Subscribers. [11]1999–2000.

Internet resources for further information:

- **La Banque de France: La Zone Franc**
  http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm
- **Ministerio de Planificación, Desarrollo Económico, e Inversiones Públicas**
  http://www.dgecnstat-ge.org

Eritrea

Official name: State of Eritrea.
Form of government: transitional regime[1] with one interim legislative body (Transitional National Assembly [150]).
Head of state and government: President.
Capital: Asmara.
Official language: none.
Official religion: none.
Monetary unit: nakfa (Nfa); valuation (Sept. 8, 2008) 1 U.S.$ = Nfa 15.00; 1 £ = Nfa 26.50.

Area and population

Regions	Capitals	area[2] sq mi	area[2] sq km	population 2002 estimate[3]
Anseba	Keren	8,960	23,200	580,700
Debub	Mendefera	3,090	8,000	1,018,000
Debub-Keih-Bahri (Southern Red Sea)	Assab (Aseb)	10,660	27,600	274,800
Gash-Barka	Barentu	12,820	33,200	747,200
Maekel	Asmara (Asmera)	500	1,300	727,800
Semien-Keih-Bahri (Northern Red Sea)	Massawa	10,730	27,800	569,000
TOTAL		46,760	121,100	3,917,500

Demography

Population (2008): 5,028,000[4].
Density (2008)[5]: persons per sq mi 128.9, persons per sq km 49.8.
Urban-rural (2006): urban 21.3%; rural 78.7%.
Sex distribution (2006): male 49.84%; female 50.16%.
Age breakdown (2006): under 15, 44.0%; 15–29, 27.9%; 30–44, 14.3%; 45–59, 8.2%; 60–74, 4.5%; 75 and over, 1.1%.
Population projection[4]: (2010) 5,278,000; (2020) 6,590,000.
Doubling time: 28 years.
Ethnolinguistic composition (2004): Tigrinya (Tigray) 50.0%; Tigré 31.4%; Afar 5.0%; Saho 5.0%; Beja 2.5%; Bilen 2.1%; other 4.0%.
Religious affiliation (2004): Muslim (virtually all Sunnī) *c.* 50%; Christian *c.* 48%, of which Eritrean Orthodox *c.* 40%, Roman Catholic *c.* 5%, Protestant *c.* 2%; traditional beliefs *c.* 2%.
Major cities (2003): Asmara 435,000; Keren 57,000; Assab 28,000; Mendefera 25,000; Massawa 25,000; Afabet 25,000; Teseney 25,000.

Vital statistics

Birth rate per 1,000 population (2006): 34.3 (world avg. 20.3).
Death rate per 1,000 population (2006): 9.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 24.7 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 5.08.
Marriage/divorce rates per 1,000 population: n.a.
Life expectancy at birth (2006): male 57.4 years; female 60.7 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 459.1, of which HIV/AIDS 168.0, diarrheal diseases 64.8, malaria 61.4; diseases of the circulatory system 104.9; accidents, poisoning, and violence 74.6; malignant neoplasms (cancers) 42.8.

National economy

Budget (2002). Revenue: Nfa 3,409,800,000 (tax revenue 45.1%, of which import duties 18.1%, sales tax 10.8%, corporate tax 9.9%; grants 32.8%; non-tax revenue 21.2%; extraordinary revenue 0.9%). Expenditures: Nfa 6,138,200,000 (defense 34.3%, health 9.6%, humanitarian assistance 7.9%, education 7.6%, transportation, construction, and communications 6.5%, debt service 5.7%).
Public debt (external, outstanding; 2006): U.S.$781,000,000.
Gross national income (GNI; 2007): U.S.$1,108,000,000 (U.S.$230 per capita); purchasing power parity GNI (U.S.$530 per capita).

Structure of gross domestic product

	2003 in value U.S.$'000	2003 % of total value
Agriculture, fishing	94,299	13.7
Manufacturing	70,794	10.2
Mining, Public utilities	7,891	1.1
Construction	69,042	10.0
Transp. and commun.	80,367	11.6
Trade	125,480	18.2
Finance, Pub. admin., defense, Services	183,345	26.5
Other	59,906	8.7
TOTAL	691,124	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sorghum 130,000, roots and tubers 101,000, cow's milk 39,200, pulses 35,640, millet 20,000, sesame seeds 19,000, cattle meat 16,650, sheep meat 5,600; livestock (number of live animals) 2,120,000 sheep, 1,960,000 cattle, 1,720,000 goats, 76,000 camels; roundwood (2006) 2,488,000 cu m, of which fuelwood 99.9%; fisheries production (2006) 8,813 (from aquaculture, none). Mining and quarrying (2005): granite 350,280, basalt 184,027, coral 91,348. Manufacturing (value added in U.S.$'000,000; 2004): beverages 31; tobacco products 8; furniture 7; bricks, cement, and ceramics 6; food products 4. Energy production (consumption): electricity (kW-hr; 2005) 289,000,000 (289,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (240,000); natural gas, none (none).
Household income and expenditure (1996–97). Average household size (2004) 5.0; average annual disposable income per household Nfa 10,967 (U.S. $1,707); sources of income[6]: wages and salaries 34.0%, transfers 29.3%, rent 19.8%, self-employment 16.9%; expenditure[6]: food 36.2%, housing 30.2%, clothing and footwear 9.3%, energy 6.8%, household furnishings 4.6%, transportation and communications 4.1%.
Population economically active (2000)[7]: 1,451,000; activity rate of total population 40.8% (participation rates: ages 15–64, 75.4%; female 41.5%; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	114.6	134.0[8]	164.8[8]	194.8[8]	224.0[8]	257.8[8]	281.8[8]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 60; remittances (2003) 150; foreign direct disinvestment (2004–06 avg.) 2; official development assistance (2006) 129. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances (2000) 1.
Land use as % of total land area (2003): in temporary crops 5.6%, in permanent crops 0.03%, in pasture 69.0%; overall forest area (2005) 15.4%.

Foreign trade[9]

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.$'000,000	–435	–334	–327	–426	–449	–472
% of total	92.8%	89.1%	79.6%	97.0%	95.2%	95.6%

Imports (2003): U.S.$432,800,000 (food and live animals 40.5%, of which cereals [all forms] 25.5%; machinery and apparatus 14.8%; road vehicles 7.3%; chemicals and chemical products 6.1%). *Major import sources* (2005): Italy 31.4%; U.S. 11.9%; Belarus 5.9%; France 5.1%; Germany 4.6%.
Exports (2003): U.S.$6,600,000 (food and live animals 36.4%, of which fresh fish 22.7%; leather 10.6%; corals and shells 9.1%). *Major export destinations* (2005): Italy 15.1%; France 11.8%; U.S. 9.5%; Germany 8.6%; Taiwan 7.4%; India 7.0%; Ireland 6.1%.

Transport and communications

Transport. Railroads (2005): route length 190 mi, 306 km. Roads (2004): total length 2,485 mi, 4,000 km (paved 20%). Vehicles (1996): automobiles 5,940; trucks and buses, n.a. Air transport (2001)[10]: passenger arrivals 39,266, passenger departures 46,448; freight loaded 202 metric tons, freight unloaded 1,548 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	250	58	PCs	2005	35	7.5
Telephones				Dailies	2005	49[11]	10[11]
Cellular	2007	70[12]	14[12]	Internet users	2007	120	24
Landline	2006	38	8.2	Broadband	2007	—	—

Education and health

Educational attainment (2002)[13]. Percentage of population age 25 and over having: no formal education 66.4%, incomplete primary education 16.6%, complete primary 1.3%, incomplete secondary 5.8%, complete secondary 5.7%, higher 3.0%, unknown 1.2%. *Literacy* (2006): total population age 15 and over literate 61.4%; males 72.3%; females 50.7%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 7–11)	695[14]	7,642	377,512	49.4
Secondary (age 12–17)	196[14]	4,058	215,080	53.0
Voc., teacher tr.[15]	12[14]	168	1,864	11.1
Higher[16]		429	4,612	10.8

Health: physicians (2004) 215 (1 per 20,791 persons); hospital beds (2000) 3,126 (1 per 1,187 persons); infant mortality rate per 1,000 live births (2006) 46.3; undernourished population (2002–04) 3,100,000 (75% of total population based on the consumption of a minimum daily requirement of 1,730 calories).

Military

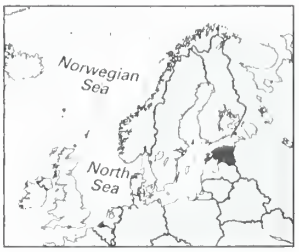
Total active duty personnel (November 2007): 201,750 (army 99.1%, navy 0.7%, air force 0.2%). Mandate for the UN peacekeeping force along the Eritrean-Ethiopian border was terminated in July 2008. *Military expenditure as percentage of GDP* (2003): 24.1%; per capita expenditure U.S.$49.

[1]New constitution ratified in May 1997 was not implemented in mid-September 2008. [2]Approximate figures. The published total area is 46,774 sq mi (121,144 sq km); water area is 7,776 sq mi (20,140 sq km). [3]Unofficial figures. [4]Estimate of the U.S. Bureau of the Census International Database (April 2005 release). [5]Based on land area only. [6]Data taken from a 1996–97 survey of the 12 largest urban centres in the country. [7]Estimates of the ILO Employment Trends Unit. [8]Estimated inflation rate. [9]Imports c.i.f.; exports f.o.b. [10]Asmara airport only. [11]Circulation of daily newspapers. [12]Subscribers. [13]Based on household survey of 14,201 persons. [14]2001–02. [15]Excludes teacher training programs, which had 47 teachers and 922 students in 2001–02. [16]2003–04.

Internet resources for further information:

- **United Nations Development Programme: Eritrea http://www.er.undp.org**
- **Eritrea Demographic and Health Survey 2002 http://www.measuredhs.com/pubs**

Estonia



Official name: Eesti Vabariik (Republic of Estonia).
Form of government: unitary multiparty republic with a single legislative body (Riigikogu[1] [101]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Tallinn.
Official language: Estonian.
Official religion: none.
Monetary unit: kroon (KR); valuation (Sept. 8, 2008) 1 U.S.$ = KR 10.97; 1 € = KR 19.38.

Area and population

Counties	Capitals	area sq mi	area sq km	population 2007[2] estimate
Harju	Tallinn	1,672	4,332	522,147
Hiiu	Kärdla	395	1,023	10,168
Ida-Viru	Jõhvi	1,299	3,364	171,748
Järva	Paide	1,013	2,623	36,328
Jõgeva	Jõgeva	1,005	2,604	37,108
Lääne	Haapsalu	920	2,383	27,713
Lääne-Viru	Rakvere	1,338	3,465	67,560
Pärnu	Pärnu	1,856	4,806	88,727
Põlva	Põlva	836	2,165	31,387
Rapla	Rapla	1,151	2,980	36,743
Saare	Kuressaare	1,128	2,922	34,978
Tartu	Tartu	1,156	2,993	149,001
Valga	Valga	789	2,044	34,455
Viljandi	Viljandi	1,321	3,422	56,075
Võru	Võru	890	2,305	38,271
TOTAL		16,769[3,4]	43,431[3,4]	1,342,409

Demography

Population (2008): 1,340,000.
Density (2008)[5]: persons per sq mi 81.9, persons per sq km 31.6.
Urban-rural (2006[2]): urban 69.3%; rural 30.7%.
Sex distribution (2006[2]): male 46.06%; female 53.94%.
Age breakdown (2006[2]): under 15, 15.1%; 15–29, 22.7%; 30–44, 20.5%; 45–59, 20.2%; 60–74, 14.7%; 75–84, 5.7%; 85 and over, 1.1%.
Population projection: (2010) 1,339,000; (2020) 1,346,000.
Ethnic composition (2006[2]): Estonian 68.6%; Russian 25.7%; Ukrainian 2.1%; Belarusian 1.2%; Finnish 0.8%; other 1.6%.
Religious affiliation (2000): Christian 63.5%, of which unaffiliated Christian 25.6%, Protestant (mostly Lutheran) 17.2%, Orthodox 16.5%, independent Christian 3.3%; nonreligious 25.1%; atheist 10.9%; other 0.5%.
Major cities (2007[2]): Tallinn 396,852; Tartu 101,965; Narva 66,712; Kohtla-Järve 45,399; Pärnu 44,074.

Vital statistics

Birth rate per 1,000 population (2007): 11.8 (world avg. 20.3); within marriage 41.9%; outside of marriage 58.1%.
Death rate per 1,000 population (2007): 13.0 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 1.64.
Marriage/divorce rates per 1,000 population (2007): 5.2/2.8.
Life expectancy at birth (2006): male 67.4 years; female 78.5 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 685.8; malignant neoplasms (cancers) 258.5; accidents, poisoning, and violence 123.2; diseases of the digestive system 51.3.

National economy

Budget (2004). Revenue: KR 54,836,300,000 (tax revenue 82.3%, of which social security contributions 28.3%, VAT 20.6%, personal income taxes 17.4%, excise taxes 9.6%; nontax revenue 11.8%; grants 5.9%). Expenditures: KR 52,429,100,000 (current expenditure 90.9%, of which social benefits 29.6%; capital expenditure 7.8%; other 1.3%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): barley 372,800, wheat 322,000, potatoes 173,700, rapeseed 132,400, oats 81,500, strawberries 1,300; livestock (number of live animals) 345,800 pigs, 244,800 cattle; roundwood (2006) 5,800,000 cu m, of which fuelwood 19%; fisheries production (2006) 87,193 (from aquaculture, negligible). Mining and quarrying (2005): oil shale 11,500,000; peat 800,000. Manufacturing (value added in U.S.$'000,000; 2004): food products 163; fabricated metal products 150; wood products (excluding furniture) 138; furniture 106; textiles 105; printing and publishing 102. Energy production (consumption): electricity (kW-hr; 2007) 12,135,000,000 ([2005] 8,394,000,000); hard coal (metric tons; 2005) none (56,000); lignite (metric tons; 2007) 16,508,000 ([2005] 14,804,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (867,000); natural gas (cu m; 2005) none (953,000,000).
Population economically active (2005): total 659,600; activity rate of total population 48.8% (participation rates: ages 15–64, 69.6%; female 50.1%; unemployed [2007] 4.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.8	109.5	111.0	114.4	119.0	124.3	132.5
Annual earnings index	112.3	125.2	137.0	148.5	..	..	.

Household income and expenditure (2005). Average household size (2004) 2.5; average annual disposable income per household member KR 41,176 (U.S.$3,272); sources of income: wages and salaries 66.1%, transfers 25.6%, self-employment 3.3%; expenditure: food and beverages 28.3%, transportation and communications 16.8%, housing 15.0%, recreation and culture 7.6%.
Public debt (external, outstanding; 2005[2]): U.S.$435,000,000.
Gross national income (GNI; 2007): U.S.$17,706,000,000 (U.S.$13,200 per capita); purchasing power parity GNI (U.S.$19,680 per capita).

Structure of gross domestic product and labour force

	2006 in value KR '000,000	2006 % of total value	2005 labour force	2005 % of labour force
Agriculture, fishing, forestry	5,683	2.8	32,200	4.9
Mining	1,711	0.8	5,900	0.9
Manufacturing	30,044	14.7	139,500	21.1
Public utilities	6,037	3.0	12,500	1.9
Construction	14,305	7.0	48,700	7.4
Trade, restaurants	30,040	14.7	102,700	15.6
Transp. and commun.	21,654	10.6	54,600	8.3
Finance, real estate	41,720	20.4	53,300	8.1
Pub. admin., defense	9,174	4.5	37,200	5.6
Services	18,861	9.2	121,000	18.3
Other	25,327[6]	12.4[6]	52,200[7]	7.9[7]
TOTAL	204,556	100.0[8]	659,600[8]	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,035; remittances (2007) 426; foreign direct investment (FDI; 2004–06 avg.) 1,841. Disbursements for (U.S.$'000,000): tourism (2006) 592; remittances (2007) 96; FDI (2004–06 avg.) 667.
Land use as % of total land area (2003): in temporary crops 12.9%, in permanent crops 0.4%, in pasture 6.3%; overall forest area (2005) 53.9%.

Foreign trade[9]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
KR '000,000	−17,220	−22,481	−26,800	−31,150	−30,770	−45,778
% of total	13.0%	16.5%	17.6%	17.3%	13.7%	16.1%

Imports (2006): KR 165,298,500,000 (mineral fuels 16.1%, electrical machinery and equipment 15.9%, vehicles and transport equipment 12.1%, chemicals and chemical products 6.5%, textiles and apparel 5.1%). *Major import sources:* Finland 18.2%; Russia 13.1%; Germany 12.4%; Sweden 9.0%; Lithuania 6.5%; Latvia 5.7%.
Exports (2006): KR 119,519,700,000 (electrical machinery and equipment 19.4%, mineral fuels 15.9%, wood and paper products 11.6%, vehicles and transport equipment 6.7%, textiles and apparel 5.2%). *Major export destinations:* Finland 18.2%; Sweden 12.3%; Latvia 8.7%; Russia 7.9%; Germany 5.0%; Lithuania 4.8%.

Transport and communications

Transport. Railroads (2004): route length 958 km; passenger-km (2005) 246,951,000; metric ton-km cargo (2005) 10,629,398,000. Roads (2005): total length 57,016 km (paved 23%). Vehicles (2006[2]): passenger cars 493,800; trucks and buses 91,400. Air transport (2007): passenger-km 756,000,000; metric ton-km cargo 1,044,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	686	507	PCs	2005	650	483
Telephones				Dailies	2004	257[10]	192[10]
Cellular	2007	1,982[11]	1,484[11]	Internet users	2007	780	584
Landline	2007	496	371	Broadband	2007	278[11]	208[11]

Education and health

Educational attainment (2000). Percentage of population age 10 and over having: no formal schooling/incomplete primary education 6.7%; complete primary/lower secondary 31.6%; complete secondary 29.2%; higher vocational 17.5%; undergraduate 12.3%; advanced degree 0.4%; unknown 2.3%.
Literacy (2003): virtually 100%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	303	7,702[12]	148,800	...
Secondary (age 13–17)	238	10,361[12]	42,100	...
Vocational	78	1,898[12]	29,915	...
Higher	36	6,574[13]	67,800	...

Health: physicians (2004[2]) 4,277 (1 per 316 persons); hospital beds (2004) 7,850 (1 per 172 persons); infant mortality rate per 1,000 live births (2007) 5.0; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 4,100 (army 87.8%, navy 7.3%, air force 4.9%). *Military expenditure as a percentage of GDP* (2005): 1.7%; per capita expenditure U.S.$152.

[1]Official legislation bans translation of parliament's name. [2]January 1. [3]Total includes 1,596 sq mi (4,133 sq km) of Baltic Sea Islands and the areas of small inland lakes. [4]The total area of Estonia including the Estonian portion of Lake Peipus (590 sq mi [1,529 sq km]), Lake Võrtsjärv, and Muuga harbour is 17,462 sq mi (45,227 sq km). [5]Based on land area of 16,367 sq mi (42,390 sq km). [6]Net taxes. [7]Unemployed. [8]Detail does not add to total given because of rounding. [9]Imports c.i.f.; exports f.o.b. [10]Circulation of daily newspapers. [11]Subscribers. [12]2001–02. [13]2002–03.

Internet resources for further information:
- **Statistical Office of Estonia http://www.stat.ee**
- **Bank of Estonia http://www.bankofestonia.info**

Ethiopia

Official name: Federal Democratic Republic of Ethiopia.
Form of government: federal republic with two legislative houses (House of the Federation [112]; House of People's Representatives [547]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Addis Ababa.
Official language: none[1].
Official religion: none.
Monetary unit: birr (Br); valuation (Sept. 8, 2008) 1 U.S.$ = Br 9.72; 1 £ = Br 17.18.

Area and population

Regional states	Capitals	area sq mi	area sq km	population 2006 estimate[2]
Afar	Aysaita	37,339	96,708	1,389,000
Amara (Amhara)	Bahir Dar	60,603	156,960	19,120,000
Binshangul Gumuz	Asosa	19,401	50,248	625,000
Gambela	Gambela	9,795	25,369	247,000
Harer Zuriya	Harer (Harar)	144	374	196,000
Oromiya	Addis Ababa	136,538	353,632	26,553,000
Southern Nations, Nationalities and Peoples'	Awasa	43,524	112,727	14,902,000
Sumale (Somali)	Jijiga	107,820	279,252	4,329,000
Tigray	Mekele	19,415	50,286	4,335,000
Cities				
Addis Ababa		211	546	2,973,000
Dire Dawa		396	1,025	398,000
TOTAL		435,186	1,127,127	75,067,000

Demography

Population (2008): 78,254,000[3].
Density (2008): persons per sq mi 179.8, persons per sq km 69.4.
Urban-rural (2007): urban 16.6%; rural 83.4%.
Sex distribution (2006): male 49.88%; female 50.12%.
Age breakdown (2006): under 15, 43.7%; 15–29, 28.1%; 30–44, 15.3%; 45–59, 8.5%; 60–74, 3.7%; 75 and over, 0.7%.
Population projection: (2010) 81,754,000[3]; (2020) 99,279,000[3].
Ethnolinguistic composition (2000)[4]: Oromo 35.8%; Amharic 31.0%; Tigrinya 6.1%; Gurage 4.9%; Sidamo 3.8%; Welaita 2.1%; Somali 1.4%; other 14.9%.
Religious affiliation (2005): Muslim 33.7%; Ethiopian Orthodox 33.4%; Protestant 16.3%; traditional beliefs 10.4%; other 6.2%.
Major cities (2006): Addis Ababa 2,973,000; Dire Dawa 281,750; Nazret 228,623; Gonder 194,773; Dese 169,104.

Vital statistics

Birth rate per 1,000 population (2006): 38.0 (world avg. 20.3).
Death rate per 1,000 population (2006): 14.9 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 5.22.
Life expectancy at birth (2006): male 47.9 years; female 50.2 years.
Adult population (ages 15–49) *living with HIV* (2007): 2.1% (world avg. 0.8%).

National economy

Budget (2004–05). Revenue: Br 20,032,000,000 (tax revenue 61.2%, of which import duties 28.7%, income and profits tax 17.8%, sales tax 9.3%; grants 22.8%; nontax revenue 16.0%). Expenditures: Br 24,551,000,000 (current expenditure 53.1%, of which defense 11.9%, education 11.8%; capital expenditure 46.9%, of which economic development 31.6%).
Public debt (external, outstanding; 2006): U.S.$2,212,000,000.
Gross national income (GNI; 2007): U.S.$17,565,000,000 (U.S.$220 per capita); purchasing power parity GNI (U.S.$780 per capita).

Structure of gross domestic product and labour force

	2004–05 in value Br '000,000[6]	2004–05 % of total value	1995[5] labour force	1995[5] % of labour force
Agriculture	35,948	47.9	21,605,317	87.8
Mining	408	0.5	16,540	0.1
Manufacturing	3,939	5.2	384,955	1.6
Construction	3,729	5.0	61,232	0.2
Public utilities	1,789	2.4	17,066	0.1
Transp. and commun.	3,973	5.3	103,154	0.4
Trade, hotels	10,208	13.6	935,937	3.8
Finance, real estate	6,679	8.9	19,451	0.1
Pub. admin., defense	3,433	4.6	1,252,224	5.1
Services	4,929	6.6		
Other	—	—	210,184[7]	0.9[7]
TOTAL	75,035[8]	100.0	24,606,060	100.0[9]

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): roots and tubers 5,600,000, corn (maize) 4,000,000, wheat 3,000,000, teff (2006–07) 2,437,700, sorghum 2,300,000, barley 1,500,000, dry broad beans 600,000, coffee 325,800, maté 260,000, chickpeas 190,000, sesame seeds 164,000; leading producer of beeswax, honey, cut flowers, and khat; livestock (number of live animals) 43,000,000 cattle, 23,700,000 sheep, 18,000,000 goats, (2005) 5,625,000 horses, mules, and asses, 2,300,000 camels, (1998) 3,037 civets; roundwood (2006) 98,631,000 cu m, of which fuelwood 97%; fisheries production (2006) 9,890 (from aquaculture, negligible). Mining and quarrying (2006): rock salt 218,000; tantalum 70,000 kg; niobium 11,000 kg; gold 4,028 kg. Manufacturing (value added in U.S.$'000,000; 2004): food products 157; beverages 118; bricks, cement, and ceramics 69; textiles 35; tobacco products 29. Energy production (consumption): electricity (kW-hr; 2005) 2,872,000,000 (2,872,000,000); crude petroleum (barrels; 2005) none (5,640,000); petroleum products (metric tons; 2005) 3,000 (1,547,000).
Land use as % of total land area (2003): in temporary crops 11.1%, in permanent crops 0.7%, in pasture 20.0%; overall forest area (2005) 11.9%.
Population economically active (2005): total 32,158,392; activity rate of total population 50.9% (participation rates: ages 10 and over, 78.4%; female [1999] 45.5%; unemployed 5.0%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	91.8	93.3	109.8	113.4	126.6	142.2	166.7

Household income and expenditure (1999–2000). Average household size (2004) 5.3; sources of income[10]: self-employment 70.9% (of which agriculture-based 57.6%), wages and salaries 10.9%, salvaging 6.6%, rent 3.9%, other 7.7%; expenditure[10]: food and beverages 52.8%, housing and energy 14.4%, household operations 13.9%, clothing and footwear 7.9%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 162; remittances (2007) 172; foreign direct investment (2004–06 avg.) 377; official development assistance (2006) 1,947. Disbursements for (U.S.$'000,000): tourism (2006) 97; remittances (2007) 14.

Foreign trade[11]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−1,170	−975	−1,399	−2,090	−2,784	−3,081
% of total	56.2%	50.4%	58.5%	60.6%	60.3%	60.1%

Imports (2006): U.S.$5,207,000,000 (machinery and apparatus 20.7%, refined petroleum 19.5%, road vehicles 14.1%, chemicals and chemical products 11.0%, food 6.7%). *Major import sources:* Saudi Arabia 17.9%; China 12.3%; Italy 7.7%; U.A.E. 7.6%; India 5.8%.
Exports (2006): U.S.$1,043,000,000 (coffee/khat 40.8%, sesame seeds 15.4%, gum products/cut flowers/foliage 12.4%, gold 6.2%, leather 4.2%, chickpeas 3.5%). *Major export destinations:* Germany 12.6%; China 9.7%; Japan 8.4%; Switzerland 6.4%; Saudi Arabia 6.3%; Italy 6.1%.

Transport and communications

Transport. Railroads (2003): length 781 km[12]; (1998–99) passenger-km 151,000,000[13]; (1998–99) metric ton-km cargo 90,000,000[13]. Roads (2006): total length 39,477 km (paved [2004] 19%). Vehicles (2003): passenger cars 71,311; trucks and buses 65,557. Air transport (2007): passenger-km 8,340,000,000; metric ton-km cargo 160,320,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	547	7.9	PCs	2004	113	1.7
Telephones				Dailies	2005	83[14]	1.1[14]
Cellular	2007	1,209[15]	15[15]	Internet users	2007	291	3.5
Landline	2007	880	11	Broadband	2007	0.3[15]	—[15]

Education and health

Educational attainment (2000)[4]. Percentage of population age 15 and over having: no formal schooling 63.8%; incomplete primary education 21.6%; primary 2.6%; incomplete secondary 8.1%; secondary 2.5%; post-secondary 1.4%. *Literacy* (2007): total population age 15 and over literate 47.5%.

Education (2003–04)

	schools[16]	teachers	students	student/teacher ratio
Primary (age 7–12)	11,490	124,202	8,269,663	66.6
Secondary (age 13–18)	410	41,075	2,053,593	50.0
Voc., teacher tr.	62	4,035	87,158	21.6
Higher	6	4,803	172,111	35.8

Health (2004–05): physicians 1,077 (1 per 66,236 persons); hospital beds 13,851 (1 per 5,150 persons); infant mortality rate (2006) 93.6; undernourished population (2002–04) 32,700,000 (46% of total population based on the consumption of a minimum daily requirement of 1,720 calories).

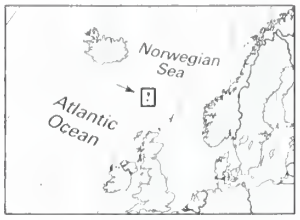
Military

Total active duty personnel (November 2007): 138,000 (army 97.8%, air force 2.2%); mandate for the UN peacekeeping force along the Ethiopian-Eritrean border was terminated in July 2008. *Military expenditure as percentage of GDP* (2005): 3.9%; per capita expenditure U.S.$5.

[1]Amharic is the "working" language. [2]Official projection based on 1994 census. [3]Estimate of the U.S. Bureau of the Census International Database (September 2004 update). [4]Based on the national Ethiopian Demographic and Health Survey, comprising 14,072 households. [5]For ages 10 and up. [6]At 1999–2000 factor cost. [7]First-time job seekers. [8]Sum total; reported total is Br 74,506,000,000. [9]Detail does not add to total given because of rounding. [10]Based on the national Household Income and Expenditure Survey, comprising 17,332 households. [11]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [12]Length of Ethiopian segment of Addis Ababa–Djibouti railroad, which in 2007 was in poor condition. [13]Includes Djibouti part of Addis Ababa–Djibouti railroad. [14]Circulation of daily newspapers. [15]Subscribers. [16]1999–2000.

Internet resources for further information:
- **Central Statistical Agency of Ethiopia http://www.csa.gov.et**
- **National Bank of Ethiopia http://www.nbe.gov.et**

Faroe Islands[1]



Official name: Førovar (Faroese); Færøerne (Danish) (Faroe Islands).
Political status: self-governing region of the Danish realm with a single legislative body (Løgting, or Parliament [33]).
Chief of state: Danish Monarch.
Heads of government: High Commissioner (for Denmark); Prime Minister (for Faroe Islands).
Capital: Tórshavn (Thorshavn).
Official languages: Faroese; Danish.
Official religion: Faroese Lutheran[2].
Monetary unit: Danish krone[3] (DKK); valuation (Sept. 8, 2008) 1 U.S.$ = DKK 5.23; 1£ = DKK 9.23.

Area and population

Regions[4]	Largest municipalities	area sq mi	area sq km	population 2007[5] estimate
Eysturoy	Runavík	110	286	10,810
Nordhoy (Northern)	Klaksvík	93	241	5,980
Sandoy	Skopun	48	125	1,464
Streymoy	Tórshavn	151	392	22,188
Sudhuroy	Tvoroyri	64	167	4,940
Vágar	Sørvágur	73	188	2,968
TOTAL		540[6]	1,399	48,350

Demography

Population (2008): 48,400.
Density (2008): persons per sq mi 89.6, persons per sq km 34.6.
Urban-rural (2003): urban 38.8%; rural 61.2%.
Sex distribution (2007[5]): male 51.99%; female 48.01%.
Age breakdown (2007[5]): under 15, 22.4%; 15–29, 19.3%; 30–44, 20.6%; 45–59, 18.9%; 60–74, 12.2%; 75–84, 4.9%; 85 and over, 1.7%.
Population projection: (2010) 48,000; (2020) 49,000.
Ethnic composition (2000): Faroese 97.0%; Danish 2.5%; other Scandinavian 0.4%; other 0.1%.
Religions affiliation (2005): Protestant *c.* 91%, of which Lutheran *c.* 79%, Plymouth Brethren *c.* 10%; other (mostly nonreligious) *c.* 9%.
Major municipalities (2008[5]): Tórshavn 19,429; Klaksvík 4,888; Runavík 3,679; Tvoroyri 1,793.

Vital statistics

Birth rate per 1,000 population (2007): 13.9 (world avg. 20.3); (1998) within marriage 62.0%; outside of marriage 38.0%.
Death rate per 1,000 population (2007): 7.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 6.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.47.
Marriage/divorce rates per 1,000 population (2006): 5.7/1.3.
Life expectancy at birth (2006): male 75.9 years; female 82.8 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 316.1; malignant neoplasms (cancers) 245.9; diseases of the respiratory system 82.6; accidents 33.1; diabetes mellitus 31.0.

National economy

Budget (2003). Revenue: DKK 5,737,000,000 (tax revenue 78.6%, of which income taxes 47.6%, VAT 18.5%; transfers from the Danish government 14.8%; other 6.6%). Expenditures: DKK 5,329,000,000 (social welfare 34.7%, education 15.3%, health 14.5%, debt service 4.0%, agriculture, fishing, and hunting 2.8%).
Gross national income (at current market prices; 2003): U.S.$1,472,000,000 (U.S.$30,680 per capita).

Structure of gross domestic product and labour force

	2006 in value DKK '000,000	2006 % of total value	2005 labour force	2005 % of labour force
Agriculture	2,410[7]	20.3[7]	53	0.2
Mining	—	—	67	0.3
Fishing/fish processing	[7]	[7]	4,845	19.7
Manufacturing (excluding fish-related)	408	3.4	1,649	6.7
Construction	725	6.1	1,676	6.8
Public utilities	137	1.2	145	0.6
Transp. and commun.	958	8.1	1,822	7.4
Trade, hotels	1,111	9.4	3,436	14.0
Finance and real estate	1,614	13.6	1,511	6.2
Pub. admin., defense	539	4.5	8,481	34.6
Services	2,368	19.9	735	3.0
Other	1,608[8]	13.5[8]	121	0.5
TOTAL	11,878	100.0	24,541	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 1,400, other vegetables, grass, hay, and silage are produced; livestock (number of live animals) 68,000 sheep, 2,093 cattle; roundwood, n.a.; fisheries production 606,167 (including blue whiting 312,005, pollock 67,044, cod 28,141, and capelin 19,059; from aquaculture 4% [including salmon 18,283]). Mining and quarrying: negligible[9]. Manufacturing (value added in DKK '000,000; 1999): processed fish 393; all other manufacturing 351; important products include handicrafts and woolen textiles and clothing. Energy production (consumption): electricity (kW-hr; 2007) 269,000,000 ([2005] 290,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (214,000); natural gas, none (none).
Population economically active (2006): total 29,400; activity rate of total population *c.* 61% (participation rates: ages 16–74, 85.8%; female 44.8%; unemployed 2.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	107.6	108.1	109.5	110.2	114.0	115.6	119.7
Hourly wage index	104.4	110.5	116.6	122.0	..	..	...

Public debt (external, outstanding; 2004): U.S.$155,000,000[10].
Household income and expenditure. Average household size: n.a.; average annual income per household: n.a.; sources of income: n.a.; expenditure (1998)[11]: food and beverages 25.1%, transportation and communications 17.7%, housing 12.5%, recreation 11.9%, energy 7.7%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) *c.* 25; remittances (2003) 44; foreign direct investment (FDI), n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances (2007) 5; FDI, n.a.
Land use as % of total land area (2003): in temporary crops 2.1%, in permanent crops, n.a., in pasture *c.* 93%; overall forest area (2005) 0.1%.

Foreign trade[12]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
DKK '000,000	–337	–953	–72	–900	–905	–1,277
% of total	4.1%	10.9%	1.0%	11.1%	10.8%	13.7%

Imports (2006): DKK 4,649,488,600 (goods for household consumption 27.7%; fuels, lubricants, and electric current 18.5%; machinery and apparatus 10.8%; goods for the construction industry 9.7%; road vehicles 7.9%). *Major import sources* (2006): Denmark 30.0%; Norway 20.2%; Germany 7.6%; Sweden 6.1%; United Kingdom 4.2%.
Exports (2006): DKK 3,744,957,600 (chilled and frozen fish 64.9%; salted fish 12.8%; dried fish 12.7%; smoked, canned, and other conserved fish 3.5%). *Major export destinations* (2006): United Kingdom 26.4%; Denmark 12.0%; Norway 11.8%; France 9.9%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 288 mi, 464 km (paved, n.a.). Vehicles (2008[5]): passenger cars 20,225; trucks, vans, and buses 4,740. Air transport (2005): passenger arrivals 89,190, passenger departures 89,101.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	47	1,022	PCs	2005	..	...
Telephones				Dailies	2003	18[13]	375[13]
Cellular	2006	50[14]	1,040[14]	Internet users	2005	32	645
Landline	2006	23	478	Broadband	2006	10[14]	208[14]

Education and health

Educational attainment: n.a. *Literacy:* n.a.

Education (2001–02)

	schools	teachers	students	student/teacher ratio
Primary (age 6–14)	38	.	5,579	..
Secondary (age 15–17)	23	.	2,019	..
Voc., teacher tr.	11	.	2,195[15]	...
Higher[16]	1	19	173	9.1

Health: physicians (2006) 88 (1 per 547 persons); hospital beds (2007) 243 (1 per 199 persons); infant mortality rate per 1,000 live births (2004) 6.4; undernourished population, n.a.

Military

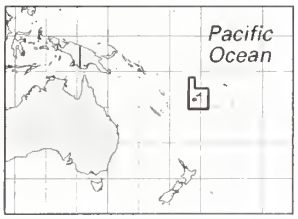
Defense responsibility lies with Denmark.

[1]English-language alternative spelling is Faeroe Islands. [2]Formally independent of the national Danish Lutheran church from July 2007. [3]The local currency, the Faroese króna (plural krónur), is equivalent to the Danish krone. Banknotes used are Faroese or Danish; coins are Danish. [4]Represents the 5 main islands (with associated islets) and the northeasternmost (Northern) islands. Actual local administration is based on 34 municipalities. [5]January 1. [6]Detail does not add to total given because of rounding. [7]Agriculture includes Fishing/fish processing. [8]Taxes less subsidies on products. [9]The maritime boundary demarcation agreement between the Shetland Islands (U.K.) and the Faroes in 1999 has allowed for the still unsuccessful exploration for deep-sea petroleum as of mid-2007. [10]Includes Denmark. [11]Weights of consumer price index components. [12]Imports c.i.f.; exports f.o.b. [13]Circulation of daily newspapers. [14]Subscribers. [15]1996–97. [16]University of the Faroe Islands.

Internet resources for further information:

- **Faroe Islands in Figures**
  http://www.hagstova.fo
- **Governmental Bank of the Faroe Islands**
  http://landsbank.fo
- **Danmarks Statistik**
  http://www.dst.dk/HomeUK.aspx

Fiji



Official name: Republic of the Fiji Islands[1, 2].
Form of government: interim regime[3,4]
Chief of state: President.
Head of government: Prime Minister.
Capital: Suva.
Official languages: [2].
Official religion: none.
Monetary unit: Fiji dollar (F$); valuation (Sept. 8, 2008) 1 U.S.$ = F$1.62; 1 £ = F$2.86.

Area and population

Divisions / Provinces	Capitals	area sq mi	area sq km	population 2007 census
Central	Suva			342,530
Naitasiri	—	643	1,666	160,112
Namosi	—	220	570	6,901
Rewa	—	105	272	101,210
Serua	—	320	830	18,420
Tailevu	—	369	955	55,887
Eastern	Levuka			36,979
Kadavu	—	185	478	10,048
Lau	—	188	487	10,516
Lomaiviti	—	159	411	16,415
Northern	Labasa			134,572
Bua	—	532	1,379	13,779
Cakaudrove	—	1,087	2,816	49,687
Macuata	—	774	2,004	71,106
Western	Lautoka			319,054
Ba	—	1,017	2,634	230,866
Nadroga	—	921	2,385	57,972
Ra	—	518	1,341	30,216
Fijian dependency				
Rotuma	—	18	46	2,095
TOTAL	—	7,055[5]	18,272[5]	835,230

Demography

Population (2008): 839,000.
Density (2008): persons per sq mi 118.9, persons per sq km 45.9.
Urban-rural (2007): urban 50.9%; rural 49.1%.
Sex distribution (2006): male 50.17%; female 49.83%.
Age breakdown (2006): under 15, 31.1%; 15–29, 28.6%; 30–44, 19.7%; 45–59, 13.6%; 60–74, 6.1%; 75 and over, 0.9%.
Population projection: (2010) 850,000; (2020) 921,000.
Doubling time: 41 years.
Ethnic composition (2007): Fijian 57.3%; Indian 37.6%; Rotuman (Polynesian) 1.2%; other 3.9%.
Religious affiliation (2005): Protestant (mostly Methodist) *c.* 35%; Hindu *c.* 33%; independent Christian *c.* 11%; Roman Catholic *c.* 8%; Muslim *c.* 7%; other *c.* 6%.
Major urban areas (2007)[4]: Nasinu 87,433[6]; Suva 86,702 (urban agglomeration, 241,432); Lautoka 52,867; Nausori 47,074[6]; Nadi 43,367.

Vital statistics

Birth rate per 1,000 population (2006): 22.6 (world avg. 20.3).
Death rate per 1,000 population (2006): 5.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 16.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.73.
Marriage/divorce rates per 1,000 population (2002): 9.2/n.a.
Life expectancy at birth (2006): male 67.3 years; female 72.5 years.
Major causes of death per 100,000 population (2001): diseases of the circulatory system 330.0; diseases of the respiratory system 50.2; infectious and parasitic diseases 45.8; malignant neoplasms (cancers) 38.0; accidents and violence 31.7.

National economy

Budget (2005). Revenue: F$1,218,332,000 (customs duties and port dues 59.4%, income taxes 28.9%, fees and royalties 4.7%, other 7.0%). Expenditures: F$1,231,556,000 (department expenditures 70.7%, charges on public debt 26.3%, other 3.0%).
Public debt (external, outstanding; March 2008): U.S.$262,600,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 3,200,000, coconuts 140,000, cow milk 58,000, taro 38,000, cassava 34,500, rice 15,000, cattle meat 8,400, ginger 4,300, yaqona (kava) (2006) 2,259; livestock (number of live animals) 315,000 cattle, 4,300,000 chickens; roundwood (2006) 509,000 cu m, of which fuelwood 7%; fisheries production (2006) 47,319 (from aquaculture 1%). Mining and quarrying (2005): gold 3,800 kg; silver 1,500 kg. Manufacturing (value added in F$'000,000; 2001): food products 94.6; textiles and clothing 92.4; beverages and tobacco 88.3; chemicals and chemical products 43.0. Energy production (consumption): electricity (kW-hr; 2005) 823,000,000 (823,000,000); coal (metric tons; 2005) none (12,000); petroleum products (metric tons; 2005) none (509,000); natural gas, none (none).
Population economically active (2000): total 341,700; activity rate of total population 42.2% (participation rates: ages 15–64 [1996] 60.6%; female 32.2%; unemployed [2002] 14.1%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.3	105.1	109.5	112.5	115.2	118.1	123.7

Gross national income (GNI; 2007): U.S.$3,189,000,000 (U.S.$3,800 per capita); purchasing power parity GNI (U.S.$4,370 per capita).

Structure of gross domestic product and labour force

	2005 in value F$'000	2005 % of total value	1996 labour force	1996 % of labour force
Agriculture	614,981	14.3	132,676	44.6
Mining	35,098	0.8	2,507	0.8
Manufacturing	565,133	13.2	29,043	9.8
Construction	227,930	5.3	10,639	3.6
Public utilities	113,148	2.6	2,107	0.7
Transp. and commun.	742,257	17.4	16,722	5.6
Trade, hotels	857,787	20.0	32,175	10.8
Finance, real estate	518,474	12.1	7,812	2.6
Pub. admin., defense	807,212	18.8	15,854	5.3
Services			28,766	9.7
Other	−185,313[7]	−4.3[7]	19,469[8]	6.5[8]
TOTAL	4,296,708[5]	100.0[5]	297,770	100.0

Household income and expenditure. Average household size (2007) 4.7; average annual income per household (2002)[9] F$15,757 (U.S.$12,784); sources of income (2002)[9]: wages and salaries 64.3%, transfers 8.4%, self-employment 7.2%; expenditure (2002)[9]: food, beverages, and tobacco 31.2%, housing and energy 18.5%, transportation and communications 17.9%, education 4.5%.
Selected balance of payments data. Receipts from (U.S.$'000,000); tourism (2006) 433; remittances (2007) 165; foreign direct investment (2004–06 avg.) 64; official development assistance (2006) 56. Disbursements for (U.S.$'000,000): tourism (2006) 101; remittances (2007) 30.
Land use as % of total land area (2003): in temporary crops 10.9%, in permanent crops 4.7%, in pasture 9.6%; overall forest area (2005) 54.7%.

Foreign trade[10, 11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
F$'000,000	−758	−941	−1,029	−1,536	−1,945	−1,680
% of total	24.1%	27.0%	30.8%	39.3%	45.3%	41.0%

Imports (2006): F$3,119,920,000 (mineral products 33.4%, machinery and apparatus 14.9%, transport equipment 7.1%, chemicals and chemical products 5.3%, textiles and clothing 5.0%). *Major import sources:* Singapore 34.4%; Australia 22.4%; New Zealand 15.9%; Japan 3.6%; China 3.6%.
Exports (2006): F$1,175,206,000 (reexports [mostly petroleum products] 29.4%, sugar 18.3%, fish 8.3%, clothing 8.1%, mineral water 7.4%, gold 3.4%). *Major export destinations:* Australia 17.4%; U.S. 14.4%; U.K. 11.2%; Japan 8.1%; New Zealand 5.9%; unspecified 24.8%.

Transport and communications

Transport. Railroads (2003)[12]: length 371 mi, 597 km. Roads (1999): total length 2,140 mi, 3,440 km (paved 49%). Vehicles (2005): passenger cars 76,273; trucks and buses 42,311. Air transport (2004–05)[13]: passenger-km 2,360,000,000; metric ton-km cargo 92,108,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	98	118	PCs	2004	44	52
Telephones				Dailies	2001	49[14]	60[14]
Cellular	2007	437[15]	524[15]	Internet users	2006	80	94
Landline	2007	108	130	Broadband	2006	8.5[15]	10[15]

Education and health

Educational attainment (1996). Percentage of population age 25 and over having: no formal schooling 4.4%; some education 22.3%; incomplete secondary 47.7%; complete secondary 17.0%; some higher 6.7%; university degree 1.9%. *Literacy* (2003): total population age 15 and over literate 93.7%; males 95.5%; females 91.9%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 5–15)	714	5,229	143,858	27.5
Secondary (age 16–19)	160	4,431	68,774	15.5
Voc., teacher tr.	58	1,159	3,256	2.8
Higher[16]	1	355[17]	31,322	11.3[17]

Health (2005): physicians 361 (1 per 2,343 persons); hospital beds 1,810 (1 per 467 persons); infant mortality rate per 1,000 live births (2006) 12.3; undernourished population (2002–04) 40,000 (5% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

Military

Total active duty personnel (November 2007): 3,500 (army 91.4%, navy 8.6%, air force, none). *Military expenditure as percentage of GDP* (2004): 1.2%; per capita expenditure U.S.$36.

[1]Fijian long/short-form names: Matanitu Tu-Vaka-i-koya ko Viti/Viti; Hindustani long-form name: Fiji Ripablik. [2]English, Fijian, and Hindustani (Fijian Hindi) have equal status per 1998 constitution. [3]Backed by the military from December 2006; the constitution is not formally abrogated. [4]The people's charter, a supplement to the constitution, was approved by the president in late December 2008. This should allow for the March 2009 legislative elections to take place. [5]Detail does not add to total given because of rounding. [6]Within Suva urban agglomeration. [7]Less imputed bank service charges. [8]Includes 2,204 not stated and 17,265 unemployed. [9]Based on a survey of 3,015 urban households. [10]Imports c.i.f.; exports f.o.b. [11]All export data include reexports. [12]Owned by the Fiji Sugar Corporation. [13]Air Pacific only. [14]Circulation of daily newspapers. [15]Subscribers. [16]University of the South Pacific only. [17]2000.

Internet resources for further information:
- **Fiji Islands Bureau of Statistics http://www.statsfiji.gov.fj**
- **Reserve Bank of Fiji http://www.reservebank.gov.fj**

Finland

Official names[1]: Suomen Tasavalta (Finnish); Republiken Finland (Swedish) (Republic of Finland).
Form of government: multiparty republic with one legislative house (Parliament [200]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Helsinki.
Official languages: none[1].
Official religion: none.
Monetary unit. euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2008[2] estimate
Eastern Finland	Mikkeli	18,738	48,532	573,478
Lapland	Rovaniemi	35,846	92,840	184,390
Oulu	Oulu	21,907	56,738	467,190
Southern Finland	Hämeenlinna	11,654	30,183	2,173,509
Western Finland	Turku	28,664	74,240	1,874,764
Autonomous territory				
Åland (Ahvenamaa)	Mariehamn (Maarianhamina)	600	1,554	27,153
TOTAL LAND AREA		117,408[3]	304,086[3]	
FRESHWATER AREA		13,255	34,331	
TOTAL		130,664[3]	338,417[3]	5,300,484

Demography

Population (2008): 5,310,000.
Density (2008)[4]: persons per sq mi 45.2, persons per sq km 17.5.
Urban-rural (2005[2]): urban 62.1%; rural 37.9%.
Sex distribution (2007[2]): male 48.96%; female 51.04%.
Age breakdown (2007[2]): under 15, 17.1%; 15–29, 18.7%; 30–44, 19.5%; 45–59, 22.3%; 60–74, 14.7%; 75–84, 5.9%; 85 and over, 1.8%.
Population projection: (2010) 5,350,000; (2020) 5,541,000.
Linguistic composition (2007[2]): Finnish 91.5%; Swedish 5.5%; Russian 0.8%; other 2.2%.
Religious affiliation (2006[2]): Evangelical Lutheran 83.1%; nonreligious 14.7%; Finnish (Greek) Orthodox 1.1%; Muslim 0.4%; other 0.7%.
Major cities (2008[2]): Helsinki 568,531 (urban agglomeration [2003] 1,075,000); Espoo 238,047[5]; Tampere 207,866; Vantaa 192,522[5]; Turku 175,286; Oulu 131,585.

Vital statistics

Birth rate per 1,000 population (2007): 11.1 (world avg. 20.3); within marriage 59.4%; outside of marriage 40.6%.
Death rate per 1,000 population (2007): 9.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 1.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.83.
Marriage/divorce rates per 1,000 population (2007): 5.6/2.5.
Life expectancy at birth (2007): male 75.9 years; female 82.9 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 374.7, of which ischemic heart disease 221.0; malignant neoplasms (cancers) 202.0; cerebrovascular diseases 87.3; accidents and violence 71.5; diseases of the respiratory system 47.0.

National economy

Budget (2006). Revenue: €39,582,000,000 (VAT 33.3%, income and property taxes 32.4%, excise duties 11.7%). Expenditures: €39,582,000,000 (social security and health 28.6%, education 16.3%, agriculture and forestry 6.8%, defense 5.7%, interest on state debt 5.7%).
Public debt (2007): U.S.$83,629,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): barley 1,984,000, oats 1,222,000, wheat 797,000, potatoes 702,000, sugar beets 673,000; livestock (number of live animals[6]) 1,448,000 pigs, 927,000 cattle, 193,000 reindeer; roundwood (2006) 50,811,617 cu m, of which fuelwood 10%; fisheries production (2006) 162,341 (from aquaculture 8%). Mining and quarrying (2006): chromite (concentrate) 320,000; zinc (metal content) 66,109; gold 5,292 kg. Manufacturing (value added in €'000,000; 2005): electrical and optical equipment (largely telephone apparatus) 7,187; nonelectrical machinery and apparatus 3,744; chemicals and chemical products 3,615; paper and paper products 3,073; fabricated metal products 2,260; food products 2,127; wood and wood products (including metal furniture) 1,735; printing and publishing 1,694. Energy production (consumption): electricity (kWhr; 2007) 77,970,000,000 ([2005] 87,539,000,000); hard coal (metric tons; 2005) none (4,598,000); crude petroleum (barrels; 2005) none (72,100,000); petroleum products (metric tons; 2005) 11,825,000 (10,234,000); natural gas (cu m; 2005) none ([2005] 4,344,000,000).
Population economically active (2006): total 2,648,000; activity rate of total population 50.3% (participation rates: ages 15–64 [2004] 73.8%; female [2004] 48.1%; unemployed 7.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.6	104.2	105.1	105.3	106.2	107.8	110.6
Annual earnings index	104.5	108.2	112.6	116.8	121.4	125.1	129.2

Household income and expenditure (2004). Average household size 2.2; disposable income per household €31,706 (U.S.$39,367); sources of gross income (2003): wages and salaries 74.4%, rent 18.0%, self-employment 7.1%; expenditure: housing 25.6%, food, beverages, and tobacco 17.7%, transportation and communications 16.0%, recreation, culture, and education 11.7%.
Gross national income (GNI; 2007): U.S.$234,833,000,000 (U.S.$44,400 per capita); purchasing power parity GNI (U.S.$34,550 per capita).

Structure of gross domestic product and labour force

	2004 in value €'000,000	2004 % of total value	2006 labour force	2006 % of labour force
Agriculture, fishing, forestry	4,086	2.7	114,000	4.3
Mining	352	0.2	...	...
Manufacturing	28,728	19.2	465,000	17.6
Public utilities	3,106	2.1	...	...
Construction	6,989	4.7	162,000	6.1
Transp. and commun.	14,062	9.4	181,000	6.8
Trade, restaurants	15,880	10.6	381,000	14.4
Finance, real estate	27,228	18.2	336,000	12.7
Pub. admin., defense Services	29,498	19.7	801,000	30.2
Other	19,796[7]	13.2[7]	208,000[8]	7.9[8]
TOTAL	149,725	100.0	2,648,000	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 2,357; remittances (2007) 772; foreign direct investment (FDI; 2004–06 avg.) 3,739. Disbursements for (U.S.$'000,000): tourism (2006) 3,417; remittances (2007) 391; FDI (2004–06 avg.) 1,136.
Land use as % of total land area (2003): in temporary crops 7.3%, in permanent crops 0.03%, in pasture 0.09%; overall forest area (2005) 73.9%.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	+11,634	+9,603	+8,187	+5,426	+6,258	+6,095
% of total	14.0%	11.5%	9.1%	5.5%	5.4%	4.9%

Imports (2006): €55,341,000,000 (machinery and apparatus 26.8%; petroleum 11.6%; chemicals and chemical products 10.8%; road vehicles and parts 8.5%). *Major import sources* (2006): Russia 14.1%; Germany 13.9%; Sweden 9.8%; China 7.4%; U.K. 4.8%; The Netherlands 4.4%; U.S. 3.8%.
Exports (2006): €61,599,000,000 (telecommunications equipment 15.7%; paper and cardboard 13.2%; chemicals 6.1%; specialized machinery 5.7%; refined petroleum 4.9%; road vehicles 4.8%; nonferrous base metals 4.4%). *Major export destinations* (2006): Germany 11.3%; Sweden 10.5%; Russia 10.1%; U.K. 6.5%; U.S. 6.5%; The Netherlands 5.1%.

Transport and communications

Transport. Railroads (2007): route length 5,899 km; passenger-km 3,800,000,000; metric ton-km cargo 10,400,000,000. Roads (2005[2, 10]): total length 78,168 km (paved 65%). Vehicles (2005): passenger cars 2,430,345; trucks and buses 363,644. Air transport (2007): passenger-km 15,564,000,000; metric ton-km cargo 489,672,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,540	679	PCs	2004	2,515	482
Telephones				Dailies	2004	2,255[11]	431[11]
Cellular	2007	6,080[12]	1,152[12]	Internet users	2007	3,600	682
Landline	2007	1,740	330	Broadband	2007	1,759[12]	333[12]

Education and health

Educational attainment (2004[2]). Percentage of population age 25 and over having: incomplete upper-secondary education 35.6%; complete upper secondary or vocational 35.8%; higher 28.6%. *Literacy:* virtually 100%.

Education (2004)

	schools	teachers[13]	students	student/teacher ratio[13]
Primary/lower secondary (age 7–15)	3,720	44,313	593,148	13.5
Upper secondary (age 16–18)	436	7,295	120,531	16.7
Voc. (incl. higher)	333	20,092	362,742	15.2
Higher[14]	20	7,755	173,974	21.9

Health (2004): physicians (2007) 18,843 (1 per 281 persons); hospital beds 36,082 (1 per 145 persons); infant mortality rate per 1,000 live births 3.3; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 29,300 (army 70.0%, navy 14.0%, air force 16.0%). *Military expenditure as percentage of GDP* (2005): 1.4%; per capita expenditure U.S.$515.

[1]Finnish and Swedish are national (not official) languages. [2]January 1. [3]Detail does not add to total given because of rounding. [4]Based on land area only. [5]Within Helsinki urban agglomeration. [6]From farms of 1 hectare and larger only. [7]Taxes less subsidies. [8]Includes 204,000 unemployed persons not previously employed and 4,000 not adequately defined. [9]Imports c.i.f., exports f.o.b. [10]Excludes Åland Islands. [11]Circulation of daily newspapers. [12]Subscribers. [13]2003. [14]Universities only.

Internet resources for further information:
- **Embassy of Finland (Washington, D.C.) http://www.finland.org**
- **Statistics Finland http://www.stat.fi/index_en.html**

France[1]

Official name: République Française (French Republic).
Form of government: republic with two legislative houses (Parliament: Senate [343], National Assembly [577]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Paris.
Official language: French.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Regions Departments	Capitals	area sq mi	area sq km	population 2006[2] estimate
Alsace	Strasbourg			1,817,000
Bas-Rhin	Strasbourg	1,836	4,755	1,077,000
Haut-Rhin	Colmar	1,361	3,525	740,000
Aquitaine	Bordeaux			3,099,000
Dordogne	Périgueux	3,498	9,060	402,500
Gironde	Bordeaux	3,861	10,000	1,387,000
Landes	Mont-de-Marsan	3,569	9,243	359,500
Lot-et-Garonne	Agen	2,070	5,361	319,000
Pyrénées-Atlantiques	Pau	2,952	7,645	631,000
Auvergne	Clermont-Ferrand			1,333,000
Allier	Moulins	2,834	7,340	341,500
Cantal	Aurillac	2,211	5,726	150,500
Haute-Loire	Le Puy-en-Velay	1,922	4,977	218,000
Puy-de-Dôme	Clermont-Ferrand	3,077	7,970	623,000
Basse-Normandie (Lower Normandy)	Caen			1,449,000
Calvados	Caen	2,142	5,548	666,500
Manche	Saint-Lô	2,293	5,938	489,500
Orne	Alençon	2,356	6,103	293,000
Bourgogne (Burgundy)	Dijon			1,624,000
Côte-d'Or	Dijon	3,383	8,763	514,000
Nièvre	Nevers	2,632	6,817	221,500
Saône-et-Loire	Mâcon	3,311	8,575	546,000
Yonne	Auxerre	2,868	7,427	342,500
Bretagne (Brittany)	Rennes			3,081,000
Côtes-d'Armor	Saint-Brieuc	2,656	6,878	569,500
Finistère	Quimper	2,600	6,733	879,500
Ille-et-Vilaine	Rennes	2,616	6,775	938,500
Morbihan	Vannes	2,634	6,823	693,500
Centre	Orléans			2,505,000
Cher	Bourges	2,793	7,235	315,000
Eure-et-Loir	Chartres	2,270	5,880	419,000
Indre	Châteauroux	2,622	6,791	232,000
Indre-et-Loire	Tours	2,366	6,127	571,500
Loir-et-Cher	Blois	2,449	6,343	322,500
Loiret	Orléans	2,616	6,775	645,000
Champagne-Ardenne	Châlons su Marne			1,339,000
Ardennes	Charleville-Mézières	2,019	5,229	286,500
Aube	Troyes	2,318	6,004	299,500
Haute-Marne	Chaumont	2,398	6,211	186,500
Marne	Châlons-en-Champagne	3,151	8,162	566,500
Corse[3] (Corsica)	Ajaccio			279,000
Corse-du-Sud	Ajaccio	1,550	4,014	129,000
Haute-Corse	Bastia	1,802	4,666	150,000
Franche-Comté	Besançon			1,146,000
Doubs	Besançon	2,021	5,234	515,500
Haute-Saône	Vesoul	2,070	5,360	235,000
Jura	Lons-le-Saunier	1,930	4,999	255,500
Territoire de Belfort	Belfort	235	609	140,000
Haute-Normandie (Upper Normandy)	Rouen			1,811,000
Eure	Évreux	2,332	6,040	565,500
Seine-Maritime	Rouen	2,424	6,278	1,245,500
Île-de-France	Paris			11,491,000
Essonne	Évry	696	1,804	1,193,500
Hauts-de-Seine	Nanterre	68	176	1,532,000
Paris	Paris	40	105	2,168,000
Seine-et-Marne	Melun	2,284	5,915	1,267,500
Seine-Saint-Denis	Bobigny	91	236	1,485,000
Val-de-Marne	Créteil	95	245	1,293,000
Val-d'Oise	Cergy/Pontoise	481	1,246	1,153,500
Yvelines	Versailles	882	2,284	1,398,500
Languedoc-Roussillon	Montpellier			2,520,000
Aude	Carcassonne	2,370	6,139	339,500
Gard	Nîmes	2,260	5,853	685,000
Hérault	Montpellier	2,356	6,101	992,500
Lozère	Mende	1,995	5,167	77,500
Pyrénées-Orientales	Perpignan	1,589	4,116	425,500
Limousin	Limoges			725,000
Corrèze	Tulle	2,261	5,857	237,500
Creuse	Guéret	2,149	5,565	122,500
Haute-Vienne	Limoges	2,131	5,520	365,000
Lorraine	Metz			2,339,000
Meurthe-et-Moselle	Nancy	2,024	5,241	724,000
Meuse	Bar-le-Duc	2,400	6,216	192,500
Moselle	Metz	2,400	6,216	1,039,500
Vosges	Épinal	2,268	5,874	383,000
Midi-Pyrénées	Toulouse			2,755,000
Ariège	Foix	1,888	4,890	147,000
Aveyron	Rodez	3,373	8,736	271,500
Gers	Auch	2,416	6,257	180,000
Haute-Garonne	Toulouse	2,436	6,309	1,169,500
Haute-Pyrénées	Tarbes	1,724	4,464	230,500
Lot	Cahors	2,014	5,217	168,500
Tarn	Albi	2,223	5,758	365,000
Tarn-et-Garonne	Montauban	1,435	3,718	223,000
Nord-Pas-de-Calais	Lille			4,043,000
Nord	Lille	2,217	5,742	2,583,500
Pas-de-Calais	Arras	2,576	6,671	1,459,500

Area and population (continued)

Regions Departments	Capitals	area sq mi	area sq km	population 2006[2] estimate
Pays de la Loire	Nantes			3,426,000
Loire-Atlantique	Nantes	2,631	6,815	1,219,500
Maine-et-Loire	Angers	2,767	7,166	759,000
Mayenne	Laval	1,998	5,175	299,500
Sarthe	Le Mans	2,396	6,206	555,000
Vendée	La Roche-sur-Yon	2,595	6,720	593,000
Picardie (Picardy)	Amiens			1,886,000
Aisne	Laon	2,845	7,369	536,500
Oise	Beauvais	2,263	5,860	790,000
Somme	Amiens	2,382	6,170	559,500
Poitou-Charentes	Poitiers			1,713,000
Charente	Angoulême	2,300	5,956	344,500
Charente-Maritime	La Rochelle	2,650	6,864	596,000
Deux-Sevres	Niort	2,316	5,999	353,500
Vienne	Poitiers	2,699	6,990	419,000
Provence-Alpes-Côte d'Azur	Marseille			4,781,000
Alpes-de-Haute-Provence	Digne	2,674	6,925	154,500
Alpes-Maritimes	Nice	1,660	4,299	1,070,000
Bouches-du-Rhône	Marseille	1,964	5,087	1,916,500
Hautes-Alpes	Gap	2,142	5,549	133,000
Var	Toulon	2,306	5,973	974,000
Vaucluse	Avignon	1,377	3,567	533,000
Rhône-Alpes	Lyon			6,005,000
Ain	Bourg-en-Bresse	2,225	5,762	565,000
Ardèche	Privas	2,135	5,529	304,000
Drôme	Valence	2,521	6,530	466,500
Haute-Savoie	Annecy	1,694	4,388	693,500
Isère	Grenoble	2,869	7,431	1,172,000
Loire	Saint-Étienne	1,846	4,781	733,000
Rhône	Lyon	1,254	3,249	1,667,500
Savoie	Chambéry	2,327	6,028	403,500
TOTAL		210,026	543,965	61,167,000

Demography

Population (2008): 62,028,000.
Density (2008): persons per sq mi 295.3, persons per sq km 114.0.
Urban-rural (2003): urban 76.3%; rural 23.7%.
Sex distribution (2007[2]): male 48.60%; female 51.40%.
Age breakdown (2006[2]): under 15, 18.4%; 15–29, 19.1%; 30–44, 21.1%; 45–59, 20.4%; 60–74, 12.7%; 75–84, 6.3%; 85 and over, 2.0%.
Population projection: (2010) 62,677,000; (2020) 65,393,000.
Ethnic composition (2000): French 76.9%; Algerian and Moroccan Berber 2.2%; Italian 1.9%; Portuguese 1.5%; Moroccan Arab 1.5%; Fleming 1.4%; Algerian Arab 1.3%; Basque 1.3%; Jewish 1.2%; German 1.2%; Vietnamese 1.0%; Catalan 0.5%; other 8.1%.
Religious affiliation (2004): Roman Catholic 64.3%, of which practicing *c.* 8%; nonreligious/atheist *c.* 27%; Muslim 4.3%; Protestant 1.9%; Buddhist *c.* 1%; Jewish 0.6%; Jehovah's Witness 0.4%; Orthodox 0.2%; other 0.3%.
Major cities (2005): Paris 2,153,600 (urban agglomeration 9,854,000); Marseille 820,900 (1,384,000); Lyon 466,400 (1,408,000); Toulouse 435,000 (839,000); Nice 347,900 (915,000); Nantes 281,800 (544,932[4]); Strasbourg 272,700 (427,245[4]); Montpellier 244,300 (287,981[4]); Bordeaux 230,600 (794,000); Lille 225,100 (1,031,000); Rennes 209,900 (272,263[4]); Reims 184,800 (215,581[4]); Le Havre 183,900 (248,547[4]); Saint-Étienne 175,700 (291,960[4]).
Households (2004). Average household size 2.36; 1 person 32.8%, 2 persons 32.5%, 3 persons 15.1%, 4 persons 12.8%, 5 persons or more 6.8%. Individual households 14,320,000 (56.0%); collective households 11,232,000 (44.0%).
Immigration: total immigrant population (2005[2]) *c.* 4,850,000; immigrants admitted (2002) 205,707, of which North African 30.7%, EU 20.8%, sub-Saharan African 15.2%, Asian 14.1%, other European 11.8%.

Vital statistics

Birth rate per 1,000 population (2006): 13.1 (world avg. 20.3); (2005) within marriage 52.6%; outside of marriage 47.4%.
Death rate per 1,000 population (2006): 8.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 4.7 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman: 2006): 2.00.
Marriage/divorce rates per 1,000 population: (2006) 4.4/(2003) 2.1.
Life expectancy at birth (2006): male 77.2 years; female 84.1 years.
Major causes of death per 100,000 population (2004): malignant neoplasms (cancers) 251.9; diseases of the circulatory system 243.0; accidents and violence 61.7; diseases of the respiratory system 50.0; diseases of the digestive system 37.8; endocrine, metabolic, and nutritional disorders 31.1.
Adult population (ages 15–49) *living with HIV* (2007): 0.4% (world avg. 0.8%).

Social indicators

Educational attainment (2002). Percentage of population age 25–64 with no formal schooling through lower-secondary education 35%, upper secondary/higher vocational 41%, university 24%.
Quality of working life. Legally worked week for full-time employees (2005) 36.0 hours. Rate of fatal injuries per 100,000 insured workers (2004): 3.7. Average days lost to labour stoppages per 1,000 workers (2004): 13. Trade union membership (2003): 1,900,000 (*c.* 8% of labour force).
Access to services (2004). Proportion of principal residences having: electricity 97.4%; indoor toilet 94.6%; indoor kitchen with sink 94.2%; hot water 60.3%; air conditioner 15.4%.
Social participation. Eligible voters participating in last (May 2007) national election: 84.0%. Population over 15 years of age participating in voluntary associations (1997): 28.0%. Percentage of population who "never" or "almost never" attend church services (2000) 60%; percentage of Roman Catholic population who attend Mass weekly (2003) 12%.
Social deviance. Offense rate per 100,000 population (2006) for: murder 1.5, rape 16.0, other assault 269.2; theft (including burglary and housebreaking) 3,403.8. Incidence per 100,000 in general population of: homicide (2001) 0.8; suicide (2001) 16.1.

Leisure. Members of sports federations (2004): 15,226,000, of which football (soccer) 2,147,000, tennis 1,066,000. Movie tickets sold (2005): 174,200,000. Average daily hours of television viewing for population age 4 and over (2005): 3.43.

Material well-being (2004). Households possessing: automobile 81%; colour television 95%; personal computer 45%; washing machine 92%; microwave 74%; dishwasher (2001) 39%.

National economy

Gross national income (2006)[5]: U.S.$2,256,465,000,000 (U.S.$35,725 per capita).

Structure of gross domestic product and labour force

	2006		2005	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	32,700	1.8	953,100	3.4
Mining	...	...	41,700	0.2
Manufacturing	198,800	11.1	4,129,800	14.9
Construction	101,200	5.6	1,688,100	6.1
Public utilities	32,800	1.8	205,000	0.7
Transp. and commun.	66,400	3.7	1,599,400	5.8
Trade, hotels	197,100	11.0	4,176,200	15.1
Finance, real estate	568,200	31.7	3,256,400	11.8
Pub. admin., defense	126,000	7.0	2,358,800	8.5
Services	403,500	22.5	6,419,200	23.2
Other	65,300	3.6	2,808,100[6]	10.2[6]
TOTAL	1,792,000	100.0[7]	27,635,800	100.0[7]

Budget (2004). Revenue: €330,140,000,000 (value-added taxes 47.1%, direct taxes 38.3%, other taxes 14.6%). Expenditures: €355,470,000,000 (current civil expenditure 86.0%; military expenditure 8.7%, development expenditure 5.3%).

Public debt (2005): U.S.$1,375,000,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) for forage and silage 43,600,000, wheat 36,840,806, sugar beets 31,242,506, corn (maize) 13,107,000, barley 9,472,000, grapes 6,500,000, potatoes 6,271,000, rapeseed 4,554,000, apples 1,800,000, triticale 1,539,000, sunflower seeds 1,376,000, tomatoes 750,000, carrots and turnips 710,000, dry peas 643,000, lettuce and chicory 471,000, oats 443,000, peaches and nectarines 401,000, cauliflower and broccoli 370,000, green peas 355,000, string beans 355,000, leeks 182,910, chicory roots 141,000, mushrooms and truffles 125,000, flax fibre and tow 95,000; livestock (number of live animals) 19,359,000 cattle, 14,736,000 pigs, 8,499,000 sheep, 161,500,000 chickens, 28,105,000 turkeys, 23,190,000 ducks; roundwood (2006) 65,640,000 cu m, of which fuelwood 54%; fisheries production (2005) 832,793 (from aquaculture 31%); aquatic plants production 76,678 (from aquaculture, negligible). Mining and quarrying (2005): gypsum 3,500,000; crude talc 340,000; kaolin 316,000; gold (2004) 1,312 kg. Manufacturing (value added in U.S.$'000,000; 2003): food products 27,023; pharmaceuticals, soaps, and paints 22,675; motor vehicles, trailers, and motor vehicle parts 20,269; fabricated metal products 14,264; general purpose machinery 10,595; plastic products 8,754; medical, measuring, and testing appliances 7,551; aircraft and spacecraft 7,476; publishing 6,911; special purpose machinery 6,605; bricks, cement, and ceramics 5,922; basic chemicals 5,843; base metals 5,547, of which basic iron and steel 4,117; paper and paper products 5,532; beverages 5,509; furniture 4,218.

Financial aggregates[8]	2002	2003	2004	2005	2006	2007
Exchange rate, € per.						
U.S. dollar	0.95	0.79	0.73	0.85	0.76	0.68
£	1.43	1.41	1.42	1.46	1.49	1.36
SDR	1.30	1.18	1.14	1.21	1.14	1.07
International reserves (U.S.$)						
Total (excl. gold, '000,000)	28,365	30,186	35,314	27,753	42,652	45,710
SDRs ('000,000)	622	761	875	878	948	995
Reserve pos. in IMF ('000,000)	5,778	6,303	5,363	2,878	1,417	1,127
Foreign exchange	21,965	23,122	29,077	23,996	40,287	43,587
Gold ('000,000 fine troy oz)	97.25	97.25	95.98	90.85	87.44	83.69
% world reserves	10.5	10.7	10.7	10.3	10.1	9.8
Interest and prices						
Central bank discount (%)	.	..	.	.	...	..
Govt. bond yield (%)	4.86	4.13	4.10	3.41	3.80	4.30
Industrial share prices (2000 = 100)[9]	60.4	49.7	58.9	68.5	82.4	92.0
Balance of payments (U.S.$'000,000)						
Balance of visible trade	+7,620	+3,430	−4,840	−28,490	−37,700	−54,880
Imports, f.o.b.	−299,580	−358,500	−425,950	−468,390	−520,810	−600.92
Exports, f.o.b.	307,200	361,930	421,110	439,900	483,110	546,040
Balance of invisibles	+12,080	+11,330	+15,260	+9,420	+9,390	+23,630
Balance of payments, current account	+19,700	+14,760	+10,420	−19,070	−28,310	−31,250

Energy production (consumption): electricity (kW-hr; 2005) 575,351,000,000 (515,055,000,000); hard coal (metric tons; 2007) 168,000[10] ([2005] 21,346,000); lignite (metric tons; 2005) negligible (36,000); crude petroleum (barrels; 2007) 7,430,000 ([2005] 627,000,000); petroleum products (metric tons; 2005) 73,322,000[11] (73,378,000[11]); natural gas (cu m; 2007) 1,079,000,000 ([2005] 50,857,000,000).

Retail trade (value of sales in €'000,000; 2004): large food stores 162,600; large nonfood stores 136,400; auto repair shops 120,400; pharmacies and stores selling orthopedic equipment 32,600; shops selling bread, pastries, or meat 31,800; small food stores and boutiques 15,300.

Population economically active (2005): total 27,635,800; activity rate of total population 45.5% (participation rates: ages 15–64, 69.1%; female 46.4%; unemployed [April 2007] 8.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.7	103.6	105.8	108.0	110.0	111.8	113.4
Earnings index	104.5	108.4	112.8	116.1	119.3		

Household income and expenditure. Average household size (2004) 2.4; average disposable income per household (2004) €28,340 (U.S.$35,187); sources of income (2004): wages and salaries 66%, transfers 23%, self-employment 7%, other 4%; expenditure (2005): housing and energy 24.7%, transportation 14.9%, food and nonalcoholic beverages 13.9%, recreation and culture 9.3%, restaurants and hotels 6.2%, household furnishings 5.8%.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 42,283; remittances (2006) 12,554; foreign direct investment (FDI; 2004–06 avg.) 64,900. Disbursements for (U.S.$'000,000): tourism (2005) 31,180; remittances (2006) 4,268; FDI (2004–06 avg.) 97,581.

Land use as % of total land area (2003): in temporary crops 33.5%, in permanent crops 2.0%, in pasture 18.4%; overall forest area (2005) 28.3%.

Foreign trade[11, 12]

Balance of trade (current prices)

	2004	2005	2006	2007
U.S.$'000,000	−20,534	−41,503	−50,889	−58,783[13]
% of total	2.4%	4.6%	5.0%	5.5%

Imports (2006): U.S.$529,902,000,000 (machinery and apparatus 22.1%, of which electrical machinery/apparatus/parts 5.4%, general industrial machinery 3.9%, office machines/computers 3.5%; mineral fuels 14.8%, of which crude petroleum 7.5%, refined petroleum 3.5%; chemical products 12.7%, of which medicines and pharmaceuticals 3.5%; road vehicles/parts 10.2%; apparel and clothing accessories 3.5%; iron and steel 3.2%). *Major import sources:* Germany 16.3%; Italy 8.5%; Belgium 8.3%; Spain 6.9%; U.K. 6.1%; U.S. 6.0%; China 5.7%; The Netherlands 4.1%; Japan 2.4%; Russia 2.4%.

Exports (2006): U.S.$479,013,000,000 (machinery and apparatus 22.1%, of which electrical machinery/apparatus/parts 6.2%, general industrial machinery 4.8%, power-generating machinery 3.7%, telecommunications equipment 3.1%; chemicals and chemical products 15.7%, of which medicines and pharmaceuticals 5.1%, perfumery and cosmetics 2.3%; road vehicles/parts 12.1%; food 6.1%; aircraft/parts 6.0%; mineral fuels 4.3%; iron and steel 3.7%; alcoholic beverages [mostly wine] 2.4%). *Major export destinations:* Germany 14.5%; Spain 9.9%; Italy 9.1%; U.K. 8.5%; Belgium 7.4%; U.S. 6.9%; The Netherlands 4.1%; Switzerland 2.7%; China 2.1%; Poland 1.8%.

Transport and communications

Transport. Railroads (2004): route length (in operation) 29,085 km; (2003) passenger-km 53,080,000,000; (2003) metric ton-km cargo 46,840,000,000. Roads (2004): total length 951,220 km (paved 100%). Vehicles (2004): passenger cars 29,900,000; trucks and buses 6,139,000. Air transport (2005): passenger-km 115,116,000,000; metric ton-km cargo 5,526,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	23,723	391	PCs	2005	35,000	573
Telephones				Dailies	2004	7,934[14]	131[14]
Cellular	2006	51,662[15]	851[15]	Internet users	2006	30,100	496
Landline	2006	33,897	558	Broadband	2006	12,699[15]	208[15]

Education and health

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)[16]	56,158	363,285	3,962,600	10.9
Secondary (age 11–18)				
Lower	7,010	520,736	3,138,000	10.3
Upper (Professional)	1,708		720,200	
Upper (General/Technical)	2,625		1,512,800	
Higher	4,356[17]	89,300	2,269,800	25.4

Health (2004[2]): physicians 203,487 (1 per 296 persons); hospital beds 457,132 (1 per 132 persons); infant mortality rate per 1,000 live births (2006) 3.7; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 254,895 (army 52.4%, navy 17.3%, air force 24.9%, headquarters staff 2.0%, health services 3.4%)[18]. *Military expenditure as percentage of GDP* (2005): 2.5%[19]; per capita expenditure U.S.$871[19].

[1]Data for the French overseas departments of Guadeloupe, Martinique, French Guiana, and Réunion are excluded unless footnoted. [2]January 1. [3]Commonly referred to as a region but officially a territorial collectivity. [4]1999. [5]Includes the overseas departments of French Guiana, Guadeloupe, Martinique, and Réunion. [6]Includes 2,717,000 unemployed. [7]Detail does not add to total given because of rounding. [8]Data are end of year unless otherwise indicated. [9]Period average. [10]Last state-owned coal-producing mine closed in April 2004. [11]Includes Monaco. [12]Imports c.i.f.; exports f.o.b. [13]Excludes December. [14]Circulation of daily newspapers. [15]Subscribers. [16]Includes integration and adaptation schooling. [17]2003–04. [18]Paramilitary 199,148. [19]Includes military pensions.

Internet resource for further information:

- **INSEE http://www.insee.fr/fr/home/home_page.asp**

French Guiana

Official name: Département de la Guyane française (Department of French Guiana).
Political status: overseas department of France with two legislative houses (General Council [19]; Regional Council [31]).
Chief of state: President of France.
Heads of government: Prefect (for France); President of the General Council (for French Guiana); President of the Regional Council (for French Guiana).
Capital: Cayenne.
Official language: French.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.23.

Area and population

Arrondissements	Capitals	area sq mi	area sq km	population 1999 census
Cayenne	Cayenne	17,727	45,913	119,660
Saint-Laurent-du-Maroni	Saint-Laurent-du-Maroni	14,526	37,621	37,553
TOTAL		32,253	83,534	157,213

Demography

Population (2008): 217,000.
Density (2008): persons per sq mi 6.7, persons per sq km 2.6.
Urban-rural (2003): urban 75.4%; rural 24.6%.
Sex distribution (2005): male 50.58%; female 49.42%.
Age breakdown (2005): under 15, 29.3%; 15–29, 22.8%; 30–44, 21.1%; 45–59, 17.4%; 60–74, 7.2%; 75 and over, 2.2%.
Population projection: (2010) 228,000; (2020) 280,000.
Doubling time: 26 years.
Ethnic composition (2000): Guianese Mulatto 37.9%; French 8.0%; Haitian 8.0%; Surinamese 6.0%; Antillean 5.0%; Chinese 5.0%; Brazilian 4.9%; East Indian 4.0%; other (other West Indian, Hmong, other South American) 21.2%.
Religious affiliation (2000): Christian 84.6%, of which Roman Catholic 80.0%, Protestant 3.9%; Chinese folk-religionist 3.6%; Spiritist 3.5%; nonreligious/atheist 3.0%; traditional beliefs 1.9%; Hindu 1.6%; Muslim 0.9%; other 0.9%.
Major cities (1999)[1]: Cayenne (2003) 60,500 (urban agglomeration 84,181); Saint-Laurent-du-Maroni 19,211; Kourou 19,107; Matoury 18,032[2]; Rémire-Montjoly 15,555[2].

Vital statistics

Birth rate per 1,000 population (2006): 30.5 (world avg. 20.3); (2005) within marriage *c.* 10%; outside of marriage *c.* 90%.
Death rate per 1,000 population (2006): 3.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 27.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 4.10.
Marriage/divorce rates per 1,000 population: (2005) 3.0/(2003) 0.8.
Life expectancy at birth (2006): male 74.0 years; female 80.8 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system *c.* 85; violence and accidents *c.* 80; malignant neoplasms (cancers) *c.* 58; infectious and parasitic diseases *c.* 35, of which HIV/AIDS *c.* 23; endocrine and metabolic disorders *c.* 16; diseases of the digestive system *c.* 12.

National economy

Budget (2002). Revenue: €145,000,000 (direct taxes 33.1%, indirect taxes 31.7%, revenue from French central government 20.7%). Expenditures: €145,000,000 (current expenditures 83.4%, capital expenditures 16.6%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 23,000, cassava 10,300, cabbages 6,300, sugarcane 5,500, bananas 4,500, taro 4,100, tomatoes 3,700, green beans 3,300; livestock (number of live animals) 10,500 pigs, 9,200 cattle; roundwood (2006) 171,376 cu m, of which fuelwood 61%; fisheries production (2006) 5,207 (from aquaculture 1%). Mining and quarrying (2004): stone, sand, and gravel 3,000; gold 2,564 kg; tantalum 1,500 kg. Manufacturing (2001): pork 1,245; chicken meat 560; finished wood products 3,172 cu m[3]; rum (2004) 3,786 hectolitres; other products include leather goods, clothing, rosewood essence, yogurt, and beer. Number of satellites launched from the Kourou Space Centre (2007): 6[4]. Energy production (consumption): electricity (kW-hr; 2005) 430,000,000 ([2007] 582,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (267,000); natural gas, none (none).
Household income and expenditure. Average household size (1999) 3.3; income per household (2000) €30,542 (U.S.$28,139); sources of income (2000): wages and salaries 55.4%, self-employment 17.6%, transfer payments 14.4%; expenditure (2005)[5]: food and beverages 21.7%, housing and energy 20.8%, transportation and communications 15.4%, restaurants and hotels 7.9%, household furnishings 7.3%, clothing and footwear 6.4%.
Land use as % of total land area (2003): in temporary crops 0.14%, in permanent crops 0.05%, in pasture 0.08%; overall forest area (2005) 91.8%.
Gross domestic product (at current market prices; 2006): U.S.$3,410,000,000 (U.S.$16,589 per capita).

Structure of gross domestic product and labour force

	2000 in value €'000,000	2000 % of total value	2002 labour force[6]	2002 % of labour force[6]
Agriculture, forestry, fishing	81	5.1	1,024	2.1
Mining	30	1.9	409	0.8
Manufacturing	158	9.9	1,053	2.1
Construction	147	9.2	2,583	5.2
Public utilities	22	1.4	644	1.3
Finance, real estate[7]	379	23.8	830	1.7
Transp. and commun.	−165	−10.4	2,134	4.3
Trade, restaurants, hotels	245	15.4	4,815	9.8
Pub. admin., defense	256	16.1	9,758	19.8
Services	439	27.6	14,975	30.4
Other	—	—	11,095	22.5
TOTAL	1,592	100.0	49,320	100.0

Population economically active (2005): total 60,012; activity rate of total population 30.3% (participation rates: ages 15 and over 65.0%; female 44.7%; unemployed [2007] 20.6%).

Price and earnings indexes (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	101.6	103.1	105.2	106.4	108.2	110.4
Monthly earnings index[8,9]	100.0	101.6	102.6	102.6	103.9	.	.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 45; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	−505	−524	−581	−641	−628	−664
% of total	65.1%	70.2%	76.3%	77.5%	72.0%	77.9%

Imports (2007): €757,900,000 (machinery and apparatus 21.5%; food and agricultural products 19.0%; mineral fuels 14.8%; road vehicles 12.9%). *Major import sources* (2006): EU *c.* 52%, of which France *c.* 42% (including Martinique and Guadeloupe *c.* 2%); Trinidad and Tobago *c.* 12%; Asian countries *c.* 6%; unspecified *c.* 29%.
Exports (2006): €122,700,000 (gold 43.4%, motor vehicles/parts 16.1%, machinery and apparatus 14.3%, boats and aircraft/spacecraft parts 9.4%, shrimp 7.6%, wood/paper products 2.2%). *Major export destinations* (2006): EU *c.* 79%, of which France *c.* 64% (including Martinique and Guadeloupe *c.* 6%), Italy *c.* 7%; other Europe (nearly all Switzerland) *c.* 15%; Suriname *c.* 3%.

Transport and communications

Transport. Railroads: none. Roads (1996): total length 774 mi, 1,245 km (paved, n.a.). Vehicles (1999): passenger cars 32,900; trucks and buses 11,900. Air transport (2005): passengers carried 375,844; cargo carried (2007) 4,973 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1998	37	202	PCs	2004	33	180
Telephones				Dailies	2005	9[10]	46[10]
Cellular	2004	98[11]	536[11]	Internet users	2005	42	216
Landline	2001	51	301	Broadband	2005	.	.

Education and health

Educational attainment (1999). Percentage of population age 20 and over having: no formal education through lower secondary education 57.3%; vocational 17.5%; upper secondary 9.3%; incomplete higher 5.6%; completed higher 6.7%; other 3.6%. *Literacy:* n.a.

Education (2005–06)

	schools	teachers[12]	students	student/teacher ratio
Primary (age 6–11)	105	2,751	23,972	
Secondary (age 12–18)	40	4,553	26,337	
Higher[13]	1	42	1,371[14]	.

Health (2005): physicians 342 (1 per 580 persons); hospital beds 697 (1 per 284 persons); infant mortality rate per 1,000 live births 12.1; undernourished population, n.a.

Military

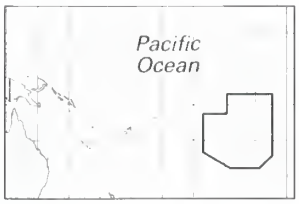
Total active duty personnel (November 2007): French troops 1,470 (army 88.4%, navy 11.6%).

[1]Commune population. [2]Within Cayenne urban agglomeration. [3]1996. [4]In 2004 the European Space Agency accounted for 26% of GDP and employed 8,300. [5]Weights of consumer price index components. [6]Employed only. [7]Includes insurance. [8]Index based on end-of-year figures. [9]Based on minimum-level wage in public administration. [10]Circulation of daily newspapers. [11]Subscribers. [12]2002–03. [13]Université des Antilles et de la Guyane, Cayenne campus. [14]2004–05.

Internet resources for further information:

- **Chambre de Commerce et d'Industrie de la Guyane**
  http://www.guyane.cci.fr
- **INSEE Guyane**
  http://www.insee.fr/fr/regions/guyane

French Polynesia



Official name. Polynesie française (French); Polynesia Farani (Tahitian) (French Polynesia).
Political status. overseas collectivity (France) with one legislative house (Assembly [57]).
Chief of state. President of France.
Heads of government: High Commissioner (for France); President of the Government (for French Polynesia).
Capital: Papeete.
Official language: French[1].
Official religion: none.
Monetary unit: CFP franc (CFPF); valuation (Sept. 8, 2008) 1 U.S.$ = CFPF 83.60; 1 £ = CFPF 147.70.

Area and population

Administrative subdivisions	Capitals	area sq mi	area sq km	population 2007 census
Îles Australes (Austral [Tubuai] Islands)	Mataura	57	148	6,310
Îles du Vent (Windward Islands)	Papeete	461	1,194	194,623
Îles Marquises (Marquesas Archipelago)	Taiohae	405	1,049	8,632
Îles Sous le Vent (Leeward Islands)	Uturoa	156	404	33,184
Îles Tuamotu et Gambier (Tuamotu–Gambier Islands)	Papeete	280	726	16,847
TOTAL		1,544[2]	4,000[2]	259,596

Demography

Population (2008): 263,000.
Density (2008)[3]: persons per sq mi 193.5, persons per sq km 74.7.
Urban-rural (2005): urban 51.9%; rural 48.1%.
Sex distribution (2005): male 51.64%; female 48.36%.
Age breakdown (2005): under 15, 26.8%; 15–29, 27.5%; 30–44, 22.9%; 45–59, 14.0%; 60–74, 6.9%; 75 and over, 1.9%.
Population projection: (2010) 269,000; (2020) 298,000.
Ethnic composition (2000): Polynesian 58.4%, of which Tahitian 41.0%, Tuamotuan 8.5%; mixed European-Polynesian 17.0%; Han Chinese 11.3%; French 11.0%; other 2.3%.
Religious affiliation (2005): Protestant *c.* 36%, of which Maôhi Protestant Church (Presbyterian) *c.* 33%; Roman Catholic *c.* 31%; other Christian *c.* 11%, of which Mormon *c.* 6%; Chinese folk-religionist, nonreligious, and other *c.* 22%.
Major communes (2007): Faaa 29,851[4]; Papeete 26,017 (urban agglomeration 131,695)[5]; Punaauia 25,441[4]; Pirae 14,475[4]; Nunue 4,927[6].

Vital statistics

Birth rate per 1,000 population (2006): 17.8 (world avg. 20.3); (2004) within marriage *c.* 26%; outside of marriage *c.* 74%.
Death rate per 1,000 population (2006): 4.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 13.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.20.
Marriage/divorce rates per 1,000 population (2006): 4.6/n.a.
Life expectancy at birth (2006): male 73.0 years; female 76.9 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 105.3; malignant neoplasms (cancers) 99.2; accidents, suicide, and violence 49.4; respiratory diseases 37.6; diseases of the genitourinary system 19.0.

National economy

Budget (2005). Revenue: CFPF 100,343,000,000 (indirect taxes 70.7%, direct taxes and nontax revenue 29.3%). Expenditures: CFPF 148,618,000,000 (current expenditure 68.7%, capital expenditure 31.3%).
Public debt (external, outstanding; 1999): U.S.$542,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 87,000; roots and tubers 10,450 (of which cassava 4,300), copra 9,054, pineapples 3,400, sugarcane 3,000, *noni* juice and puree (export production) 2,578, tomatoes 1,100, lettuce 900, cucumbers 870, bananas 800, vanilla 42; livestock (number of live animals) 27,000 pigs, 16,500 goats, 12,000 cattle; roundwood, n.a.; fisheries production (2006) 13,437 (from aquaculture 10%); export production of black pearls (2007) 7,816 kg. Mining and quarrying: phosphate deposits were not mined in 2005. Manufacturing (2004): copra (metric tons sold) 4,143; coconut oil (2001) 5,000; other manufactures include *monoï* oil (primarily refined coconut and sandalwood oils), beer, printed cloth, and sandals. Energy production (consumption): electricity (kW-hr; 2007) 544,800,000[7] ([2005] 493,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (223,000).
Population economically active (2002): total 99,498; activity rate of total population 40.6% (participation rates: ages 15–64, 61.7%; female 40.0%; unemployed 11.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.0	103.9	104.3	104.8	105.8	108.8	111.1
Earnings index	102.5	105.2	108.6	110.6	112.0	117.8	120.4

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 558; remittances (2007) 601; foreign direct investment (FDI; 2004–06 avg.) 5. Disbursements for (U.S.$'000,000): tourism (2006) 298; remittances (2007) 51; FDI (2004–06 avg.) 9.
Gross national income (2006): U.S.$5,643,000,000 (U.S.$21,766 per capita).

Structure of gross domestic product and labour force

	1997 in value CFPF '000,000	1997 % of total	2006 labour force[8]	2006 % of labour force[8]
Agriculture, fishing	15,534	4.1	2,808	4.1
Mining and quarrying			156	0.2
Manufacturing[9]	26,360	7.0	4,645	6.8
Construction	20,104	5.3	5,961	8.8
Public utilities[9]	12,221	3.2	537	0.8
Transp. and commun.	27,832	7.4	6,509	9.6
Trade	81,854	21.6	17,578	25.8
Finance, real estate	97,360	25.7	6,307	9.3
Services			8,469	12.4
Pub. admin., defense	97,238	25.7	15,070	22.1
TOTAL	378,503	100.0	68,040	100.0[10]

Household income and expenditure. Average household size (2007) 3.8; average annual income per household, n.a.; sources of income (1993): salaries 61.9%, self-employment 21.5%, transfer payments 16.6%; expenditure (2000–01): food and beverages 21.9%, housing 19.2%, transportation 16.7%, hotel and café expenditures 7.7%, culture and recreation 6.9%, household furnishings 5.8%.
Land use as % of total land area (2003): in temporary crops 0.8%, in permanent crops 6.0%, in pasture 5.5%; overall forest area (2005) 28.7%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFPF '000,000	−139,084	−149,169	−124,310	−143,378	−135,110	−145,318
% of total	76.7%	82.5%	77.8%	78.0%	75.1%	80.9%

Imports (2006): CFPF 157,489,000,000 (machinery and apparatus 16.9%; mineral fuels 12.7%; motor vehicles and parts 10.0%; pharmaceutical products 4.1%). *Major import sources:* France 30.6%; Singapore 12.4%; U.S. 10.3%; China 6.6%; New Zealand 6.5%.
Exports (2006): CFPF 22,380,000,000 (pearl products [mostly black cultured pearls] 56.2%; transportation [including aerospace] equipment 8.3%; *noni*[12] fruit 5.2%; fish 1.9%; coconut oil 1.1%; vanilla 0.9%; *monoï* oil 0.9%). *Major export destinations:* Hong Kong 26.8%; Japan 23.1%; France 11.0%; U.S. 10.1%; New Caledonia 1.7%.

Transport and communications

Transport. Railroads: none. Roads (1999): total length 1,609 mi, 2,590 km (paved 67%). Motor vehicles: passenger cars (1996) 47,300; trucks and buses (1993) 15,300. Air transport (2007)[13]: passenger-km 4,509,000,000; metric ton-km cargo (2004) 96,492,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	56	223	PCs	2005	28	109
Telephones				Dailies	2005	27[14]	106[14]
Cellular	2007	175[15]	665[15]	Internet users	2007	75	285
Landline	2004	53	216	Broadband	2007	23[15]	90[15]

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling 4.9%; less than lower-secondary education 46.2%; lower secondary 10.9%; upper secondary 11.7%; vocational 15.8%; higher 10.5%. *Literacy* (2000): virtually 100%.

Education (2001–02)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)[16]	251	2,811	44,634	15.9
Secondary (age 11–17)	90	2,035	32,524	16.0
Vocational		316	19,752	62.5
Higher[17]	1	50	2,343	46.9

Health: physicians (2004) 447 (1 per 561 persons); hospital beds (2003) 971 (1 per 256 persons); infant mortality rate per 1,000 live births (2006) 6.8; undernourished population (2002–04) 10,000 (4% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

Military

Total active duty personnel (November 2007): 1,510 French military personnel (army 53.0%, navy 47.0%). *Military expenditure as percentage of GDP:* n.a.

[1]The Tahitian language provides the fundamental element of cultural identity per the Statute of Autonomy of French Polynesia. [2]Approximate total area including inland water; total land area is 1,359 sq mi (3,521 sq km). [3]Based on land area. [4]Part of Papeete urban agglomeration. [5]On Tahiti in the Îles du Vent (Windward Islands). [6]Nunue is officially an associated commune. Located on Bora-Bora in the Îles Sous le Vent (Leeward Islands), it is the largest town not on the island of Tahiti. [7]Tahiti only. [8]Salaried employees only. [9]The manufacture of energy-generating products is included in Public utilities. [10]Detail does not add to total given because of rounding. [11]Imports c.i.f.; exports f.o.b. [12]Fruit known locally as *nono*; also known as Indian mulberry. [13]Air Tahiti and Air Tahiti Nui only. [14]Circulation of daily newspapers. [15]Subscribers. [16]Includes preprimary. [17]University of French Polynesia only; 2003–04.

Internet resource for further information:
- **Institut de la Statistique de la Polynésie Francaise http://www.ispf.pf**

Gabon

Official name: République Gabonaise (Gabonese Republic).
Form of government: unitary multiparty republic with a Parliament comprising two legislative houses (Senate [91]; National Assembly [120]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Libreville.
Official language: French.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2002 estimate[1]
Estuaire	Libreville	8,008	20,740	597,200
Haut-Ogooué	Franceville	14,111	36,547	134,500
Moyen-Ogooué	Lambaréné	7,156	18,535	54,600
Ngounié	Mouila	14,575	37,750	100,300
Nyanga	Tchibanga	8,218	21,285	50,800
Ogooué-Ivindo	Makokou	17,790	46,075	63,000
Ogooué-Lolo	Koulamoutou	9,799	25,380	56,600
Ogooué-Maritime	Port-Gentil	8,838	22,890	126,200
Woleu-Ntem	Oyem	14,851	38,465	125,400
TOTAL		103,347[2]	267,667	1,308,600[3]

Demography

Population (2008): 1,486,000.
Density (2008): persons per sq mi 14.3, persons per sq km 5.6.
Urban-rural (2006): urban 85.7%; rural 14.3%.
Sex distribution (2006): male 49.67%; female 50.33%.
Age breakdown (2005): under 15, 40.0%; 15–29, 28.3%; 30–44, 16.1%; 45–59, 9.3%; 60–74, 4.6%; 75–84, 1.4%; 85 and over, 0.3%.
Population projection: (2010) 1,545,000; (2020) 1,877,000.
Doubling time: 29 years.
Ethnic composition (2000): Fang 28.6%; Punu 10.2%; Nzebi 8.9%; French 6.7%; Mpongwe 4.1%; Teke 4.0%; other 37.5%.
Religious affiliation (2005): Christian *c.* 73%[4], of which Roman Catholic *c.* 45%[4], Protestant/independent Christian *c.* 28%[4]; Muslim *c.* 12%[5]; traditional beliefs *c.* 10%; nonreligious *c.* 5%.
Major urban areas (2003): Libreville 661,600; Port-Gentil 116,200; Franceville 41,300; Lambaréné 9,000.

Vital statistics

Birth rate per 1,000 population (2006): 36.2 (world avg. 20.3).
Death rate per 1,000 population (2006): 12.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 23.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 4.74.
Life expectancy at birth (2006): male 53.2 years; female 55.8 years.
Adult population (ages 15–49) *living with HIV* (2007): 5.9%[6] (world avg. 0.8%).

National economy

Budget (2005). Revenue: CFAF 1,432,200,000,000 (oil revenues 63.3%; taxes on international trade 15.0%, of which VAT 5.6%; direct taxes 9.7%; indirect taxes 7.9%; other revenues 4.1%). Expenditures: CFAF 872,400,000,000 (current expenditure 82.2%, of which wages and salaries 26.1%, transfers 23.8%, debt service 14.8%; capital expenditure 17.8%).
Public debt (external, outstanding; 2006): U.S.$3,860,000,000.
Gross national income (GNI; 2007): U.S.$8,876,000,000 (U.S.$6,670 per capita); purchasing power parity GNI (U.S.$13,080 per capita).

Structure of gross domestic product and labour force

	2004 in value CFAF '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	214,600	5.6	201,000	32.9
Crude petroleum	1,654,700	43.3		
Other mining	66,300	1.7		
Manufacturing	188,600	4.9		
Construction	81,200	2.1		
Public utilities	51,300	1.4		
Transp. and commun.	206,600	5.4	410,000	67.1
Trade, restaurants	238,300	6.2		
Finance, real estate	62,700	1.7		
Services	475,200	12.5		
Pub. admin., defense	308,600	8.1		
Other	270,000[7]	7.1[7]		
TOTAL	3,818,000[2]	100.0	611,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): plantains 275,000, cassava 240,000, sugarcane 220,000, yams 158,000, taro 56,000, vegetables 35,000, oil palm fruit 33,500, game meat 21,000, peanuts (groundnuts) 18,000, natural rubber 12,000; livestock (number of live animals) 3,100,000 chickens, 213,000 pigs; roundwood (2006) 4,030,000 cu m, of which fuelwood 13%; fisheries production (2006) 41,647 (from aquaculture, negligible). Mining and quarrying (2005): manganese ore 2,859,000; gold 300 kg. Manufacturing (value added in CFAF '000,000,000; 2004): agricultural products 48.0; wood products (excluding furniture) 31.3; refined petroleum products 18.1. Energy production (consumption): electricity (kW-hr; 2005) 1,569,000,000 (1,569,000,000); coal, none (none); crude petroleum (barrels; 2007) 83,900,000 ([2005] 5,540,000); petroleum products (metric tons; 2005) 727,000 (431,000); natural gas (cu m; 2005) 126,000,000 (126,000,000).
Population economically active (2003)[9]: total 570,000; activity rate of total population 42.5% (participation rates: ages 15–64, 74.1%; female 43.0%; unemployed *c.* 21%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.1	102.2	104.5	104.9	106.1	104.6	109.9

Household income and expenditure (2004). Average household size 5.0; average annual income per household[10] CFAF 1,730,000 (U.S.$3,275); sources of income: n.a.; expenditure[10]: food 85.3%, transportation and communications 3.6%, clothing 1.8%, housing 1.4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 15; remittances (2007) 7; foreign direct investment (2004–06 avg.) 269; official development assistance (2006) 31. Disbursements for (U.S.$'000,000): tourism (2004) 214; remittances (2007) 110.
Land use as % of total land area (2003): in temporary crops 1.3%, in permanent crops 0.7%, in pasture 18.1%; overall forest area (2005) 84.5%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+1,666	+1,783	+1,815	+3,597	+4,290	+3,750
% of total	52.8%	46.1%	48.5%	55.0%	55.4%	46.0%

Imports (2006): U.S.$1,725,000,000 (machinery and apparatus 27.6%, of which general industrial machinery 8.8%; food 13.0%; road vehicles/parts 9.9%; chemicals and chemical products 9.2%). *Major import sources:* France 39.9%; Belgium 14.2%; U.S. 7.3%; Cameroon 3.5%; Japan 3.0%.
Exports (2006): U.S.$6,015,000,000 (crude petroleum 84.4%, rough wood 5.1%, manganese ore and concentrate 3.1%, veneer/plywood 2.0%, refined petroleum 1.2%). *Major export destinations:* U.S. 58.4%; China 10.6%; France 7.1%; Singapore 5.3%; Switzerland 2.6%.

Transport and communications

Transport. Railroads (2005): route length 506 mi, 814 km; (2002) passenger-km 97,500,000; (2002) metric ton-km cargo 1,553,000,000. Roads (2004): total length 5,700 mi, 9,170 km (paved 10%). Vehicles (1997): passenger cars 24,750; trucks and buses 16,490. Air transport (2002): passenger-km 643,000,000; metric ton-km cargo, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	220	173	PCs	2005	45	33
Telephones				Dailies	2005	48[12]	35[12]
Cellular	2007	1,169[13]	803[13]	Internet users	2007	145	100
Landline	2007	27	18	Broadband	2007	2.0[13]	1.3[13]

Education and health

Educational attainment (2000)[14]: no formal schooling 6.2%; incomplete primary and complete primary education 32.7%; lower secondary 41.3%; upper secondary 14.2%; higher 5.6%. *Literacy* (2000): total population age 15 and over literate 71%; males literate 80%; females literate 62%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary		7,807	281,371	36.0
Secondary		2,504[15]	97,604[16]	
Voc., teacher tr.			7,587[15]	
Higher[17]	2	410	5,600	13.7

Health (2003–04): physicians 270 (1 per 5,006 persons); hospital beds 4,460 (1 per 303 persons); infant mortality rate per 1,000 live births (2006) 54.5; undernourished population (2002–04) 60,000 (5% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2007): 4,700 (army 68.1%, navy 10.6%, air force 21.3%); French troops (2007) 2,260. *Military expenditure as percentage of GDP* (2005): 1.5%; per capita expenditure U.S.$79.

[1]Unofficial estimate not adjusted per 2003 provisional census results. [2]Detail does not add to total given because of rounding. [3]December 2003 provisional census results equal 1,269,000. [4]Many also practice elements of traditional beliefs. [5]Mostly foreigners. [6]Statistically derived midpoint within range. [7]Indirect taxes. [8]Excludes about 400 kg of illegally mined gold smuggled out of Gabon. Uranium mining ceased in 1999. [9]Estimates of the ILO Employment Trends Unit. [10]Figures based on a national sample survey of 529 households. [11]Imports c.i.f.; exports f.o.b. [12]Circulation of daily newspapers. [13]Subscribers. [14]Figures based on a national sample survey of people ages 15–59 from 6,203 households. [15]2002–03. [16]2000–01. [17]2006; Université Omar Bongo and Université des Sciences et Techniques de Masuku only.

Internet resources for further information:

- **Direction Générale de la Statistique et des Études Économiques**
  http://www.stat-gabon.ga/Donnees/index-data.htm
- **La Banque de France: La Zone Franc**
  http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm

Gambia, The

Official name: The Republic of The Gambia.
Form of government: multiparty republic with one legislative house (National Assembly [53[1]]).
Head of state and government: President.
Capital: Banjul.
Official language: English.
Official religion: none.
Monetary unit: dalasi (D); valuation (Sept. 8, 2008) 1 U.S.$ = D 22.08; 1 £ = D 39.00.

Area and population

Divisions	Capitals	area sq mi	area sq km	population 2003 census
Basse	Basse	791	2,048	182,586
Brikama	Brikama	681	1,764	389,594
Janjanbureh (Georgetown)	Janjanbureh (Georgetown)	565	1,463	107,212
Kerewan	Kerewan	849	2,199	172,835
Kuntaur	Kuntaur	579	1,501	78,491
Mansakonko	Mansakonko	603	1,561	72,167
Municipal Council				
Kanifing[2, 3]		29	76	322,735
City				
Banjul[3]	—	5	12	35,061
SUBTOTAL		4,102	10,624	
REMAINDER		261	676	
TOTAL		4,363[4]	11,300[4]	1,360,681

Demography

Population (2008): 1,754,000[5].
Density (2008): persons per sq mi 402.0, persons per sq km 155.2.
Urban-rural (2006): urban 26.2%; rural 73.8%.
Sex distribution (2003): male 49.59%; female 50.41%.
Age breakdown (2005): under 15, 40.1%; 15–29, 26.4%; 30–44, 17.3%; 45–59, 10.2%; 60–74, 5.0%; 75–84, 0.9%; 85 and over, 0.1%.
Population projection: (2010) 1,845,000; (2020) 2,301,000.
Doubling time: 26 years.
Ethnic composition (2003): Malinke *c.* 42%; Fulani *c.* 18%; Wolof *c.* 16%; Diola *c.* 10%; Soninke *c.* 9%; other *c.* 5%.
Religious affiliation (2005): Muslim *c.* 90%; Christian (mostly Roman Catholic) *c.* 9%; traditional beliefs/other *c.* 1%.
Major cities/urban areas (2004): Serekunda 225,500[2]; Brikama 81,400; Bakau 74,700[2]; Banjul 36,100 (Greater Banjul [2003] 523,589[3]); Farafenni 31,600.

Vital statistics

Birth rate per 1,000 population (2006): 39.4 (world avg. 20.3).
Death rate per 1,000 population (2006): 12.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 27.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2003): 5.13.
Marriage/divorce rates per 1,000 population: n.a.
Life expectancy at birth (2006): male 52.3 years; female 56.0 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases *c.* 404, of which malaria *c.* 94; cardiovascular diseases *c.* 172; lower respiratory infections *c.* 145; accidents *c.* 80.

National economy

Budget (2005). Revenue: D 2,823,500,000 (tax revenue 80.2%, of which taxes on international trade 42.7%, corporate taxes 14.4%; nontax revenue 12.0%; grants 7.8%). Expenditures: D 3,961,100,000 (current expenditure 61.1%, of which interest payments 28.6%; capital expenditure 38.9%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): millet 160,000, peanuts (groundnuts) 100,000, sorghum 40,000, corn (maize) 40,000, paddy rice 40,000, oil palm fruit 36,000, fresh vegetables 9,000, cassava 7,800, pulses (mostly beans) 3,300, findo (local cereal; 2005) 600; livestock (number of live animals) 334,000 cattle, 280,000 goats, 150,000 sheep; roundwood (2006) 769,021 cu m, of which fuelwood 85%; fisheries production (2006) 34,912 (from aquaculture, negligible). Mining and quarrying: sand, clay ([2006] 13,700), and gravel are excavated for local use. Manufacturing (value added in U.S.$; 1995): food products and beverages 6,000,000; textiles, clothing, and footwear 750,000; wood products 550,000. Energy production (consumption): electricity (kW-hr; 2005) 151,000,000 (151,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (102,000); natural gas, none (none).
Population economically active (2003): total 730,000; activity rate of total population 52.2% (participation rates: ages 15-64, n.a.; female 44.2%; unemployed [2004] extremely high).

Price and earnings indexes (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	108.1	113.4	132.7	151.6	158.9	162.2
Daily earnings index[6]	100.0	100.0	106.0	132.5	132.5	132.5	...

Household income and expenditure. Average household size (2003) 8.6; income per household: n.a.; sources of income: n.a.; expenditure (1991)[7]: food and beverages 58.0%, clothing and footwear 17.5%, energy and water 5.4%, housing 5.1%, education, health, transportation and communications, recreation, and other 14.0%.
Public debt (external, outstanding; 2006): U.S.$689,000,000.
Gross national income (GNI; 2007): U.S.$544,000,000 (U.S.$320 per capita); purchasing power parity GNI (U.S.$1,140 per capita).

Structure of gross domestic product and labour force

	2005 in value D '000,000	2005 % of total value	1993 labour force[8]	1993 % of labour force[8]
Agriculture	3,900	29.6	181,752	52.6
Mining	[9]	[9]	398	0.1
Manufacturing	618	4.7	21,682	6.3
Construction	819[9]	6.2[9]	9,679	2.8
Public utilities	129	1.0	1,858	0.5
Transp. and commun.	2,405	18.2	14,203	4.1
Trade	2,067	15.7	54,728	15.8
Finance, real estate	714	5.4	2,415	0.7
Public administration	872	6.6	41,254	11.9
Services	422	3.2		
Other	1,235[10]	9.4[10]	17,412[11]	5.0[11]
TOTAL	13,180[12, 13]	100.0	345,381	100.0[13]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 66; remittances (2007) 64; foreign direct investment (FDI; 2004–06 avg.) 55; official development assistance (2006) 74. Disbursements for (U.S.$'000,000): tourism (2006) 6; remittances (2007) 1.
Land use as % of total land area (2003): in temporary crops 31.5%, in permanent crops 0.5%, in pasture 45.9%; overall forest area (2005) 41.7%.

Foreign trade[14]

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.$'000,000	–63.3	–42.6	–50.8	–51.6	–109.6	–135.2
% of total	20.0%	17.3%	18.9%	20.3%	30.1%	31.9%

Imports (2004): U.S.$236,600,000 (food and live animals 27.3%; machinery and transport equipment 18.1%; mineral fuels 10.1%; chemicals and chemical products 7.4%). *Major import sources*[15]: China 24.6%; Brazil 16.8%; Senegal 10.4%; United Kingdom 5.8%; The Netherlands 4.5%.
Exports (2004): U.S.$127,000,000 (reexports 79.7%; peanuts [groundnuts] 13.3%; fruits and vegetables 4.1%). *Major export destinations*[15]: Thailand 16.5%; United Kingdom 15.4%; France 14.0%; India 12.8%; Germany 9.1%.

Transport and communications

Transport Railroads: none. Roads (2004): total length 2,325 mi, 3,742 km (paved 19%). Vehicles (2004): passenger cars 8,109; trucks and buses 2,961. Air transport (2001)[16]: passenger arrivals 300,000, passenger departures 300,000; cargo loaded and unloaded 2,700 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	20	13	PCs	2004	23	16
Telephones				Dailies	2005	...	...
Cellular	2007	796[17]	469[17]	Internet users	2007	100	59
Landline	2007	76	45	Broadband	2005	0.1[17]	0.06[17]

Education and health

Educational attainment: n.a. *Literacy* (2007): total population age 15 and over literate 44.9%; males literate 52.3%; females literate 37.8%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	346	4,428[18]	182,055	41.1
Secondary (age 13–18)	196	3,230[18]	90,442	28.0
Postsecondary[19]	1	156	1,756	11.3

Health (2003): physicians 156 (1 per 9,769 persons); hospital beds (2000) 1,140 (1 per 1,199 persons); infant mortality rate per 1,000 live births (2006) 71.6; undernourished population (2002–04) 450,000 (29% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2007): 800 (army 100%). *Military expenditure as percentage of GDP* (2005): 0.5%; per capita expenditure U.S.$2.

[1]Includes 5 nonelective seats. [2]Kanifing includes the urban areas of Serekunda and Bakau. [3]Kanifing and Banjul make up most of Greater Banjul. [4]Includes national area near the mouth of the Gambia River not allocated by division. [5]Estimate of the *UN World Population Prospects (2006 revision)*. [6]Minimum wage of dock workers. [7]Low-income population in Banjul and Kanifing only; weights of consumer price index components. [8]Based on census data excluding numerous unemployed. [9]Construction includes Mining. [10]Indirect taxes. [11]Not adequately defined. [12]Reexports make up about 1/3 of The Gambia's GDP; goods imported into The Gambia under lower taxes are reexported (sometimes illegally) to nearby countries (particularly Senegal). [13]Detail does not add to total given because of rounding. [14]Imports c.i.f.; exports f.o.b. [15]Based on The Gambia's trading partners' data. [16]Yumdum International Airport at Banjul. [17]Subscribers. [18]Includes unqualified teachers. [19]2004; data for University of The Gambia and Gambia College.

Internet resources for further information:
- **Central Statistics Department**
  http://www.csd.gm
- **Central Bank of The Gambia**
  http://www.cbg.gm

Georgia

Official name: Sak'art'velo (Georgia).
Form of government: unitary multiparty republic with a single legislative body (Parliament [150]).
Head of state and government: President, assisted by Prime Minister.
Capital: Tbilisi[1].
Official language: Georgian.
Official religion: none[2].
Monetary unit: Georgian lari (GEL); valuation (Sept. 8, 2008) 1 U.S.$ = GEL 1.41; 1 £ = GEL 2.49.

Area and population

Regions	area sq km	population 2006[3] estimate
Guria	2,032	139,300
Imereti	6,475	700,100
Kakheti	11,311	404,800
Kvemo Kartli	6,072	507,600
Mtskheta-Mtianeti	6,786	124,500
Racha-Lechkhumi & Kvemo Svaneti	4,990	49,100
Samegrelo & Zemo Svaneti	7,440	472,900
Samtskhe-Javakheti	6,413	208,500
Shida Kartli[7]	1,829	314,000
City		
Tbilisi (T'bilisi)	1,384	1,103,300
Autonomous republic		
Ajaria (Adjara)	2,880	377,200
Disputed areas[4]		
Abkhazia	8,640	180,000[6]
South Ossetia[5]	3,900	70,000[6]
TOTAL	70,152	4,401,300[8]

Demography

Population (2008): 4,360,000[8].
Density (2008)[8]: persons per sq mi 196.0, persons per sq km 75.7.
Urban-rural (2005[3])[8]: urban 52.3%; rural 47.7%.
Sex distribution (2006[3])[8]: male 47.50%; female 52.50%.
Age breakdown (2006[3])[8]: under 15, 17.9%; 15–29, 24.2%; 30–44, 21.5%; 45–59, 18.9%; 60 and over, 17.5%.
Population projection[8]: (2010) 4,298,000; (2020) 4,060,000.
Ethnic composition (2002)[8]: Georgian 83.8%; Azerbaijani 6.5%; Armenian 5.7%; Russian 1.5%; Ossetian 0.9%; other 1.6%.
Religious affiliation (2005)[9]: Georgian Orthodox 54.8%; Sunnī Muslim 14.5%; Shī'i Muslim 5.0%; Armenian Apostolic (Orthodox) 3.9%; Catholic 0.8%; Yazidi 0.4%; Protestant 0.4%; nonreligious 13.0%; other 7.2%.
Major cities (2006): Tbilisi 1,103,300; Kutaisi 190,100; Batumi 122,100; Rustavi 118,200; Sokhumi (2002) 45,000.

Vital statistics

Birth rate per 1,000 population (2005)[8]: 10.7 (world avg. 20.3); within marriage 50.3%; outside of marriage 49.7%.
Death rate per 1,000 population (2005)[8]: 9.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2005)[8]: 0.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005)[8]: 1.35.
Marriage/divorce rates per 1,000 population (2005)[8]: 4.1/0.4.
Life expectancy at birth (2005)[8]: male 69.3 years; female 76.7 years.
Major causes of death per 100,000 population (2005)[8]: diseases of the circulatory system 630.3; malignant neoplasms (cancers) 101.6; accidents, poisoning, and violence 28.4; diseases of the digestive system 27.6.

National economy

Budget (2005). Revenue: GEL 3,257,200,000 (tax revenue 74.0%, of which VAT 30.3%, income tax 8.9%, excise tax 8.8%, taxes on corporate profits 6.5%; nontax revenue 23.0%; grants 3.0%). Expenditures: GEL 3,280,800,000 (social security and welfare 19.1%, defense 12.1%, general public service 10.8%, education 8.8%, public order 8.7%, energy 7.0%).
Population economically active (2005): total 2,023,900; activity rate of total population 44.1% (participation rates: ages 15–64, 68.4%; female 46.9%; unemployed 13.8%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.6	110.5	115.8	122.4	132.4	144.6	158.0
Monthly earnings index	130.8	157.0	174.1	216.6	...	...	...

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow milk 734,000, potatoes 174,500, grapes 93,000, wheat 92,300, corn (maize) 86,197, tomatoes 56,200, cattle meat 49,000, apples 42,500, tea 23,800, walnuts 12,400; livestock (number of live animals) 1,318,800 cattle, 509,700 pigs; roundwood (2006) 616,000, of which fuelwood 74%; fisheries production (2006) 3,075 (from aquaculture 2%). Mining and quarrying (2004): manganese ore 218,700. Manufacturing (value of production in GEL '000,000; 2005): food products and beverages 799.6, basic metals 205.7, nonmetallic mineral products 131.2, chemicals and chemical products 127.4. Energy production (consumption): electricity (kW-hr; 2005) 7,267,000,000 (8,613,000,000); coal (metric tons; 2005) 5,000 (18,000); crude petroleum (barrels; 2005) 487,000 (145,000); petroleum products (metric tons; 2005) 5,000 (653,000); natural gas (cu m; 2005) 13,000,000 (1,283,000,000).
Household income and expenditure (2005). Average household size (2004) 3.7; average annual income per household GEL 3,642 (U.S.$2,009); sources of income: wages and salaries 28.8%, self-employment 13.0%, remittances 12.0%, agricultural income 10.6%, non-cash income 26.1%, other 9.5%; expenditure: food, beverages, and tobacco 38.9%, transportation 7.8%, energy 7.6%, health 5.7%, clothing and footwear 4.3%.
Gross national income (GNI; 2007): U.S.$9,337,000,000 (U.S.$2,120 per capita); purchasing power parity GNI (U.S.$4,770 per capita).

Structure of gross domestic product and labour force

	2005 in value GEL '000,000	% of total value	labour force	% of labour force
Agriculture	1,716.4	14.8	947,800	47.2
Mining	1,823.0	15.7	5,800	0.2
Manufacturing			89,800	4.4
Public utilities			23,400	1.0
Construction	937.9	8.1	43,100	2.1
Transp. and commun	1,443.0	12.4	69,300	3.6
Trade, restaurants	1,719.1	14.8	204,500	10.6
Finance, real estate	852.3	7.3	39,200	2.0
Pub. admin., defense	750.5	6.5	81,800	4.2
Services	1,172.1	10.1	236,300	11.8
Other	1,206.8[10]	10.4[10]	282,900[11]	12.9[11]
TOTAL	11,621.0[12]	100.0[12]	2,023,900	100.0

Public debt (external, outstanding; 2006): U.S.$1,457,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 313; remittances (2007) 705; foreign direct investment (2004–06 avg.) 675; official development assistance (2006) 361. Disbursements for (U.S.$'000,000): tourism (2006) 167; remittances (2007) 28.
Land use as % of total land area (2003): in temporary crops 11.5%, in permanent crops 3.8%, in pasture 27.9%; overall forest area (2005) 39.7%.

Foreign trade[13]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−384	−680	−1,199	−1,624	−2,688	−3,977
% of total	35.5%	42.4%	48.1%	48.4%	57.5%	61.6%

Imports (2006): U.S.$3,681,230,000 (mineral fuels 17.8%; food products and beverages 15.4%; motor vehicles 9.1%; nonelectrical machinery 9.1%; chemicals and chemical products 8.2%; electrical machinery and apparatus 7.8%). *Major import sources* (2007): Turkey 14.0%; Russia 11.1%; Ukraine 11.0%; Germany 7.4%; Azerbaijan 7.3%; U.A.E. 4.1%.
Exports (2006): U.S.$993,054,000 (food and beverages [including wine] 23.3%; iron and steel 16.6%; transportation equipment 14.1%; chemicals and chemical products 7.8%). *Major export destinations* (2007): Turkey 13.9%; U.S. 12.1%; Azerbaijan 11.1%; Armenia 8.9%; Ukraine 7.6%; Canada 5.7%.

Transport and communications

Transport. Railroads (2005): 1,559 km; passenger-km 719,500,000; metric ton-km cargo 6,127,100,000. Roads (2005): 20,329 km (paved [2004] 40%). Vehicles (2004): passenger cars 255,200; trucks and buses 68,600. Air transport (2005): passenger-km 510,800,000; metric ton-km cargo 3,600,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,627	357	PCs	2004	192	42
Telephones				Dailies	2001	23[14]	5[14]
Cellular	2006	1,704[15]	368[15]	Internet users	2007	360	82
Landline	2006	553	119	Broadband	2007	47[15]	11[15]

Education and health

Educational attainment (2004). Percentage of population age 15 and over having: no formal education/unknown 1.6%; primary education 4.1%; incomplete secondary 10.5%; secondary 48.2%; incomplete higher 12.3%; higher 23.3%. *Literacy* (2004): virtually 100%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	2,744	68,992	326,597	9.1
Secondary (age 12–17)			308,127	
Voc., teacher tr.	219	6,069[16]	34,700	5.9[16]
Higher	189	7,649	144,313	18.9

Health (2005): physicians 20,311 (1 per 226 persons); hospital beds 17,100 (1 per 268 persons); infant mortality rate per 1,000 live births 19.7[9]; undernourished population (2002–04) 500,000 (9%[17] of total population based on the consumption of a minimum daily requirement of 1,960 calories).

Military

Total active duty personnel (November 2007): 21,150[18] (army 84.0%, national guard 7.5%, navy 2.3%, air force 6.2%).[19] *Military expenditure as percentage of GDP* (2005): 3.5%; per capita expenditure U.S.$51.

[1]Officially T'bilisi. [2]Special recognition is given to the Georgian Orthodox Church. [3]January 1. [4]On Aug. 26, 2008, Russia became the first country to recognize Abkhazia's and South Ossetia's independence from Georgia. [5]Georgia claims as part of Shida Kartli region. [6]2007 rough estimate. [7]Part administered by Georgia only. [8]Excludes Abkhazia and South Ossetia. [9]Includes Abkhazia and South Ossetia. [10]Taxes on products less subsidies and less imputed bank service charges. [11]Including 279,300 unemployed. [12]Detail does not add to total given because of rounding. [13]Imports c.i.f.; exports f.o.b. [14]Circulation of daily newspapers. [15]Subscribers. [16]2004–05. [17]Based on FAO population estimate. [18]Excluding 11,700 paramilitary troops. [19]Number of Russian troops to be stationed in Abkhazia and South Ossetia per September 2008 official announcement: *c.* 3,800 in each.

Internet resources for further information:
- **National Bank of Georgia http://www.nbg.gov.ge**
- **Statistics Georgia http://www.statistics.ge**

Germany

Official name: Bundesrepublik Deutschland (Federal Republic of Germany).
Form of government: federal multiparty republic with two legislative houses (Federal Council [69]; Federal Diet [612]).
Chief of state: President.
Head of government: Chancellor.
Capital: Berlin, some ministries remain in Bonn.
Official language: German.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

States[1] Administrative districts	Capitals	area sq mi	area sq km	population 2007[2] estimate
Baden-Württemberg	Stuttgart	13,804[3]	35,752	10,738,753
Freiburg	Freiburg im Breisgau	3,613	9,357	2,193,178
Karlsruhe	Karlsruhe	2,671	6,919	2,734,260
Stuttgart	Stuttgart	4,076	10,558	4,005,380
Tübingen	Tübingen	3,443	8,918	1,805,935
Bavaria	Munich	27,240	70,552[3]	12,492,658
Mittelfranken	Ansbach	2,798	7,246	1,712,622
Niederbayern	Landshut	3,988	10,330	1,193,820
Oberbayern	Munich	6,768	17,530	4,279,112
Oberfranken	Bayreuth	2,792	7,230	1,094,525
Oberpfalz	Regensburg	3,742	9,691	1,087,939
Schwaben	Augsburg	3,858	9,992	1,786,764
Unterfranken	Würzburg	3,294	8,531	1,337,876
Berlin	—	344	892	3,404,037
Brandenburg	Potsdam	11,382	29,479	2,547,772
Bremen	Bremen	156	404	663,979
Hamburg	Hamburg	292	755	1,754,182
Hessen	Wiesbaden	8,153[3]	21,115[3]	6,075,359
Darmstadt	Darmstadt	2,874	7,444	3,772,906
Giessen	Giessen	2,078	5,381	1,057,553
Kassel	Kassel	3,200	8,289	1,244,900
Lower Saxony	Hannover	18,388	47,624	7,982,685
Mecklenburg–West Pomerania	Schwerin	8,950	23,180	1,693,754
North Rhine–Westphalia	Düsseldorf	13,160[3]	34,085[3]	18,028,745
Arnsberg	Arnsberg	3,090	8,002	3,742,162
Cologne (Köln)	Cologne (Köln)	2,843	7,364	4,384,669
Detmold	Detmold	2,517	6,518	2,065,413
Düsseldorf	Düsseldorf	2,042	5,290	5,217,129
Münster	Münster	2,666	6,906	2,619,372
Rhineland-Palatinate	Mainz	7,665	19,853	4,052,860
Saarland	Saarbrücken	992	2,569	1,043,167
Saxony	Dresden	7,110[3]	18,416[3]	4,249,774
Chemnitz	Chemnitz	2,354	6,097	1,520,537
Dresden	Dresden	3,062	7,931	1,657,114
Leipzig	Leipzig	1,693	4,386	1,072,123
Saxony-Anhalt	Magdeburg	7,894	20,446	2,441,787
Schleswig-Holstein	Kiel	6,100	15,799	2,834,254
Thuringia	Erfurt	6,244	16,172	2,311,140
TOTAL		137,874	357,093	82,314,906

Demography

Population (2008): 82,143,000.
Density (2008): persons per sq mi 595.8, persons per sq km 230.0.
Urban-rural (2003): urban 88.1%; rural 11.9%.
Population projection: (2010) 81,943,000; (2020) 80,148,000.
Major cities (2006[2]; *urban agglomerations*): Berlin 3,395,189 (4,200,072); Hamburg 1,743,627 (2,549,339); Munich 1,259,677 (7,940,477); Cologne 983,347 (1,846,241); Frankfurt am Main 651,899 (1,915,002); Stuttgart 592,569 (2,625,690); Dortmund 588,168 (5,746,018[4]); Essen 585,430 (5,746,018[4]); Düsseldorf 574,514 (1,318,512); Bremen 546,852 (858,488); Hannover 515,729 (1,001,580); Leipzig 502,651 (580,050); Duisburg 501,564 (5,746,018[4]); Nuremberg (Nürnberg) 499,237 (1,030,168).

Other principal cities (2006[2])

	population		population		population
Aachen	258,208	Heidelberg	142,993	Neuss	151,610
Augsburg	262,676	Herne	170,992	Oberhausen	218,898
Bielefeld	326,925	Karlsruhe	285,263	Oldenburg	158,565
Bochum	385,626	Kassel	194,427	Osnabrück	163,814
Bonn	312,818	Kiel	234,433	Paderborn	143,769
Braunschweig	245,273	Krefeld	237,701	Potsdam	147,583
Chemnitz	246,587	Leverkusen	161,227	Recklinghausen	121,827
Darmstadt	140,562	Lübeck	211,825	Regensburg	129,859
Dresden	495,181	Ludwigshafen am Rhein	163,343	Rostock	199,288
Erfurt	202,844	Magdeburg	229,126	Saarbrücken	178,914
Freiburg im Breisgau	215,966	Mainz	194,372	Solingen	163,581
Gelsenkirchen	268,102	Mannheim	307,900	Wiesbaden	274,611
Göttingen	121,884	Mönchengladbach	261,444	Wuppertal	359,237
Hagen	196,934	Mülheim an der Ruhr	169,917	Wurzburg	133,906
Halle	237,198	Munster	270,868		
Hamm	184,239				

Sex distribution (2008[2]): male 48.98%; female 51.02%.
Ethnic composition (by nationality; 2000): German 88.2%; Turkish 3.4% (including Kurdish 0.7%); Italian 1.0%; Greek 0.7%; Serb 0.6%; Russian 0.6%; Polish 0.4%; other 5.1%.
Households (2007). Number of households 39,722,000; average household size 2.1; 1 person 38.7%, 2 persons 34.0%, 3 persons 13.4%, 4 persons 10.3%, 5 or more persons 3.6%.
Age breakdown (2004[2]): under 15, 14.7%; 15–29, 17.4%; 30–44, 23.9%; 45–59, 19.3%; 60–74, 16.9%; 75–84, 6.1%; 85 and over, 1.7%.
Religious affiliation (2005): Protestant 35.0%, of which Lutheran/Reformed churches *c.* 34%; Roman Catholic 32.5%; Sunnī Muslim 4.3%; Orthodox 1.7%; New Apostolic (an independent Christian group) 0.5%; Buddhist 0.3%; Jewish 0.2%; nonreligious 18.0%; atheist 2.0%; other 5.5%.
Immigration (2003): immigrant arrivals 601,759, from Poland 14.6%, Turkey 8.0%, Russia 5.2%, Romania 3.9%, Serbia and Montenegro 3.6%.

Vital statistics

Birth rate per 1,000 population (2007): 8.3 (world avg. 20.3); (2004) within marriage 72.0%; outside of marriage 28.0%.
Death rate per 1,000 population (2007): 10.1 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): –1.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.37.
Marriage/divorce rates per 1,000 population (2007): 4.5/2.3.
Life expectancy at birth (2005–07): male 76.9 years; female 82.3 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 384.0; malignant neoplasms (cancers) 253.6; diseases of the respiratory system 70.3; diseases of the digestive system 51.2; accidents, poisoning, and violence 38.8.

Social indicators

Educational attainment (2002). Percentage of population age 25–64 having: no formal schooling through lower secondary 17%; upper secondary/higher vocational 60%; university 23%.
Quality of working life. Average workweek (2005): 38.2 hours. Annual rate per 100,000 workers (2005) for: injuries or accidents at work 2,835; deaths 2.4. Proportion of labour force insured for damages of income loss resulting from: injury, virtually 100%; permanent disability, virtually 100%; death, virtually 100%. Average days lost to labour stoppages per 1,000 workers (2005): 0.5.
Access to services. Proportion of dwellings (2002) having: electricity, virtually 100%; piped water supply, virtually 100%; flush sewage disposal (1993) 98.4%; public fire protection, virtually 100%.
Social participation. Eligible voters participating in last (September 2005) national election 77.7%. Trade union membership in total workforce (2003): *c.* 18%. Practicing religious population: 5% of Protestants (1994) and 15% of Roman Catholics (2003) "regularly" attend religious services.
Social deviance (2000). Offense rate per 100,000 population for: murder and manslaughter 3.8; sexual abuse 37.0, of which rape and forcible sexual assault 11.7, child molestation 10.2; assault and battery 153.2; theft 754.2.
Leisure. Favourite leisure activities include playing football (soccer; registered participants, 2004) 6,272,804, as well as watching television, going to the cinema, attending theatrical and musical performances, and visiting museums.
Material well-being (2005). Households possessing: automobile 76.8%; telephone (2006) 95.2%; mobile telephone (2006) 80.6%; refrigerator 99.1%; television (2004) 95.0%; DVD player 50.1%; washing machine (2004) 95.5%; clothes dryer 39.3%; personal computer (2006) 71.6%; dishwasher 59.1%; microwave oven 67.0%; Internet access (2006) 57.9%; MP3 player 14.7%.

National economy

Budget (2004). Revenue: €639,220,000,000 (social security contributions 58.3%; tax revenue 37.6%, of which individual income taxes 13.7%, taxes on goods and services 10.2%, excise taxes 10.2%; nontax revenue 2.2%; other 1.9%). Expenditures: €691,480,000,000 (social benefits 71.4%; grants 7.9%; interest 5.7%; compensation of employees 5.5%).
Total public debt (2004): U.S.$1,732,000,000,000.
Production (metric tons except as noted; 2007). Agriculture, forestry, fishing: cereal grains 42,294,600 (of which wheat 21,366,800, barley 11,034,200), sugar beets 26,114,000, potatoes 11,604,500, rapeseed 5,320,000, grapes 1,300,000, apples 911,900, cabbages 735,500, gooseberries (2006) 40,000, hops 28,600, currants 8,800; livestock (number of live animals) 26,530,000 pigs, 12,600,800 cattle, 2,444,400 sheep, 108,000,000 chickens; roundwood (2006) 62,290,000 cu m, of which fuelwood 13%; fisheries production (2006) 333,216 (from aquaculture 11%). Mining and quarrying (metric tons; 2005): potash (potassium oxide content) 3,664,000; feldspar 500,000. Manufacturing (value added in U.S.$'000,000; 2003): transportation equipment 80,003, of which motor vehicles 46,854, motor vehicle parts 20,655; nonelectrical machinery and apparatus 64,943; electrical machinery and electronics 47,403, of which electricity distribution and control apparatus 18,799; fabricated metal products 41,855; food and food products 31,727; paints, soaps, and pharmaceuticals 26,172; industrial chemicals 20,211; printing and publishing 19,829; professional and scientific equipment 19,045, of which medical, measuring, and testing appliances 16,737; plastic products 17,333; cement, bricks, and ceramics 10,736.

Manufacturing enterprises (2000)

	no. of enterprises	no. of employees	wages as a % of avg. of all wages	annual value added (€'000,000)
Manufacturing	40,052	6,424,000	100.0	600,009
of which				
Machinery (electrical and nonelectrical)	7,996	1,480,000	110.0	119,652
Transport equipment	1,239	967,000	117.8	90,538
Chemical products	1,282	481,000	119.9	68,313
Fabricated metals	7,211	855,000	95.4	63,945
Food and beverages	5,448	599,000	68.2	48,538
Refined petroleum, coke	48	23,000	130.9	30,453
Publishing and printing	2,679	274,000	105.5	27,594
Rubber and plastic products	2,708	359,000	85.5	26,022
Wood and wood products	3,688	329,000	79.7	21,427
Glass and ceramics	2,203	248,000	88.1	20,847
Professional and scientific equipment	1,930	224,000	100.0	17,930
Radio and television	514	161,000	115.4	17,269

Energy production (consumption): electricity (kW-hr; 2007) 522,779,000,000 ([2005] 615,734,000,000); hard coal (metric tons; 2007) 21,500,000 ([2005] 64,000,000); lignite (metric tons; 2007) 180,400,000 ([2005] 177,900,000); crude petroleum (barrels; 2007) 33,100,000 ([2005] 840,700,000); petroleum products (metric tons; 2005) 106,211,000 (98,378,000); natural gas (cu m; 2007) 21,832,000,000 ([2005] 101,222,000,000).

Gross national income (GNI: 2007): U.S.$3,197,029,000,000 (U.S.$38,860 per capita); purchasing power parity GNI (U.S.$33,530 per capita).

Structure of gross domestic product and labour force

	2007		2005	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture	20,020	0 8	868,000	2 1
Public utilities	52,570	2.2	315,000	0 8
Mining			123,000	0.3
Manufacturing	519,550	21 4	8,032,000	19 5
Construction	87,150	3.6	2,400,000	5.8
Transp. and commun.	382,410	15.8	1,949,000	4 7
Trade, restaurants			6,452,000	15 7
Finance, real estate	634,820	26.2	4,829,000	11 7
Services	474,690	19 6	8,582,000	20.9
Pub. admin., defense			2,879,000	7.0
Other	252,590[5]	10.4[5]	4,721,000[6]	11.5[6]
TOTAL	2,423,800	100.0	41,150,000	100.0

Household income and expenditure. Average annual disposable income per household (2003) €33,840 (U.S.$38,194); sources of take-home income (1997): wages 77.6%, self-employment 12.0%, transfer payments 10.4%; expenditure (2003): housing and energy 32.5%, transportation 14.4%, food, beverages, and tobacco 14.0%, recreation and culture 11.8%, household furnishings 5.7%, clothing and footwear 5.0%, restaurants and hotels 4.3%.

Financial aggregates[7]

	2001	2002	2003	2004	2005	2006	2007
Exchange rate, € per:							
U.S. dollar	1 13	0.95	0.79	0 73	0.85	0.76	0 70
£	1.64	1.53	1 41	1 41	1 46	1 49	1 36
SDR	1 43	1 30	1 18	1 14	1 21	1 14	1 07
International reserves (U.S.$)							
Total (excl. gold, '000,000)	51,404	51,171	50,694	48,823	45,140	41,687	44,327
SDRs ('000,000)	1,793	1,980	1,942	2,061	1,892	2,010	2,162
Reserve pos. in IMF ('000,000)	5,901	6,695	7,656	6,863	3,483	1,958	1,396
Foreign exchange	43,710	42,495	41,095	39,899	39,765	37,719	40,768
Gold ('000,000 fine troy oz)	111.13	110.79	110.58	110 38	110.21	110 04	109 87
% world reserves	11.79	11 91	12 11	12.26	12 50	12.68	12 89
Interest and prices							
Central bank discount (%)							
Govt. bond yield (%)	4 8	4.8	4.1	4 0	3 4	3 8	4 2
Industrial share prices (2000 = 100)[8]	76.2	57 6	45.5	55.8	64 9	81 4	101 1
Balance of payments (U.S.$'000,000,000)							
Balance of visible trade	+87 41	+125.76	+144 75	+185.40	+188 41	+200 87	+278 69
Imports, f.o.b.	−476.26	−484 02	−600.06	−718.05	−789 77	−934 86	−1,075 43
Exports, f.o.b.	563.67	609 78	744 81	903.45	978 18	1 135 73	1,354 12
Balance of invisibles	−86 93	−85.05	−98.16	−67 47	−59.45	−19 67	−23 16
Balance of payments, current account	+0.48	+40.71	+46.59	+117 93	+128 96	+181.20	+255.53

Selected service enterprises (2004)

	no. of enterprises	no. of employees	annual turnover (€'000,000)
Transport, storage, and communication			
Air	409	53,002	11,765
Land, pipelines	58,329	656,597	55,747
Water	2,408	26,678	18,109
Transport support, travel agencies	22,258	501,724	87,973
Postal services, telecommunications	8,137	610,549	101,715
Real estate	175,620	383,122	94,487
Rental of equipment and goods	14,464	80,217	26,984
Computer-related activities	45,205	370,346	58,525
Research and development	4,185	87,840	6,820
Other business activities	323,742	3,057,849	191 162

Population economically active (2005): total 41,150,000; activity rate of total population 49.9% (participation rates: ages 15–64, 73.7%; female 44.8%; unemployed [2006] 8.1%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.0	103.4	104 5	106.2	108 3	110 1	112.5
Hourly earnings index	102.5	104.8	107 6	109.0	110.5	111.2	.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 32,846; remittances (2007) 7,000; foreign direct investment (FDI; 2004–06 avg.) 23,180. Disbursements for (U.S.$'000,000): tourism (2006) 74,123; remittances (2007) 12,344; FDI (2004–06 avg.) 49,923.

Land use as % of total land area (2003): in temporary crops 33.9%, in permanent crops 0.6%, in pasture 14.2%; overall forest area (2005) 31.7%.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	+132,788	+129,921	+156,081	+160,554	+159,050	+196,870
% of total	11 4%	10 8%	11.9%	11.4%	9.8%	10.2%

Imports (2005): €625,632,000,000 (machinery and equipment 21.7%, of which televisions, telecommunications equipment, and electronic components 6.4%, office machinery and computers 4.6%; transport equipment 14.2%, of which road vehicles 10.2%; chemicals and chemical products 11.3%; crude petroleum and natural gas 8.3%; base metals 6.0%; food products and beverages 4.5%; wearing apparel 2.6%). *Major import sources* (2006): France 8.7%; The Netherlands 8.3%; China 6.7%; U.S. 6.6%; U.K. 5.9%; Italy 5.5%; Belgium 4.9%; Russia 4.1%; Austria 4.1%; Switzerland 3.4%.

Exports (2005): €786,186,000,000 (machinery and equipment 26.5%, of which televisions, telecommunications equipment, and electronic components 4.7%; transport equipment 22.6%, of which road vehicles 19.2%; chemicals and chemical products 13.1%; base metals 5.2%; medical and precision instruments and watches and clocks 4.2%). *Major export destinations* (2006): France 9.6%; U.S. 8.7%; U.K. 7.3%; Italy 6.7%; The Netherlands 6.2%; Belgium 5.5%; Austria 5.5%; Spain 4.7%; Switzerland 3.9%; Poland 3.2%.

Transport and communications

Transport. Railroads (2001): length 53,222 mi, 85,653 km; (2003) passenger-mi 44,299,000,000, passenger-km 71,292,000,000; (2004) short ton-mi cargo 54,800,000,000, metric ton-km cargo 86,400,000,000. Roads (2005): total length 143,830 mi, 231,480 km (paved [2003] 100%). Vehicles (2006): passenger cars 46,090,300; trucks and buses 2,573,100. Air transport (2007): passenger-km 206,112,000,000; metric ton-km cargo 8,345,976,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	55 758	675	PCs	2004	46,300	561
Telephones				Dailies	2004	22,095[10]	268[10]
Cellular	2007	97,151[11]	1,176[11]	Internet users	2007	42,500	515
Landline	2007	53,750	651	Broadband	2007	19,800[11]	241[11]

Education and health

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)[12]	16,814	89,902	3,176,478	35 3
Secondary (age 10–19)[12]	14,788	250,226	5,882,502	23.5
Voc., teacher tr.	8,742	87,320	2,770,813	31 7
Higher	376	164,789	1,985,765	12 1

Health (2006): physicians 311,000 (1 per 265 persons); hospital beds 510,767 (1 per 161 persons); infant mortality rate per 1,000 live births 4.1; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 245,702 (army 65.4%, navy 9.9%, air force 24.7%); German peacekeeping troops abroad (April 2006) more than 7,500; U.S. troops in Germany (March 2008) 56,200; British troops (November 2007) 22,000; French troops (November 2007) 2,800; Dutch troops (November 2007) 2,300. *Military expenditure as percentage of GDP* (2005): 1.4%[13]; per capita expenditure U.S.$462[13].

[1]State names used in this table are English conventional. [2]January 1. [3]Detail does not add to total given because of rounding. [4]Part of the Rhine-Ruhr North urban agglomeration. [5]Taxes less subsidies and imputed bank service charges. [6]Includes 4,583,000 unemployed. [7]End-of-period figures. [8]Period averages. [9]Imports c.i.f.; exports f.o.b. [10]Circulation of daily newspapers. [11]Subscribers. [12]Excludes 3,468 *Sonderschulen* for students with physical and mental disabilities. [13]Includes military pensions.

Internet resource for further information:

- **Federal Statistical Office of Germany (in English)**
  http://www.destatis.de/e_home.htm

Ghana

Official name: Republic of Ghana.
Form of government: unitary multiparty republic with one legislative house (Parliament [230]).
Head of state and government: President.
Capital: Accra.
Official language: English.
Official religion: none.
Monetary unit: Ghana cedi (GH¢)[1]; valuation (Sept. 8, 2008) 1 U.S.$ = GH¢1.16; 1 £ = GH¢2.05.

Area and population

Regions	Capitals	area sq mi	area sq km	population 2000 census
Ashanti	Kumasi	9,417	24,389	3,612,950
Brong-Ahafo	Sunyani	15,273	39,557	1,815,408
Central	Cape Coast	3,794	9,826	1,593,823
Eastern	Koforidua	7,461	19,323	2,106,696
Greater Accra	Accra	1,253	3,245	2,905,726
Northern	Tamale	27,175	70,384	1,820,806
Upper East	Bolgatanga	3,414	8,842	920,089
Upper West	Wa	7,134	18,476	576,583
Volta	Ho	7,942	20,570	1,635,421
Western	Sekondi-Takoradi	9,236	23,921	1,924,577
TOTAL		92,098[2]	238,533	18,912,079

Demography

Population (2008): 23,383,000.
Density (2008): persons per sq mi 253.9, persons per sq km 98.0.
Urban-rural (2006): urban 46.8%; rural 53.2%.
Sex distribution (2006): male 50.05%; female 49.95%.
Age breakdown (2006): under 15, 38.7%; 15–29, 29.0%; 30–44, 18.1%; 45–59, 8.9%; 60–74, 4.2%; 75–84 1.0%; 85 and over, 0.1%.
Population projection: (2010) 24,279,000; (2020) 28,567,000.
Doubling time: 33 years.
Ethnic composition (2000): Akan 41.6%; Mossi 23.0%; Ewe 10.0%; Ga-Adangme 7.2%; Gurma 3.4%; Nzima 1.8%; Yoruba 1.6%; other 11.4%.
Religions affiliation (2005): Protestant 23.7%; traditional beliefs 21.5%; Sunnī Muslim 20.1%; independent Christian 15.9%; Roman Catholic 12.2%; other 6.6%.
Major cities (2002): Accra (2003) 1,847,432; Kumasi 627,600; Tamale 269,200; Tema 237,700; Obuasi 122,600.

Vital statistics

Birth rate per 1,000 population (2006): 30.5 (world avg. 20.3).
Death rate per 1,000 population (2006): 9.7 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 3.99.
Life expectancy at birth (2006): male 58.0 years; female 59.6 years.
Major causes of death per 100,000 population (2002): communicable diseases (excluding HIV/AIDS; significantly malaria) 458; cardiovascular diseases 159; HIV/AIDS 147; accidents and violence 83; malignant neoplasms 61.
Adult population (ages 15–49) *living with HIV* (2007): 1.9%[3] (world avg. 0.8%).

National economy

Budget (2006). Revenue: ₵31,917,680,000,000 (tax revenue 77.2%, of which VAT 18.4%, trade tax 17.0%, petroleum tax 12.8%, income tax 9.7%, corporate tax 9.4%; grants 19.9%; nontax revenue 2.9%). Expenditures: ₵38,734,730,000,000 (current expenditure 63.9%, of which transfers 14.7%, debt service 10.2%; capital expenditure 36.1%).
Public debt (external, outstanding; March 2008): U.S.$3,739,040,000.
Household income and expenditure (1999). Average household size (2003) 3.94; mean annual household income[5] ₵2,267,000 (U.S.$849); sources of income[5]: income from agriculture 37.0%, other self-employment 31.3%, wages and salaries 22.8%, remittances 4.8%; expenditure[5]: food and nonalcoholic beverages 53.6%, clothing 10.0%, household operations 8.8%, education 6.1%.
Gross national income (GNI; 2007): U.S.$13,905,000,000 (U.S.$590 per capita); purchasing power parity GNI (U.S.$1,330 per capita).

Structure of gross domestic product and labour force

	2007 in value ₵'000,000[6]	2007 % of total value	1999 labour force[7, 8]	1999 % of labour force[7]
Agriculture, forestry, fishing	258,500	34.7	3,778,000	50.5
Mining, quarrying	49,700	6.7	48,000	0.6
Manufacturing	60,000	8.1	798,000	10.7
Construction	66,700	8.9	97,000	1.3
Public utilities	18,400	2.5	14,000	0.2
Transp. and commun	37,300	5.0	150,000	2.0
Trade, hotels	56,500	7.6	1,257,000	16.8
Finance, real estate	35,600	4.8	52,000	0.7
Pub. admin., defense	78,500	10.5	673,000	9.0
Services	19,400	2.6		
Other	64,400[9]	8.6[9]	613,000[10]	8.2[10]
TOTAL	744,800[2]	100.0	7,480,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 9,650,000, yams 3,550,000, plantains 2,930,000, oil palm fruit 1,900,000, taro 1,662,000, corn (maize) 1,100,000, cacao 690,000, oranges 480,000, peanuts (groundnuts) 440,000, sorghum 350,000, coconuts 316,000, chilies and peppers 279,000, rice 242,000; livestock (number of live animals) 3,704,700 goats, 3,420,000 sheep, 1,427,100 cattle; roundwood (2006) 34,343,530 cu m, of which fuelwood 96%; fisheries production (2006) 368,069 (from aquaculture, negligible). Mining and quarrying (2006): bauxite 842,000; manganese (metal content) 560,000; gold 66,205 kg[11]; gem diamonds 780,000 carats. Manufacturing (value added in U.S.$'000,000; 2003): wood products 157; chemical products 115; food products 108; petroleum products 55; precious and nonferrous metal products (including gold) 47; plastic products 39. Energy production (consumption): electricity (kW-hr; 2005) 6,793,000,000 (6,969,000,000); coal, none (none); crude petroleum (barrels; 2006) none ([2005] 14,700,000); petroleum products (metric tons; 2005) 1,655,000 (1,718,000); natural gas, none (none).
Population economically active (2000): total 9,039,318; activity rate of total population 47.8% (participation rates: ages 15–64, 76.2%; female 54.1%; unemployed [2001] 20.3%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	132.9	152.6	193.3	217.7	250.6	278.0	307.8
Monthly earnings index[12]	131.0	170.2	219.0	266.7	321.4	...	...

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 861; remittances (2007) 105; foreign direct investment (2004–06 avg.) 240; official development assistance (2006) 1,176. Disbursements for (U.S.$'000,000): tourism (2006) 345; remittances (2007) 6.
Land use as % of total land area (2003): in temporary crops 18.4%, in permanent crops 9.7%, in pasture 36.7%; overall forest area (2005) 24.2%.

Foreign trade[13]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−1,438	..	−886	−2,295	..	−1,715
% of total	29.5%	.	16.0%	39.2%	...	19.2%

Imports (2006): U.S.$5,329,000,000 (machinery and apparatus 19.1%, road vehicles 14.8%, crude petroleum 12.9%, food 12.2%, chemicals and chemical products 10.8%). *Major import sources:* Nigeria 9.6%; China 9.5%; U.K. 8.9%; U.S. 6.6%; Belgium 5.6%; Germany 5.4%.
Exports (2006): U.S.$3,614,000,000 (cocoa 34.3%, gold 31.3%, woven cotton fabrics 6.3%, wood products [excl. furniture] 5.5%). *Major export destinations:* South Africa 25.8%; Burkina Faso 12.6%; The Netherlands 11.1%; Switzerland 6.8%; France 4.6%.

Transport and communications

Transport. Railroads (2005): route length 592 mi, 953 km; (2002) passenger-km 238,000,000; (2002) metric ton-km cargo 168,000,000. Roads (2003): total length 29,693 mi, 47,787 km (paved 18%). Vehicles (2002): passenger cars 463,000; trucks and buses 56,000. Air transport (2003)[14]: passenger-km 906,000,000; metric ton-km cargo 16,630,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,114	53	PCs	2004	112	5.2
Telephones				Dailies	2005	190[15]	8.7[15]
Cellular	2007	7,604[16]	324[16]	Internet users	2007	650	28
Landline	2007	377	16	Broadband	2007	14[16]	0.6[16]

Education and health

Educational attainment (2003)[4]. Percentage of population age 25 and over having: no formal schooling or unknown 41.8%; incomplete primary education 9.6%; primary 3.6%; incomplete secondary 35.0%; secondary 5.4%; higher 4.6%. *Literacy* (2005): total population age 15 and over literate 77.0%; males literate 84.2%; females literate 70.0%.

Education (2003–04)

	schools[17]	teachers	students	student/teacher ratio
Primary (age 6–12)	13,115	89,278[18]	2,929,536[18]	32.8[18]
Secondary (age 13–20)	6,906	67,946	1,276,670	18.8
Voc., teacher tr.	99	959	18,672	19.5
Higher	15	3,142[18]	69,968	17.8

Health: physicians (2004) 3,240 (1 per 6,631 persons); hospital beds (2001) 18,448 (1 per 1,089 persons); infant mortality rate per 1,000 live births (2006) 54.9; undernourished population (2002–04) 2,300,000 (11% of total population based on the consumption of a minimum daily requirement of 1,860 calories).

Military

Total active duty personnel (November 2007): 13,500 (army 74.1%, navy 14.8%, air force 11.1%). *Military expenditure as percentage of GDP* (2005): 0.7%; per capita expenditure U.S.$4.

[1]The Ghana cedi (GH¢) replaced the cedi (₵) on July 1, 2007, at a rate of 1 GH¢ = ₵10,000. [2]Detail does not add to total given because of rounding. [3]Statistically derived midpoint within range. [4]Based on the Ghana Demographic and Health Survey of 6,251 households. [5]Based on the Ghana Living Standards Survey of 5,998 households. [6]In constant prices of 1993. [7]Ages 15–64 only. [8]Derived figures calculated from percentages. [9]Indirect taxes. [10]Unemployed. [11]Legal production only. [12]Minimum monthly wage. [13]Imports c.i.f.; exports f.o.b. [14]Ghana Airways only, which subsequently ceased operations in July 2004. [15]Circulation of daily newspapers. [16]Subscribers. [17]1998–99. [18]2004–05.

Internet resources for further information:
- **Bank of Ghana http://www.bog.gov.gh**
- **Ghana Statistical Service http://www.statsghana.gov.gh**

Greece

Official name: Elliniki Dhimokratía (Hellenic Republic).
Form of government: unitary multiparty republic with one legislative house (Hellenic Parliament [300]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Athens.
Official language: Greek.
Official religion: [1].
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Regions[2]	area sq km	population 2006 estimate	Regions[2]	area sq km	population 2006 estimate
Insular			Epirus	9,203	345,100
Aegean Islands	9,122	505,711	Greater Athens	3,808	4,001,911
Crete	8,336	602,658	Macedonia	34,178	2,454,877
Ionian Islands	2,307	223,149	Peloponnese	21,379	1,112,653
Mainland			Thessaly	14,037	737,144
Central Greece and Euboea	21,010	775,837	Thrace	8,578	366,139
			TOTAL	131,957[3]	11,125,179

Demography

Population (2008): 11,239,000.
Density (2008): persons per sq mi 220.6, persons per sq km 85.2.
Urban-rural (2005): urban 60.4%; rural 39.6%.
Sex distribution (2006): male 49.51%; female 50.49%.
Age breakdown (2006): under 15, 14.3%; 15–29, 19.3%; 30–44, 22.9%; 45–59, 19.7%; 60–74, 15.8%; 75–84, 6.6%; 85 and over, 1.4%.
Population projection: (2010) 11,329,000; (2020) 11,453,000.
Ethnic composition (2000)[4]: Greek 90.4%; Macedonian 1.8%; Albanian 1.5%; Turkish 1.4%; Pomak 0.9%; Rom (Gypsy) 0.9%; other 3.1%.
Religious affiliation (2005)[5]: Orthodox *c.* 90%; Sunnī Muslim *c.* 5%; Roman Catholic *c.* 2%; other *c.* 3%.
Major cities (2001): Athens 745,514 (urban agglomeration 3,187,734); Thessaloníki 363,987 (urban agglomeration 800,764); Piraeus (Piraiévs) 175,697[6]; Pátrai 161,114; Peristérion 137,918[6]; Iráklion 133,012.

Vital statistics

Birth rate per 1,000 population (2006): 10.0 (world avg. 20.3); (2005) within marriage 94.9%; outside of marriage 5.1%.
Death rate per 1,000 population (2006): 9.5 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2005): 1.28.
Marriage/divorce rates per 1,000 population (2006): 5.2/1.2.
Life expectancy at birth (2005): male 76.6 years; female 81.5 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 352.4; malignant neoplasms (cancers) 280.2; cerebrovascular diseases 186.1; diseases of the respiratory system 66.7; accidents, poisoning, and violence 38.4.

National economy

Budget (2006). Revenue: €48,600,000,000 (tax revenue 92.2%, of which VAT 32.6%, income taxes 30.4%; nontax revenue 7.8%). Expenditures: €50,413,000,000 (pensions and salaries 38.8%; interest payments 18.9%; health and social insurance 17.2%; operating expenditure 17.0%).
Public debt (consolidated, general; 2007): U.S.$328,757,540,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): olives 2,600,000, corn (maize) 1,767,500, tomatoes 1,450,000, wheat 1,403,200, seed cotton 1,000,000, oranges 1,000,000, grapes 950,000, sugar beets 862,300, potatoes 830,000, peaches and nectarines 700,000, apples 270,000, barley 264,500, rice 200,700; livestock (number of live animals) 8,803,350 sheep, 5,570,885 goats, 1,315,000 beehives; roundwood (2006) 1,522,857 cu m, of which fuelwood 66%; fisheries production (2006) 211,622 (from aquaculture 54%). Mining and quarrying (2006): bauxite 2,162,900; nickel (metal content) 21,670; marble 150,000 cu m. Manufacturing (value added in U.S.$'000,000; 2005): food products and beverages *c.* 5,300; textiles *c.* 1,950; chemicals and chemical products *c.* 1,750; cement, bricks, and ceramics *c.* 1,600; refined petroleum and coal derivatives *c.* 1,500; wearing apparel *c.* 1,500; basic metals *c.* 1,450. Energy production (consumption): electricity (kW-hr; 2007) 59,776,000,000 ([2005] 63,800,000,000); hard coal (metric tons; 2005) none (563,000); lignite (metric tons; 2007) 63,448,000 ([2005] 70,096,000); crude petroleum (barrels; 2006) 760,000 ([2005] 137,000,000); petroleum products (metric tons; 2005) 19,768,000 (18,695,000); natural gas (cu m; 2006) 16,000,000 ([2005] 2,806,000,000).
Population economically active (2007): total 4,917,900; activity rate of total population 44.1% (participation rates: ages 15–64 [2006] 66.9%; female 40.9%; unemployed [April 2007–March 2008] 8.1%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.4	107.1	110.9	114.1	118.2	121.9	125.5
Monthly earnings index	101.5	105.9	124.3	130.4	132.5	135.3	139.9

Household income and expenditure (1998–99). Average household size (2004) 3.1; income per family Dr 6,429,000[7] (U.S.$21,390); sources of income: wages and salaries 21.8%, transfer payments 21.7%, income from agriculture, forestry, fishing 15.6%, self-employment 11.9%, other 29.0%; expenditure (2004–05): food 17.1%, transportation 12.6%, housing and energy 10.7%, café/hotel expenditures 9.6%, clothing and footwear 8.4%.
Gross national income (GNI; 2007): U.S.$331,658,000,000 (U.S.$29,630 per capita); purchasing power parity GNI (U.S.$32,520 per capita).

Structure of gross domestic product and labour force

	2006 in value €'000,000	2006 % of total value	2007 labour force	2007 % of labour force
Agriculture, forestry, fishing	7,061	3.3	522,400	10.6
Mining, quarrying	959	0.4	18,100	0.4
Manufacturing	25,050	11.7	558,900	11.4
Construction	16,317	7.6	394,400	8.0
Public utilities	3,767	1.8	40,000	0.8
Transp. and commun	15,107	7.0	267,600	5.4
Trade, restaurants	42,129	19.7	1,118,500	22.7
Finance, real estate	34,680	16.2	407,500	8.3
Pub. admin., defense	15,793	7.4	1,192,500	24.3
Services	29,236	13.7		
Other	23,887[8]	11.2[8]	398,000[9]	8.1[9]
TOTAL	213,985[3]	100.0	4,917,900	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 14,402; remittances (2007) 1,543; foreign direct investment (FDI; 2004–06 avg.) 2,690. Disbursements for (U.S.$'000,000): tourism (2006) 2,997; remittances (2007) 982; FDI (2004–06 avg.) 2,216.
Land use as % of total land area (2003): in temporary crops 20.9%, in permanent crops 8.8%, in pasture 35.7%; overall forest area (2005) 29.1%.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007[11]
U.S.$'000,000	–20,972	–31,199	–37,564	–37,460	–42,796	–44,555
% of total	50.4%	53.3%	55.2%	51.8%	50.5%	52.5%

Imports (2006): U.S.$63,739,000,000 (machinery and apparatus 14.4%, crude petroleum 13.1%, food 8.7%, road vehicles/parts 8.5%, medicine and pharmaceuticals 5.8%, ships and tankers 5.3%). *Major import sources:* Germany 12.5%; Italy 11.6%; Russia 7.1%; France 5.9%; The Netherlands 5.2%.
Exports (2006): U.S.$20,943,000,000 (food 14.0%, of which vegetables and fruit 7.2%; refined petroleum 12.4%; machinery and apparatus 10.6%; apparel 7.4%; medicine 5.3%; aluminum 4.4%). *Major export destinations:* Germany 11.3%; Italy 11.2%; Bulgaria 6.3%; U.K. 6.0%; Cyprus 5.3%.

Transport and communications

Transport. Railroads (2006): length 2,509 km; passenger-km 1,811,000,000; metric ton-km cargo 662,000,000. Roads (2005): total length 34,863 km (paved 93%). Vehicles (2007): passenger cars 4,798,530; trucks and buses 1,283,047. Air transport (2007)[12]: passenger-km 10,919,000,000; metric ton-km cargo 81,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	6,152	558	PCs	2004	1,476	150
Telephones				Dailies	2005	878[13]	79[13]
Cellular	2007	11,997[14]	1,076[14]	Internet users	2007	2,540	228
Landline	2007	6,227	559	Broadband	2007	1,018[14]	91[14]

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 12.7%; primary education 34.3%; lower secondary 8.5%; upper secondary 25.7%; higher 18.8%. *Literacy* (2007): total population age 15 and over literate 97.1%; males 98.2%; females 96.0%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	5,668	58,981	639,083	10.8
Secondary (age 12–18)	3,361	64,465	573,123	8.9
Voc., teacher tr	718	27,043	249,620	9.2
Higher	21	12,603	171,857	13.6

Health (2006): physicians 21,038[15] (1 per 436 persons); hospital beds 44,307[15] (1 per 207 persons); infant mortality rate 3.7; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 156,600 (army 59.7%, navy 12.8%, air force 20.1%, joint staff 7.4%); Greek troops in Cyprus (November 2007) 1,150. *Military expenditure as percentage of GDP* (2005): 4.1%[16]; per capita expenditure U.S.$833[16].

[1]The autocephalous Greek Orthodox Church has special recognition per the constitution. [2]Traditional regions; local administration is based on 13 administrative regions and 1 autonomous self-governing monastic region (Mount Athos). [3]Detail does not add to total given because of rounding. [4]Unofficial source; government states there are no ethnic divisions in Greece. [5]Including non-citizen residents. [6]Within Athens urban agglomeration. [7]The drachma (Dr) was the former monetary unit; on Jan. 1, 2002, Dr 340.75 = €1. [8]Taxes less subsidies. [9]Unemployed. [10]Imports c.i.f.; exports f.o.b. [11]Excludes December. [12]Aegean Airlines and Olympic Airlines only. [13]Circulation of daily newspapers. [14]Subscribers. [15]Public health institutions only. [16]Includes military pensions.

Internet resources for further information:
- **Bank of Greece http://www.bankofgreece.gr/en**
- **National Statistical Service of Greece http://www.statistics.gr/Main_eng.asp**

Greenland

Official name. Kalaallit Nunaat (Greenlandic); Grønland (Danish) (Greenland).
Political status: integral part of the Danish realm with one legislative house (Parliament [31]).
Chief of state: Danish Monarch.
Heads of government: High Commissioner (for Denmark); Prime Minister (for Greenland).
Capital: Nuuk (Godthåb).
Official languages: Greenlandic; Danish.
Official religion: Evangelical Lutheran (Lutheran Church of Greenland).
Monetary unit: Danish krone (DKK); valuation (Sept. 8, 2008) 1 U.S.$ = DKK 5.23; 1 £ = DKK 9.23.

Area and population

Counties Communes	area sq km	population 2007[2] estimate	Counties Communes	area sq km	population 2007[2] estimate
East Greenland	459,900	3,598	Nuuk (Godthåb)	88,200	15,047
Ammassalik	232,100	3,069	Paamiut		
Illoqqortoormiut (Scoresbysund)	227,800	529	(Frederikshåb)	27,100	1,906
North Greenland	225,500	846	Qaqortoq		
Qaanaaq (Thule)	225,500	846	(Julianehåb)	4,100	3,490
West Greenland	623,000	52,004	Qasigiannguit		
Aasiaat			(Christianshåb)	13,400	1,291
(Egedesminde)	600	3,189	Qeqertarsuaq		
Ilulissat			(Godhavn)	9,700	1,055
(Jakobshavn)	36,400	4,996	Sisimiut		
Ivittuut (Ivigtut)	100	182	(Holsteinsborg)	34,400	6,140
Kangaatsiaq			Upernavik	186,300	2,953
(Kangatsiaq)	38,700	1,463	Uummannaq		
Maniitsoq			(Umanaq)	74,500	2,450
(Sukkertoppen)	62,600	3,545	NON-COUNTY/		
Nanortalik	18,000	2,281	COMMUNE AREA	857,600	200
Narsaq (Narssaq)	28,900	2,016	TOTAL	2,166,000	56,648

Demography

Population (2008): 56,700.
Density (2008)[3]: persons per sq mi 0.36, persons per sq km 0.14.
Urban-rural (2006[2]): urban (town) 82.7%; rural (settlement) 17.3%.
Sex distribution (2006[2]): male 53.04%; female 46.96%.
Age breakdown (2006): under 15, 23.9%; 15–29, 21.1%; 30–44, 24.3%; 45–59, 19.4%; 60–74, 8.8%; 75–84, 1.7%; 85 and over, 0.8%.
Population projection: (2010) 57,000; (2020) 59,000.
Doubling time: 86 years.
Ethnic composition (2000): Greenland Eskimo 79.1%; Danish 13.6%; other 7.3%.
Religious affiliation (2000): Protestant 69.2%, of which Evangelical Lutheran 64.2%, Pentecostal 2.8%; other Christian 27.4%; other/nonreligious 3.4%.
Major towns (2007[2]): Nuuk (Godthåb) 14,719; Sisimiut (Holsteinsborg) 5,344; Ilulissat (Jakobshavn) 4,512; Qaqortoq (Julianehåb) 3,238.

Vital statistics

Birth rate per 1,000 population (2006): 16.0 (world avg. 20.3); (1993) within marriage 29.2%; outside of marriage 70.8%.
Death rate per 1,000 population (2006): 7.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 8.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.40.
Marriage/divorce rates per 1,000 population (1999): 4.5/n.a.
Life expectancy at birth (2006): male 66.4 years; female 73.6 years.
Major causes of death per 100,000 population (1996–98): diseases of the circulatory system 187.5; malignant neoplasms (cancers) 181.5; violence 95.8; infectious and parasitic diseases 64.9; suicides 63.7; diseases of the respiratory system 51.8; accidents 46.4.

National economy

Budget (general government; 2005). Revenue: DKK 8,031,552,000 (block grant from Danish government 45.4%; income tax 32.3%; import duties 6.9%; other 15.4%). Expenditures: DKK 7,466,650,000 (social welfare 25.4%, education 17.9%, health 12.0%, public order 3.2%, defense 3.0%).
Tourism (2006): number of overnight stays at hotels 245,432, of which visitors from within Greenland 104,012, from Denmark 101,387, from the U.S. 9,536.
Land use as % of total land area (2003): in temporary crops, negligible, in permanent crops, none, in pasture 0.6%; overall forest area (2005) negligible.
Production (metric tons except as noted). Agriculture, fishing, other marine: locally grown broccoli, cauliflower, and cabbage sold commercially for the first time in 2007, potatoes also produced; fish catch (2004) 262,200 (by local boats 192,000, of which prawn 144,400, capelin 42,000, halibut 40,600, crab 6,400; by foreign boats 70,100); other marine catch: whales/narwhals [2006] 606, porpoises [2006] 2,373, seals [2005] 188,068; livestock (number of live animals; 2006) 21,289 sheep, 2,318 tame reindeer, 217 horses; animal products (value of external sales in DKK '000; 2004) sealskins 23,026, polar bear skins (1998) 579 (164 polar bears killed by trophy hunters in 2004). Mining: [4]. Manufacturing: principally handicrafts and fish processing. Energy production (consumption): electricity (kW-hr; 2005) 272,000,000 (272,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (181,000); natural gas, none (none).
Gross national income (2006): U.S.$1,618,000,000 (U.S.$27,991 per capita).

Structure of gross domestic product and labour force

	2007 in value U.S.$'000,000	2007 % of total value	2003 labour force[5]	2003 % of labour force[5]
Agriculture, fishing, hunting, trapping	92	4.2	1,900	6.9
Mining Public utilities	57	2.6	23 470	0.1 1.7
Manufacturing	170	7.7	2,058	7.5
Construction	129	5.9	2,030	7.4
Transp. and commun.	103	4.7	1,960	7.1
Trade, restaurants	178	8.1	3,813	13.9
Finance, real estate			861	3.1
Public administration Services	1,118	50.9	11,969 1,069	43.5 3.9
Other	350[6]	15.9[6]	1,341[7]	4.9[7]
TOTAL	2,197	100.0	27,494	100.0

Public debt (2000): U.S.$53,000,000.
Population economically active (2004[2]): total 32,119; activity rate of total population 56.5% (participation rates: ages 15–62, 83.5%; female [2002] 45.7%; unemployed[8] [2006] 8.6%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.0	107.2	110.7	111.8	114.4	117.0	123.4

Household income and expenditure. Average household size (2005) 2.5; average income per household (2003) DKK 269,992 (U.S.$40,982); sources of income: n.a.; expenditure (1994): food, beverages, and tobacco 41.6%, housing and energy 22.4%, transportation and communications 10.2%, recreation 6.4%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
DKK '000,000	−460	−668	−746	−987	−1,165	−1,036
% of total	9.3%	12.3%	14.0%	17.8%	19.4%	17.6%

Imports (2006): DKK 3,454,000,000 (refined petroleum 21.8%; machinery and apparatus 16.9%; food 16.5%; fabricated metal products 5.4%). *Major import sources:* Denmark 59.7%; Sweden 22.5%; Germany 3.0%; Norway 1.8%.
Exports (2006): DKK 2,418,000,000 (shrimp 49.5%; halibut 21.1%; gold 6.9%; cod 5.3%; crab 2.2%; seal, whale, and shark products 1.9%). *Major export destinations:* Denmark 86.6%; Spain 7.0%; U.K. 1.9%; Iceland 1.6%.

Transport and communications

Transport. Railroads: none. Roads (1998): total length 93 mi, 150 km (paved 60%). Vehicles (2004): passenger cars 2,861; trucks and buses 1,531. Air transport (2006)[9]: passenger-mi 274,286,000, passenger-km 441,422,000; short ton-mi cargo 31,390,000, metric ton-km cargo 49,485,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	...[10]	...[10]	PCs	...	...	...
Telephones				Dailies	2005	...[11]	...[11]
Cellular	2007	66[12]	1,175[12]	Internet users	2007	52	920
Landline	2005	24	421	Broadband	...	...	...

Education and health

Educational attainment (2002). Two-thirds of labour force has no formal education. *Literacy* (2001): total population age 15 and over literate: virtually 100%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 6–15) Secondary (age 15–19) Voc., teacher tr.	87[13]	1,217	11,344	9.3
Higher[14]	1	13	120	9.2

Health: physicians (2005[2]) 91 (1 per 626 persons); hospital beds (2001) 406 (1 per 139 persons); infant mortality rate per 1,000 live births (2006) 15.4; undernourished population, n.a.

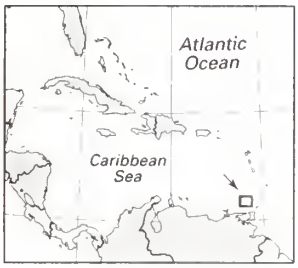
Military

Total active duty personnel. Denmark is responsible for Greenland's defense. Greenlanders are not liable for military service. U.S. troops (November 2007): 138.

[1]Areas of counties a ounty are approximate and add to rounded total of 2,166,000 sq km. Surveyed ice-free area in 1996 was 410,449 sq km (158,475 sq mi) and permanent ice area was 1,755,637 sq km (677,855 sq mi), making the total surveyed area 2,166,086 sq km (836,330 sq mi). [2]January 1. [3]Population density calculated with reference to ice-free area only. [4]Greenland's first gold mine officially opened in August 2004. [5]Employed persons only. [6]Includes taxes and import duties. [7]Includes 550 Danish employers and 791 wage earners not classified elsewhere. [8]Town residents only. [9]Air Greenland A/S only. [10]In 2002, 97% of households had a television. [11]There are no daily newspapers in Greenland. One paper is published twice a week, one weekly. [12]Subscribers. [13]2002–03. [14]University of Greenland only; 2005–06.

Internet resources for further information:
- **Statistics Greenland http://www.statgreen.gl/english**
- **Danmarks Statistik Yearbook http://www.dst.dk/HomeUK/Statistics/ofs/Publications/Yearbook.aspx**

Grenada



Official name: Grenada.
Form of government: constitutional monarchy with two legislative houses (Senate [13]; House of Representatives [15]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: St. George's.
Official language: English.
Official religion: none.
Monetary unit: Eastern Caribbean dollar (EC$); valuation (Sept. 8, 2008) 1 U.S.$ = EC$2.70; 1 £ = EC$4.77.

Area and population

Parishes[1]	Principal towns	area sq mi	area sq km	population 2001 census
St. Andrew	Grenville	38	99	24,749
St. David	St. David's	17	44	11,486
St. George	...	25[2]	65[2]	37,057[2]
St. John	Gouyave	14	35	8,591
St. Mark	Victoria	10	25	3,994
St. Patrick	Sauteurs	16	42	10,674
Town				
St. George's	—	2	2	2, 3
Grenadian dependencies[1]				
Carriacou	Hillsborough	10	26	6,081
Petite Martinique	. .	3	8	
TOTAL		133	344	102,632

Demography

Population (2008): 108,000.
Density (2008): persons per sq mi 812.0, persons per sq km 314.0.
Urban-rural (2004): urban 41.5%; rural 58.5%.
Sex distribution (2001): male 49.19%; female 50.81%.
Age breakdown (2001): under 15, 35.1%; 15–29, 28.1%; 30–44, 17.6%; 45–59, 9.0%; 60 and over, 10.2%.
Population projection: (2010) 109,000; (2020) 114,000.
Doubling time: 47 years.
Ethnic composition (2000): black 51.7%; mixed 40.0%; Indo-Pakistani 4.0%; white 0.9%; other 3.4%.
Religious affiliation (2005): Roman Catholic *c.* 41%; Protestant (of which significantly Anglican and Seventh-day Adventist) *c.* 30%; Rastafarian *c.* 5%; nonreligious/other *c.* 24%.
Major localities (2004): St. George's 4,300 (urban agglomeration [2001] 35,559); Gouyave 3,200; Grenville 2,300; Victoria 2,100.

Vital statistics

Birth rate per 1,000 population (2006): 22.1 (world avg. 20.3).
Death rate per 1,000 population (2006): 6.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 15.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.34.
Marriage/divorce rates per 1,000 population (2001): 5.0/1.1.
Life expectancy at birth (2006): male 63.1 years; female 66.7 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 413; malignant neoplasms (cancers) 178; diabetes mellitus 63; diseases of the respiratory system 25.

National economy

Budget (2006). Revenue: EC$490,800,000 (tax revenue 73.3%, of which tax on international trade 43.3%, income taxes 11.4%; grants 21.3%; nontax revenue 5.4%). Expenditures: EC$588,800,000 (current expenditure 53.9%, of which wages 26.2%, transfers 11.6%, debt service 4.9%; capital expenditure 46.1%).
Public debt (external, outstanding; 2007): U.S.$249,740,000.
Gross national income (GNI; 2007): U.S.$505,000,000 (U.S.$4,670 per capita); purchasing power parity GNI (U.S.$6,340 per capita).

Structure of gross domestic product and labour force

	2005 in value EC$'000,000	2005 % of total value	1998 labour force	1998 % of labour force
Agriculture	57.8	5.3	4,794	11.7
Quarrying	6.6	0.6	58	0.1
Manufacturing	65.2	6.0	2,579	6.3
Construction	234.2	21.5	5,163	12.6
Public utilities	62.6	5.7	505	1.2
Transp. and commun.	251.8	23.1	2,043	5.0
Trade, restaurants	161.8	14.8	8,298	20.2
Finance, real estate	144.7	13.3	1,312	3.2
Pub. admin., defense	181.5	16.7	1,879	4.6
Services	27.2	2.5	6,837	16.7
Other	–103.8[4]	–9.5[4]	7,547[5]	18.4[5]
TOTAL	1,089.6	100.0	41,015	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 7,200, coconuts 7,000, bananas 4,300[6], roots and tubers 4,060, nutmeg 2,800[6], grapefruit 2,100, mangoes 2,000, avocados 1,600, cacao 1,000[6], oranges 900, plantains 740, cinnamon 50, cloves 20; livestock (number of live animals) 13,200 sheep, 7,200 goats, 2,650 pigs; roundwood, n.a.; fisheries production (2006) 2,169 (from aquaculture, negligible). Mining and quarrying: excavation of limestone, sand, and gravel for local use. Manufacturing (value of production in EC$'000; 1997): wheat flour 13,390; soft drinks 9,798; beer 7,072; animal feed 5,852; rum 5,497; toilet paper 4,237; malt 4,192; stout 3,835; cigarettes 1,053. Energy production (consumption): electricity (kW-hr; 2005) 166,000,000 (166,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (76,000); natural gas, none (none).
Household income and expenditure. Average household size (2003) 3.3; income per capita (2000) EC$8,922 (U.S.$3,400); sources of income: n.a.; expenditure (2001)[7]: food, beverages, and tobacco 38.6%, transportation and communications 15.7%, housing 10.2%, clothing and footwear 9.8%.
Population economically active (2004): total 37,000; activity rate of total population *c.* 35% (participation rate: ages 15–64 [1998] *c.* 78%; female [1998] 43.5%; unemployed [2002] 12.2%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.7	102.7	105.0	107.4	111.2	115.5	120.1

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 93; remittances (2007) 25; foreign direct investment (2004–06 avg.) 90; official development assistance (2006) 27. Disbursements for (U.S.$'000,000): tourism (2006) 11; remittances (2007) 2.
Land use as % of total land area (2003): in temporary crops *c.* 6%, in permanent crops *c.* 29%, in pasture *c.* 3%; overall forest area (2005) *c.* 12%.

Foreign trade[8]

Balance of trade (current prices)

	2002	2003	2004	2005	2006
U.S.$'000,000	–138.7	–182.1	–177.9	–247.5	–216.0
% of total	63.9%	68.5%	76.4%	79.0%	79.7%

Imports (2005): U.S.$334,000,000 (machinery and apparatus 17.5%, food 14.2%, chemical products 8.1%, fabricated metal products 6.9%, iron and steel 6.5%, refined petroleum 6.4%). *Major import sources:* U.S. 37.5%; Trinidad and Tobago 21.0%; U.K. 5.8%; Japan 4.0%; China 3.2%.
Exports (2005): U.S.$27,600,000 (food 61.2%, of which spices [nearly all nutmeg and mace] 29.7%, wheat flour 13.8%, fish 9.9%; toilet paper 8.7%). *Major export destinations:* U.S. 21.4%; The Netherlands 14.1%; Trinidad and Tobago 10.1%; Saint Lucia 9.4%; Barbados 6.2%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 700 mi, 1,127 km (paved 61%). Vehicles (2001): passenger cars 15,800; trucks and buses 4,200. Air transport (2001)[9]: passengers 331,000; cargo 2,747 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	38	375	PCs	2004	16	155
Telephones				Dailies	2005	0[10]	0[10]
Cellular	2006	46[11]	431[11]	Internet users	2007	23	218
Landline	2006	28	262	Broadband	2006	5.5[11]	52[11]

Education and health

Educational attainment (2001). Percentage of population age 18 and over having: no formal schooling or unknown 7.6%; primary education 65.1%; secondary 21.7%; higher 5.6%, of which university 1.5%. *Literacy* (2004): total population age 15 and over literate 98.0%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 5–11)	62	888	16,598	18.7
Secondary (age 12–16)	20	696	13,808	19.8
Vocational	.	44	1,052	23.9
Higher[12, 13]	1	66	651	9.9

Health (2003): physicians 127 (1 per 803 persons); hospital beds 330 (1 per 309 persons); infant mortality rate per 1,000 live births (2006) 14.3; undernourished population (2002–04) 7,000 (7% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

Military

Total active duty personnel (2001)[14]. *Military expenditure as percentage of GDP:* n.a.; per capita expenditure, n.a.

[1]Grenada does not have a local government system. [2]St. George local council includes St. George's town. [3]Preliminary 2001 census figure for St. George's town is 3,908. [4]Less imputed bank service charges. [5]Includes 1,321 participants in activities not adequately defined and 6,226 unemployed. [6]Hurricanes Ivan and Emily, which struck Grenada in September 2004 and June 2005, respectively, destroyed much of the nutmeg and cacao fields as well as the banana crop; it is estimated that it will take a decade to regrow the nutmeg groves. [7]Weights of consumer price index components. [8]Imports are f.o.b. in balance of trade and c.i.f. for commodities and trading partners. [9]Point Salines airport. [10]Circulation of daily newspapers. [11]Subscribers. [12]1994–95. [13]Excludes Grenada Teachers' College. [14]A 755-member police force includes an 80-member paramilitary unit and a 40-member coast guard unit.

Internet resources for further information:
- **Eastern Caribbean Central Bank http://www.eccb-centralbank.org**
- **Caricom Statistics http://www.caricomstats.org**

Guadeloupe[1]

Official name: Département de la Guadeloupe (Department of Guadeloupe).
Political status: overseas department (France) with two legislative houses (General Council [42]; Regional Council [41]).
Chief of state: President of France.
Heads of government: Prefect of the Republic (for France); President of the General Council (for Guadeloupe); President of the Regional Council (for Guadeloupe).
Capital: Basse-Terre.
Official language: French.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Arrondissements	Capitals	area sq mi	area sq km	population 1999 census
Basse-Terre[2]	Basse-Terre	330	855	175,691
Pointe-à-Pitre[3]	Pointe-à-Pitre	299	775	210,875
Saint-Martin–Saint-Barthélemy[4]	Marigot	29	74	35,930
TOTAL		658	1,705[5]	422,496

Demography

Population (2008): 419,000[6].
Density (2008): persons per sq mi 666.1[6], persons per sq km 257.1[6].
Urban-rural (2007): urban 99.8%; rural 0.2%.
Sex distribution (2005): male 49.25%; female 50.75%.
Age breakdown (2005): under 15, 24.0%; 15–29, 22.7%; 30–44, 26.2%; 45–59, 14.6%; 60–74, 8.4%; 75 and over, 4.1%.
Population projection: (2010) 422,000[6]; (2020) 440,000[6].
Doubling time: 79 years.
Ethnic composition (2000): Creole (mulatto) 76.7%; black 10.0%; Guadeloupe mestizo (French–East Asian) 10.0%; white 2.0%; other 1.3%.
Religious affiliation (2000): Roman Catholic 86.4%; Protestant 4.5%; Jehovah's Witness 3.9%; nonreligious/atheist 3.1%; other 2.1%.
Major communes (1999): Les Abymes (2003) 65,700[7]; Saint-Martin (Marigot) 29,078; Le Gosier 25,360[7]; Pointe-à-Pitre 20,948 (urban agglomeration 171,773); Basse-Terre (2003) 12,900 (urban agglomeration 54,076).

Vital statistics

Birth rate per 1,000 population (2007): 14.8 (world avg. 20.3); (1999) within marriage 34.7%; outside of marriage 65.3%.
Death rate per 1,000 population (2007): 6.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 8.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 2.10.
Marriage/divorce rates per 1,000 population: (2006) 3.8/(2005) 1.9.
Life expectancy at birth (2007): male 76.0 years; female 82.2 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 207.5, of which cerebrovascular diseases 77.9; malignant neoplasms (cancers) 148.3; accidents, violence, and poisoning 75.6, of which transportation accidents 27.9; infectious and parasitic diseases 42.3; diabetes mellitus 31.5.

National economy

Budget (2006). Revenue: €381,500,000 (transfers from France 48.8%; direct tax revenues 42.8%; loans 6.9%; other 1.5%). Expenditures: €470,200,000 (capital [development] expenditures 59.8%; current expenditures 40.2%).
Public debt: n.a.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 800,000, bananas 75,000, plantains 9,000, melons 7,500, pineapples 5,300, sweet potatoes 4,000, tomatoes 3,000, yams 3,000, oranges 2,200; livestock (number of live animals) 73,000 cattle, 48,000 goats, 30,000 pigs; roundwood (2006) 32,120 cu m, of which fuelwood 99%; fisheries production (2006) 10,131 (from aquaculture, negligible). Mining and quarrying (2006): pumice 210,000. Manufacturing (value added in €'000,000; 2005): food and agricultural products 55.7; machinery and apparatus 44.0; other products include clothing, wooden furniture and posts, and metalware. Energy production (consumption): electricity (kW-hr; 2006) 1,795,000,000 (1,603,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (653,000); natural gas, none (none).
Land use as % of total land area (2003): in temporary crops *c.* 12%, in permanent crops *c.* 3%, in pasture *c.* 12%; overall forest area *c.* 47%.
Population economically active (2006): total 219,000; activity rate of total population 48.5% (participation rates: ages 15–59, 74.8%; female 50.5%; unemployed [December 2005] 23.3%).

Price and earnings indexes (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	102.6	105.0	107.1	108.6	112.1	114.3
Earnings index	100.0	104.6	..	...	...	...	..

Gross domestic product (at current market prices; 2006): U.S.$9,962,000,000 (U.S.$21,750 per capita).

Structure of gross domestic product and labour force

	2005 in value €'000,000	% of total value	labour force[8]	% of labour force
Agriculture	305	4.1	2,954	1.8
Mining, manufacturing	245	3.3	8,496	5.2
Public utilities	30	0.4	...	...
Construction	595	8.1	6,819	4.2
Transp. and commun.	245	3.3	[9]	[9]
Trade, hotels	919	12.4	16,674	10.2
Finance, real estate Pub. admin., defense Services	4,681	63.4	80,181[9]	48.9[9]
Other	368	5.0	48,700[10]	29.7[10]
TOTAL	7,388	100.0	163,824	100.0

Household income and expenditure (2000). Average household size 2.3; disposable income per household €25,441 (U.S.$23,439); sources of income: wages and salaries 81.5%, transfer payments 17.2%, property 1.3%; expenditure (2006)[11]: food and beverages 20.9%, energy 10.1%, housing 8.9%, clothing 7.8%, health 6.5%, transportation and communications 6.1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 299; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.

Foreign trade[12]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	−1,704	−1,715	−1,667	−2,047	−2,061	−2,065
% of total	83.9%	82.7%	84.1%	86.2%	86.3%	88.3%

Imports (2006): €2,225,000,000 (agricultural and food products 17.3%; mineral fuels 14.1%; machinery and apparatus 13.6%; road vehicles 12.8%; medicine, pharmaceuticals, perfume 8.2%). *Major import sources:* France (metropolitan) *c.* 56%; other EU countries *c.* 14%; Martinique *c.* 4%; Trinidad and Tobago *c.* 3%; Aruba *c.* 3%.
Exports (2006): €164,000,000 (sugar 20.6%; bananas 12.4%; electrical machinery and electronics 9.2%; rum 7.7%; boats, motorcycles, bicycles 7.4%). *Major export destinations:* France (metropolitan) *c.* 55%; Martinique *c.* 31%; other EU countries *c.* 3%; French Guiana *c.* 3%.

Transport and communications

Transport. Railroads: none. Roads (1998): total length 1,988 mi, 3,415 km (paved [1986] 80%). Vehicles (2001): passenger cars 117,700; trucks and buses 31,400. Air transport (2007): passenger-km[13] 3,794,000,000; cargo handled (2006) 14,531 metric tons, cargo unloaded 8,412 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	125	289	PCs	2005	90	200
Telephones				Dailies	2005	50[14]	110[14]
Cellular	2005	315	710	Internet users	2005	85	187
Landline	2000	205	480	Broadband	2005	...	...

Education and health

Educational attainment (1999). Percentage of population age 20 and over having: no formal education through lower secondary education 59.5%; upper secondary 10.1%; vocational 16.6%; incomplete higher 4.8%; complete higher 5.0%; other 4.0%. *Literacy* (1992): total population age 15 and over literate 90.1%; males literate 89.7%; females literate 90.5%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	351	3,246	60,769[15]	19.0
Secondary (age 11–17)	89	4,780	53,787[15]	11.2
Higher[16]	1	214	11,746	54.9

Health (2006[17]): physicians 983 (1 per 466 persons); hospital beds 2,348 (1 per 195 persons); infant mortality rate per 1,000 live births (2005) 8.6; undernourished population, n.a.

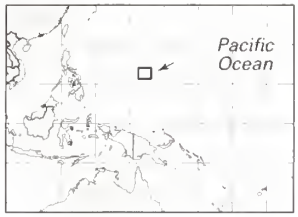
Military

Total active duty personnel (November 2007): French troops in West Indies (Guadeloupe and Martinique) 1,250 (army 64.0%, navy 36.0%).

[1]Includes Saint-Martin and Saint-Barthélemy unless otherwise footnoted. [2]Comprises Basse-Terre 325 sq mi (842 sq km), pop. 172,693, and Îles des Saintes 5 sq mi (13 sq km), pop. 2,998. [3]Comprises Grande-Terre 230 sq mi (596 sq km), pop. 196,767; Marie-Galante 61 sq mi (158 sq km), pop. 12,488; La Désirade 8 sq mi (21 sq km), pop. 1,620; and the uninhabited Îles de la Petite-Terre. [4]On Feb. 22, 2007, Saint-Martin (the northern half of the island of St. Martin) and Saint-Barthélemy formally separated from Guadeloupe to become overseas collectivities of France. [5]Detail does not add to total given because of rounding. [6]Excludes Saint-Martin (2008 pop. 29,000) and Saint-Barthélemy (2008 pop. 8,600). [7]Within Pointe-à-Pitre urban agglomeration. [8]Excludes 19,870 non-salaried workers. [9]Finance, real estate; Public administration, defense; Services includes Transportation and communications. [10]Unemployed. [11]Weights of consumer price index components. [12]Imports c.i.f.; exports f.o.b. [13]Air Caraïbes only. [14]Circulation of daily newspapers. [15]2006–07. [16]University of Antilles-French Guiana, Guadeloupe campus. [17]January 1.

Internet resources for further information:
- **INSEE Guadeloupe**
  http://www.insee.fr/fr/regions/guadeloupe
- **Region Guadeloupe**
  http://www.cr-guadeloupe.fr

Guam



Official name: Teritorion Guam (Chamorro); Territory of Guam (English).
Political status: self-governing, organized, unincorporated territory of the United States with one legislative house (Guam Legislature [15]).
Chief of state: President of the United States.
Head of government: Governor.
Capital: Hagåtña (Agana).
Official languages: Chamorro; English.
Official religion: none.
Monetary unit: United States dollar (U.S.$); valuation (Sept. 8, 2008) 1 U.S.$ = £0.57.

Area and population

Election Districts	land area sq mi	land area sq km	population[1] 2000 census
Agat	11	29	5,656
Asan	6	16	2,090
Barrigada	9	23	8,652
Chalan Pago-Ordot	6	16	5,923
Dededo	30	78	42,980
Hagåtña (Agana)	1	3	1,100
Hagåtña Heights	1	3	3,940
Inarajan	19	49	3,052
Mangilao	10	26	13,313
Merizo	6	16	2,163
Mongmong-Toto-Maite	2	5	5,845
Piti	7	18	1,666
Santa Rita	16	42	7,500
Sinajana	1	3	2,853
Talofofo	17	44	3,215
Tamuning	6	16	18,012
Umatac	6	16	887
Yigo	35	91	19,474
Yona	20	52	6,484
TOTAL	209	541[2]	154,805

Demography

Population (2008)[3]: 179,000.
Density (2008)[3]: persons per sq mi 856.5, persons per sq km 330.9.
Urban-rural (2003): urban 93.7%; rural 6.3%.
Sex distribution (2006): male 50.94%; female 49.06%.
Age breakdown (2006): under 15, 29.0%; 15–29, 23.0%; 30–44, 22.2%; 45–59, 16.1%; 60–74, 7.4%; 75 and over, 2.3%.
Population projection: (2010) 189,000; (2020) 226,000.
Doubling time: 48 years.
Ethnic composition (2000): Pacific Islander 44.6%, of which Chamorro 37.0%; Asian 32.5%, of which Filipino 26.3%, Korean 2.5%; white 6.8%; black 1.0%; mixed 13.9%; other 1.2%.
Religious affiliation (2005): Roman Catholic *c.* 72%; Protestant *c.* 12%; non-religious/other *c.* 16%.
Major populated places (2000): Tamuning 10,833; Mangilao 7,794; Yigo 6,391; Astumbo 5,207; Hagåtña 1,122.

Vital statistics

Birth rate per 1,000 population (2006): 18.8 (world avg. 20.3); (2004) within marriage 42.8%; outside of marriage 57.2%.
Death rate per 1,000 population (2006): 4.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 14.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.58.
Marriage/divorce rates per 1,000 population (2004): 9.4/11.9.
Life expectancy at birth (2006): male 75.5 years; female 81.8 years.
Major causes of death per 100,000 population (2003): diseases of the heart 122.1; malignant neoplasms (cancers) 69.9; cerebrovascular disease 31.9; accidents 31.9; bacterial infections 16.6; suicide 13.6.

National economy

Budget (2003). Revenue: U.S.$426,276,454 (local taxes 81.8%, federal contributions 15.3%, other 2.9%). Expenditures: U.S.$342,550,414 (education 46.1%, public order 16.0%, health 3.9%, social protection 2.7%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 53,200, vegetables 2,685, watermelons 2,500, roots and tubers 2,630, eggs 750, fruits 620; livestock (number of live animals) 210,000 chickens, 5,200 pigs; roundwood, n.a.; fisheries production (2006) 891 (from aquaculture 18%). Mining and quarrying: sand and gravel. Manufacturing (value of sales in U.S.$'000; 2002): food processing 26,733; printing and publishing 7,382; fabricated metal products 4,052. Energy production (consumption): electricity (kWhr; 2005) 1,897,000,000 (1,897,000,000); petroleum products (metric tons; 2002) none (1,333,000).
Household income and expenditure. Average household size (2003) 3.7; annual mean (median) household income (2003) U.S.$41,196 (U.S.$33,457); sources of income: n.a.; expenditure (2007)[4]: health care 20.4%, household furnishings 15.7%, food and nonalcoholic beverages 14.7%, energy 11.3%, transportation 8.6%, clothing and footwear 6.7%, housing 5.3%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 1,149; remittances, n.a.; foreign direct investment (FDI), n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.; FDI, n.a.
Gross domestic product (at current market prices; 2005): U.S.$3,700,000,000 (U.S.$22,661 per capita).

Structure of gross domestic product and labour force

	1995 in value U.S.$'000,000	1995 % of total value	2005 labour force[5]	2005 % of labour force[5]
Agriculture	[6]	[6]	170	0.3
Manufacturing	[6]	[6]	1,660	2.9
Construction	379.0	12.5	4,460	7.7
Trade	622.9	20.6	14,240	24.6
Transp. and commun.	[6]	[6]	4,970	8.6
Finance	[6]	[6]	2,540	4.4
Pub. admin. (local)	513.3	16.9	11,540	19.9
Pub. admin., defense (federal)	452.7	14.9	3,230	5.6
Services	486.9	16.1	15,190	26.2
Other	575.4[6]	19.0[6]	—	—
TOTAL	3,030.2	100.0	58,000	100.0[2]

Population economically active (2005): total 64,130[7]; activity rate of total population *c.* 38% (participation rates: over age 15, 61.1%; female [2004] 43.3%; unemployed 7.0%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	98.6	99.3	102.0	108.2	116.5	129.9	138.7

Land use as % of total land area (2003): in temporary crops *c.* 4%, in permanent crops *c.* 18%, in pasture *c.* 15%; overall forest area (2005) *c.* 47%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005
U.S.$'000,000	–442	–423	–483	–451	–481
% of total	78%	81%	85%	81%	82%

Imports (2005): *c.* U.S.$532,687,000[8,9] (food products and nonalcoholic beverages *c.* 31%; motor vehicles, other transportation, and parts *c.* 21%; leather luggage and handbags *c.* 14%). *Major import sources:* significantly U.S. and Japan.
Exports (2005): U.S.$51,844,521 (motor vehicles, other transportation, and parts 33.5%; food products 14.5%, of which fish 13.0%; aluminum scrap metal 8.4%; tobacco products 7.5%; clothing 5.4%). *Major export destinations* (2005): Finland 20.9%; Japan 19.5%; Federated States of Micronesia 18.4%; China 9.7%; Hong Kong 8.5%; Palau 6.1%.

Transport and communications

Transport. Railroads: none. Roads (1999): total length 550 mi, 885 km (paved 76%). Vehicles (2005): passenger cars 63,631; trucks and buses 25,615. Air transport (2006)[10]: passenger-km 4,762,000,000; metric ton-km cargo 102,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1997	106	668	PCs			
Telephones				Dailies	2005	29[11]	171[11]
Cellular	2004	98[12]	594[12]	Internet users	2005	65	385
Landline	2004	70	420	Broadband	2007	2.7[12]	15[12]

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling to some secondary education 23.7%; completed secondary 31.9%; some higher 24.5%; undergraduate 15.3%; advanced degree 4.6%. *Literacy:* virtually 100%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 5–13)	50[13]	1,917	27,735	14.5
Secondary (age 14–18)	9	1,108	12,048	10.9
Higher[14]	1		3,034	

Health: physicians (2005) 93[15] (1 per 1,828 persons); hospital beds (2005) 187[16] (1 per 903 persons); infant mortality rate per 1,000 live births (2006) 6.8; undernourished population, n.a.

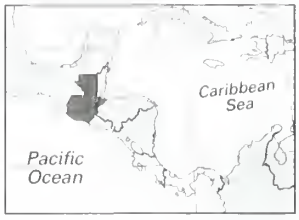
Military

Total active duty U.S. personnel (March 2008): 2,970 (army 1.4%; navy 37.2%; air force 61.1%; marine corps 0.3%)[17].

[1]Includes active-duty military personnel, U.S. Department of Defense employees, their dependents, and Guamanian nationals. [2]Detail does not add to total given because of rounding. [3]Based on land area; total area per most recent survey including area designated as inland water equals 217 sq mi (561 sq km). [4]Weights of consumer price index components. [5]Payroll employment only; excludes proprietors, the self-employed, unpaid family workers, and military personnel. [6]Other includes Agriculture, Manufacturing, Transportation and communications, and Finance. [7]Civilian labour force only, including unemployed. [8]Excludes petroleum imports for transshipment. [9]The estimated 2005 import total is based on a projection of summed figures for four months only (January, April, July, and October). [10]Continental Micronesia only. [11]Circulation of daily newspapers. [12]Subscribers. [13]Includes 8 schools with both primary and secondary grades. [14]University of Guam only. [15]Members of Guam Medical Society only. [16]Guam Memorial Hospital only. [17]8,000 U.S. Marines based in Japan are to be moved to Guam by 2014 per 2006 agreement.

Internet resource for further information:
• **Guam Bureau of Statistics and Plans http://bsp.guam.gov**

Guatemala



Official name: República de Guatemala (Republic of Guatemala).
Form of government: republic with one legislative house (Congress of the Republic [158]).
Head of state and government: President.
Capital: Guatemala City.
Official language: Spanish.
Official religion: none.
Monetary unit: quetzal (Q); valuation (Sept. 8, 2008) 1 U.S.$ = Q 7.55; 1 £ = Q 13.33.

Area and population

Departments	Capitals	area sq mi	area sq km	population 2002 census
Alta Verapaz	Coban	3,695	9,569	776,246
Baja Verapaz	Salamá	1,198	3,104	215,915
Chimaltenango	Chimaltenango	757	1,960	446,133
Chiquimula	Chiquimula	912	2,361	302,485
El Progreso	Guastatoya (Progreso)	737	1,910	139,490
Escuintla	Escuintla	1,682	4,356	538,746
Guatemala	Guatemala City	856	2,218	2,541,581
Huehuetenango	Huehuetenango	2,813	7,285	846,544
Izabal	Puerto Barrios	3,468	8,981	314,306
Jalapa	Jalapa	792	2,050	242,926
Jutiapa	Jutiapa	1,235	3,199	389,085
Peten	Flores	12,987	33,635	366,735
Quetzaltenango	Quetzaltenango	810	2,098	624,716
Quiché	Santa Cruz del Quiché	3,927	10,172	655,510
Retalhuleu	Retalhuleu	712	1,844	241,411
Sacatepequez	Antigua Guatemala	178	462	248,019
San Marcos	San Marcos	1,468	3,802	794,951
Santa Rosa	Cuilapa	1,134	2,936	301,370
Sololá	Sololá	405	1,050	307,661
Suchitepequez	Mazatenango	930	2,409	403,945
Totonicapán	Totonicapán	403	1,043	339,254
Zacapa	Zacapa	1,032	2,673	200,167
TOTAL		42,130[1]	109,117	11,237,196

Demography

Population (2008): 13,002,000.
Density (2008): persons per sq mi 308.6, persons per sq km 119.2.
Urban-rural (2005): urban 47.2%; rural 52.8%.
Sex distribution (2006): male 49.35%; female 50.65%.
Age breakdown (2006): under 15, 41.5%; 15–29, 28.6%; 30–44, 14.7%; 45–59, 9.6%; 60–74, 4.4%; 75–84, 1.1%; 85 and over, 0.1%.
Population projection: (2010) 13,550,000; (2020) 16,264,000.
Doubling time: 29 years.
Ethnic composition (2000): mestizo 63.7%; Amerindian (virtually all Mayan) 33.1%; black 2.0%; white 1.0%; other 0.2%.
Religious affiliation (2005): Roman Catholic *c.* 57%; Protestant/independent Christian *c.* 40%[2]; traditional Mayan religions *c.* 1%; other *c.* 2%.
Major cities (2002)[3]: Guatemala City 942,348 (urban agglomeration [2001] 3,366,000); Mixco 277,400[4]; Villa Nueva 187,700[4]; Quetzaltenango 106,700; Escuintla 65,400.

Vital statistics

Birth rate per 1,000 population (2006): 29.6 (world avg. 20.3).
Death rate per 1,000 population (2006): 5.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 24.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 4.30.
Marriage/divorce rates per 1,000 population (2005): 4.1/0.2.
Life expectancy at birth (2005): male 64.3 years; female 71.6 years.
Major causes of death per 100,000 population (2002): communicable diseases 339.0; diseases of the circulatory system 80.0; accidents and violence 71.0; malignant neoplasms (cancers) 44.0.

National economy

Budget (2005). Revenue: Q 24,521,300,000 (tax revenue 95.2%, of which VAT 43.8%, income tax 24.7%; nontax revenue 4.8%). Expenditures: Q 28,500,500,000 (current expenditures 66.4%; capital expenditures 33.6%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 18,000,000, corn (maize) 1,100,000, bananas 1,010,000, oil palm fruit 630,000, plantains 275,000, coffee 216,600, cardamom and nutmeg 19,000; livestock (number of live animals; 2007) 2,800,000 cattle, 265,000 sheep, 27,000,000 chickens; roundwood (2006) 17,063,047 cu m, of which fuelwood 97%; fisheries production (2006) 34,960 (from aquaculture 47%). Mining and quarrying (2005): gypsum 349,589; gold 740 kg; marble 3,000 cu m. Manufacturing (value added in Q '000,000; 2005)[5]: food products 213; beverages 98; textiles 75; wearing apparel 51; fabricated metal products 42. Energy production (consumption): electricity (kW-hr; 2005) 7,550,000,000 (7,238,000,000); coal (metric tons; 2005) none (408,000); crude petroleum (barrels; 2006) 7,340,000 ([2005] 735,000); petroleum products (metric tons; 2005) 26,000 (3,048,000); natural gas, none (none).
Household income and expenditure. Average household size (2002) 4.4; income per household (1989) Q 4,306 (U.S.$1,529); sources of income: n.a.; expenditure (2000)[6]: food and beverages 32.9%, household furnishings 14.7%, clothing 11.8%, recreation and culture 9.2%, health 7.3%.
Land use as % of total land area (2003): in temporary crops 13.3%, in permanent crops 5.6%, in pasture 24.0%; overall forest area (2005) 36.3%.
Gross national income (GNI; 2007): U.S.$32,585,000,000 (U.S.$2,440 per capita); purchasing power parity GNI (U.S.$4,440 per capita).

Structure of gross domestic product and labour force

	2006 in value Q '000,000[5, 7]	2006 % of total value	2002 labour force	2002 % of labour force
Agriculture	1,331.3	22.2	1,844,265	38.7
Mining	30.2	0.5	11,279	0.2
Manufacturing	748.9	12.5	716,633	15.0
Construction	111.4	1.9	213,007	4.5
Public utilities	257.3	4.3	12,673	0.3
Transp. and commun.	782.1	13.0	103,917	2.2
Trade	1,461.5	24.3	1,050,499	22.0
Finance, real estate	571.4	9.5	31,513	0.7
Pub. admin., defense	356.9	5.9		
Services	358.8	6.0	601,831	12.6
Other	—	—	183,767	3.9
TOTAL	6,009.8	100.0[1]	4,769,384	100.0[1]

Public debt (external, outstanding; April 2007): U.S.$4,162,600,000.
Population economically active (2004): total 5,059,800; activity rate of total population 40.5% (participation rates: ages 15–64, 64.7%; female 34.9%; unemployed [2003] 7.5%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	107.6	116.3	122.6	131.7	142.8	152.0	161.8
Annual earnings index	110.2	121.3	129.3	140.4	...	...	...

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 969; remittances (2007) 4,130; foreign direct investment (FDI; 2004–06 avg.) 245; official development assistance (2006) 487. Disbursements for (U.S.$'000,000): tourism (2006) 494; remittances (2007) 35; FDI (2004–06 avg.) 24.

Foreign trade[8]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–4,242	–4,084	–4,880	–5,119	–6,342	–7,371
% of total	50.8%	43.7%	45.4%	32.9%	49.8%	45.1%

Imports (2006): U.S.$9,540,000,000 (machinery and apparatus 18.5%, refined petroleum 17.1%, chemicals and chemical products 16.0%, road vehicles 10.1%). *Major import sources:* U.S. 38.8%; Mexico 9.1%; China 4.8%; Brazil 3.9%; Panama 3.8%.
Exports (2006): U.S.$3,198,000,000 (coffee 14.5%, raw sugar 9.3%, bananas 7.3%, crude petroleum 7.3%, toiletries and perfumery 3.9%, natural rubber 2.9%, spices 2.6%). *Major export destinations:* U.S. 31.4%; El Salvador 15.3%; Honduras 9.7%; Mexico 5.4%; Nicaragua 4.4%.

Transport and communications

Transport. Railroads (2004): route length 886 km[9]. Roads (2002): total length 14,044 km (paved 39%). Vehicles (2004): passenger cars 1,328,100; trucks and buses (2000) 53,236. Air transport (1999): passenger-km 341,700,000; metric ton-km cargo (2003) 200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	2,000	167	PCs	2005	262	21
Telephones				Dailies	2001	377[10]	33[10]
Cellular	2007	10,150[11]	760[11]	Internet users	2006	1,320	102
Landline	2006	1,355	105	Broadband	2005	27[11]	2.1[11]

Education and health

Educational attainment (2002). Percentage of heads of households having: no formal schooling 33.3%; incomplete/complete primary education 46.1%; incomplete/complete secondary 15.0%; higher 5.6%. *Literacy* (2005): total population age 15 and over literate 71.8%; males literate 79.1%; females literate 64.6%.

Education (2004)

	schools[12]	teachers	students	student/teacher ratio
Primary (age 7–12)	16,609	73,835	2,280,706	30.9
Secondary (age 13–18)	3,585	45,400	698,561	15.4
Higher	1,946	4,033[13]	111,739[13]	27.7[13]

Health (2003): physicians 11,700 (1 per 1,053 persons); hospital beds 6,118 (1 per 1,961 persons); infant mortality rate per 1,000 live births (2006) 30.8; undernourished population (2002–04) 2,800,000 (22% of total population based on the consumption of a minimum daily requirement of 1,760 calories).

Military

Total active duty personnel (November 2007): 15,500 (army 86.7%, navy 6.4%, air force 6.9%). *Military expenditure as percentage of GDP* (2005): 0.3%; per capita expenditure U.S.$8.

[1]Detail does not add to total given because of rounding. [2]Rough estimate; may also incorporate Mayan spiritual ritual. [3]Urban populations of municipios. [4]Within Guatemala City urban agglomeration. [5]At prices of 1958. [6]Weights of consumer price index components. [7]Value of GDP in 2006 in current prices is Q 268,297,800,000. [8]Imports c.i.f.; exports f.o.b. [9]Last operating rail service was shut down September 2007; no passenger service is available. [10]Circulation of daily newspapers. [11]Subscribers. [12]2003. [13]2002.

Internet resources for further information:
- **Banco de Guatemala http://www.banguat.gob.gt**
- **Instituto Nacional de Estadística http://www.ine.gob.gt**

Guernsey[1]

Official name: Bailiwick of Guernsey.
Political status: crown dependency (United Kingdom) with one legislative house (States of Deliberation [50][2, 3, 4]).
Chief of state: British Monarch represented by Lieutenant Governor.
Head of government: Chief Minister[5] assisted by the Policy Council.
Capital: St. Peter Port.
Official language: English.
Official religion: none.
Monetary unit: Guernsey pound[6]; valuation (Sept. 8, 2008) 1 Guernsey pound = U.S.$1.77.

Area and population

	area		population
	sq mi	sq km	2001 census
Parishes of Guernsey			
Castel	3.9	10.1	8,975
Forest	1.6	4.1	1,549
St. Andrew	1.7	4.5	2,409
St. Martin	2.8	7.3	6,267
St. Peter (St. Pierre du Bois)	2.4	6.2	2,188
St. Peter Port	2.6	6.6	16,488
St. Sampson	2.3	6.0	8,592
St. Saviour	2.4	6.3	2,696
Torteval	1.2	3.1	973
Vale	3.4	8.8	9,573
Dependencies of Guernsey			
Alderney	3.1	7.9	2,294
Brechou	0.1	0.3	0
Herm[7]	0.5	1.3	95
Jethou[7]	0.1	0.2	2
Lihou	0.1	0.2	0
Little Sark	0.4	1.0	591
Sark (Great Sark)	1.6	4.2	
TOTAL	30.2	78.1	62,692

Demography

Population (2008)[8]: 64,300.
Density (2008)[8]: persons per sq mi 2,129.1, persons per sq km 823.3.
Urban-rural (2003)[8, 9]: urban 30.5%; rural 69.5%.
Sex distribution (2007): male 49.09%; female 50.91%.
Age breakdown (2007): under 20, 20.9%; 20–39, 27.2%; 40–59, 29.4%; 60–79, 17.5%; 80 and over, 5.0%.
Population projection[8]: (2010) 65,000; (2020) 66,000.
Population by place of birth (2001): Guernsey 64.3%; United Kingdom 27.4%; Portugal 1.9%; Jersey 0.7%; Ireland 0.7%; Alderney 0.2%; Sark 0.1%; other Europe 3.2%; other 1.5%.
Religious affiliation (2000)[8, 9]: Protestant 51.0%, of which Anglican 44.1%; unaffiliated Christian 20.1%; Roman Catholic 14.6%; nonreligious 12.4%; other 1.9%.
Major cities (2001)[10]: St. Peter Port 16,488; Vale 9,573; Castel 8,975; St. Sampson 8,592; St. Martin 6,267.

Vital statistics

Birth rate per 1,000 population (2005): 10.5 (world avg. 20.3); (2000) within marriage 65.2%, outside of marriage 34.8%.
Death rate per 1,000 population (2005): 8.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 1.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.38.
Marriage/divorce rates per 1,000 population (2000): 5.7/2.9.
Life expectancy at birth (2005): male 77.3 years; female 83.4 years.
Major causes of death per 100,000 population (2007): malignant neoplasms (cancers) *c.* 202; ischemic heart disease *c.* 70; other cardiovascular diseases *c.* 207.

National economy

Budget (2007). Revenue: £365,004,000 (income tax 81.2%, document duties 7.2%, customs duties and excise taxes 5.0%, company fees 1.5%, automobile taxes 1.2%, other 3.9%). Expenditures: £294,085,000 (health 29.5%, education 22.0%, social security and welfare 19.3%, law and order 8.9%, advisers and finance 7.3%, other 13.0%).
Production (metric tons except as noted). Agriculture, forestry, fishing (value of exports in £; 2006): flowers 8,020,000, of which freesia 410,000, roses 360,000, carnations 290,000; other agricultural products, notably tomatoes 41,780,000; livestock (number of live animals; 1999) 3,262 cattle; roundwood, n.a.; fisheries production (number of fish landed; 2006) 1,728 (from aquaculture, n.a.), of which crabs 751, bass 162, black bream 162, scallops 123, lobsters 59. Mining and quarrying: n.a. Manufacturing (value of exports in £'000,000; 2006): plants 35.0; cut and postal flowers 8.7. Energy production (consumption): electricity (kW-hr; 2007) n.a. (340,000,000).
Population economically active (2008[11]): total 32,396; activity rate of total population 50.4% (participation rates: ages 15–64 [2001] 79.1%; female 45.0%; unemployed [July 2007–June 2008] 0.7%).

Retail price index (June 2000 = 100)

	2003	2004	2005	2006	2007	2008
Retail price index[12]	114.3	118.8	123.4	126.8	131.5	137.0

Gross national income (2007): U.S.$3,406,893,400 (U.S.$53,483 per capita).

Structure of gross domestic product and labour force

	2006		2008[12]	
	in value £'000	% of total value	labour force	% of labour force
Horticulture, fishing	24,198	1.5	1,010	3.1
Mining	—	—	—	—
Manufacturing	39,566	2.4	1,240	3.7
Construction	153,579	9.3	3,124	9.4
Public utilities	14,583	0.9	364	1.1
Transp. and commun.	30,057	1.8	1,952	5.9
Trade, hotels	216,564	13.1	6,566	19.9
Finance, real estate, insurance, international business	717,405	43.4	9,675	29.3
Pub. admin., defense	289,038	17.5	5,310	16.1
Services			3,520	10.6
Other	167,000[13]	10.1[13]	305[14]	0.9[14]
TOTAL	1,651,990	100.0	33,066	100.0

Public debt: n.a.
Household income and expenditure. Average household size (2001) 2.6; expenditure (2005–06): housing 33.8%, recreation and culture 13.9%, household furnishings and communications 11.4%, transportation 9.7%, food 9.7%, food away from home 4.8%, alcohol and tobacco products 4.5%, clothing and footwear 3.7%, energy 3.4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (1996) 275; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.
Land use as % of total land area (1999): in temporary crops, n.a., in permanent crops, n.a., in pasture *c.* 37%; overall forest area (2005) 4.1%[9].

Foreign trade

Imports (1999): petroleum products are important. *Major import sources* (2005): mostly United Kingdom.
Exports (1998): £93,000,000[15] (light industry 50.5%, flowers 36.6%, vegetables 5.4%, other 7.5%). *Major export destinations* (2005): mostly United Kingdom.

Transport and communications

Transport. Railroads: n.a. Vehicles (2007): passenger cars 40,125; trucks and buses 7,672. Air transport (2001)[16]: passenger arrivals 429,076, passenger departures 430,254; cargo loaded 969 metric tons, cargo unloaded 3,557 metric tons; airports (1999) with scheduled flights 2[17].

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2007	..		PCs	2007		
Telephones				Dailies	2006	16[18]	251[18]
Cellular	2005	43.8[19]	790[19]	Internet users	2005	39	613
Landline	2005	45.1	810	Broadband	2005		

Education and health

Educational attainment: n.a. *Literacy* (2002): virtually 100%.

Education (2008)

	schools	teachers[20]	students	student/teacher ratio
Primary (age 5–10)	19	253	4,674	.
Secondary (age 11–16)	11	295	4,359	
Higher	1	.	922	

Health (2006): physicians 102 (1 per 625 persons); hospital beds *c.* 548 (1 per 116 persons); infant mortality rate per 1,000 live births (2005) 4.7; undernourished population, n.a.

Military

Total active duty personnel: n.a.[21].

[1]Data exclude Alderney and Sark unless otherwise noted. [2]The States of Deliberation was reorganized in 2004. [3]Includes 3 ex officio members (2 of whom have no voting rights) and 2 representatives from Alderney. [4]Alderney and Sark have their own parliaments. The States of Alderney has 12 elected members; Sark's feudal system of government ended with elections to a 28-member assembly in December 2008. [5]The first Chief Minister was elected by the States of Deliberation in May 2004. [6]Equivalent in value to pound sterling (£), the Guernsey government issues both paper money and coins. [7]Populated islets that are directly administered by Guernsey. [8]Includes Alderney, Sark, and other dependencies. [9]Includes Jersey. [10]Population of parishes. [11]January 1. [12]June. [13]Less pensions (£35,976,000) and adjustment to profit account (£500,000). [14]Includes 232 unemployed. [15]Excluding administrative and financial services; financial services accounted for 66% of the export economy in 2002. [16]Guernsey airport. [17]Includes one airport on Alderney. [18]Circulation of *Guernsey Press and Star.* [19]Subscribers. [20]2000. [21]The United Kingdom is responsible for defense.

Internet resource for further information:
- **The States of Guernsey**
  http://www.gov.gg/ccm/portal

Guinea

Official name: République de Guinée (Republic of Guinea).
Form of government: military regime[1].
Head of state and government: President assisted by the National Council for Democracy and Development[1].
Capital: Conakry.
Official language: French.
Official religion: none.
Monetary unit: Guinean franc (FG); valuation (Sept. 8, 2008) 1 U.S.$ = FG 4,630; 1 £ = FG 8,179.

Area and population

Regions	Capitals	area sq mi	area sq km	population 1996 census
Boké	Boké	12,041	31,186	760,119
Faranah	Faranah	13,738	35,581	602,845
Kankan	Kankan	27,855	72,145	1,011,844
Kindia	Kindia	11,148	28,873	928,312
Labé	Labé	8,830	22,869	799,545
Mamou	Mamou	6,592	17,074	612,218
Nzérékoré	Nzérékoré	14,540	37,658	1,348,787
Special zone				
Conakry	Conakry	174	450	1,092,936
TOTAL		94,918	245,836	7,156,406

Demography

Population (2008): 9,572,000.
Density (2008): persons per sq mi 100.8, persons per sq km 38.9.
Urban-rural (2007): urban 33.7%; rural 66.3%.
Sex distribution (2005): male 50.00%; female 50.00%.
Age breakdown (2005): under 15, 44.4%; 15–29, 26.5%; 30–44, 15.4%; 45–59, 8.7%; 60–74, 4.1%; 75 and over, 0.9%.
Population projection: (2010) 10,028,000; (2020) 12,966,000.
Doubling time: 27 years.
Ethnic composition (2000): Fulani 38.3%; Malinke 25.6%; Susu 12.2%; Kpelle 5.2%; Kisi 4.8%; other 13.9%.
Religious affiliation (2005): Muslim (nearly all Sunnī) *c.* 85%[2]; Christian *c.* 8%[2]; traditional beliefs *c.* 7%.
Major cities (2004): Conakry 1,851,800; Kankan 113,900; Labé (2001) 64,500; Kindia (2001) 56,000; Nzérékoré (2001) 55,000.

Vital statistics

Birth rate per 1,000 population (2005): 42.0 (world avg. 20.3).
Death rate per 1,000 population (2005): 15.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 26.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 5.83.
Marriage/divorce rates per 1,000 population: n.a./n.a.
Life expectancy at birth (2005): male 48.2 years; female 50.6 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 682; cardiovascular diseases 150; injuries and accidents 118; malignant neoplasms (cancers) 62; cerebrovascular diseases 52.

National economy

Budget (2006). Revenue: FG 2,397,800,000,000 (current revenue 90.6%, of which mining sector revenue 28.2%, taxes on domestic production and trade 25.9%, taxes on international trade 18.2%, income tax 11.7%, nontax revenue 6.7%; grants 9.4%). Expenditures: FG 2,871,400,000,000 (current expenditure 76.2%, of which interest on debt 18.7%, wages and salaries 15.5%; capital expenditure 23.4%; net lending and restructuring 0.4%).
Public debt (external, outstanding; 2006): U.S.$2,980,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 1,401,592, cassava 1,122,171, oil palm fruit 883,000, plantains 436,000, peanuts (groundnuts) 315,116, sugarcane 283,000, fonio 243,361, citrus fruits 218,000, sweet potatoes 215,430, mangoes 165,000, bananas 160,000, pineapples 108,000, coffee 18,600, cacao 15,000; livestock (number of live animals) 4,180,965 cattle, 1,590,400 goats, 1,330,600 sheep, 17,830,000 chickens; roundwood (2006) 12,389,414 cu m, of which fuelwood 95%; fisheries production 94,000 (from aquaculture, negligible). Mining and quarrying (2006): bauxite 16,956,200; gold 25,100 kg; diamonds 444,000 carats. Manufacturing (2006): cement 151,500; flour 54,600; paints 1,362. Energy production (consumption): electricity (kW-hr; 2006) 583,400,000 ([2005] 802,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (384,000); natural gas, none (none).
Household income and expenditure (1994–95). Average household size (2004) 6.6; average annual household income[3] FG 1,905,899 (U.S.$1,952); sources of income[3]: agriculture 49.3%, self-employment 22.2%, wages and salaries 15.7%; expenditure[3]: food 50.0%; housing 14.0%; health 12.3%; transportation and communications 8.4%; clothing 6.3%.
Population economically active (2003): total 4,247,000; activity rate of total population 49.0% (participation rates: ages 15–64, 86.2%; female 46.3%; unemployed, n.a.).

Price index (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	105.4	108.4	122.4	141.4	185.3	249.6

Gross national income (GNI; 2007): U.S.$3,722,000,000 (U.S.$400 per capita); purchasing power parity GNI (U.S.$1,120 per capita).

Structure of gross domestic product and labour force

	2004 in value FG '000,000,000	2004 % of total value	1996 labour force	1996 % of labour force
Agriculture, forestry, fishing	1,879.3	22.8	2,433,480	74.2
Mining	1,186.5	14.4	34,975	1.1
Manufacturing	283.7	3.5	90,885	2.8
Construction	849.1	10.3	60,526	1.9
Public utilities	71.8	0.9	4,690	0.1
Transp. and commun.	506.0	6.2	77,070	2.4
Trade, hotels	1,968.1	23.9	373,709	11.4
Finance, real estate	...	...	3,440	0.1
Pub. admin., defense	365.9	4.5	63,192	1.9
Services	571.2	6.9	132,045	4.0
Other	545.1[4]	6.6[4]	4,822	0.1
TOTAL	8,226.7	100.0	3,278,834	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 70; remittances (2007) 42; foreign direct investment (2004–06 avg.) 103; official development assistance (2006) 164. Disbursements for (U.S.$'000,000): tourism (2005) 28; remittances (2007) 48.
Land use as % of total land area (2003): in temporary crops 4.5%, in permanent crops 2.6%, in pasture 43.5%; overall forest area (2005) 27.4%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+169.2	+161.3	+153.2	+203.5	+86.4	+69.2
% of total	13.1%	12.8%	11.7%	15.2%	5.4%	3.5%

Imports (2004): U.S.$569,320,000 (machinery and apparatus 28.0%, food 20.6%, refined petroleum 18.9%). *Major import sources:* France 14.6%; China 9.6%; The Netherlands 6.8%; Belgium 6.0%; U.S. 5.9%; Italy 5.0%.
Exports (2004): U.S.$772,820,000 (bauxite 39.0%, alumina 20.3%, gold 18.9%, diamonds 6.5%, cotton 5.6%, fish 4.5%, coffee 3.1%). *Major export destinations:* South Korea 15.6%; Russia 13.1%; Spain 12.3%; Ireland 9.1%; U.S. 7.5%; Germany 6.2%; France 5.9%.

Transport and communications

Transport. Railroads (2006): route length (mostly for bauxite transport) 520 mi, 837 km; passenger-km, n.a.[5]; metric ton-km cargo (1993) 710,000,000. Roads (2003): total length 44,348 km (paved 10%). Vehicles (2003): passenger cars 47,524; trucks and buses 26,467. Air transport (1999): passenger-km 94,000,000; metric ton-km cargo 10,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	140	16	PCs	2005	45	5.6
Telephones				Dailies	2005	...[6]	...[6]
Cellular	2005	189[7]	24[7]	Internet users	2006	50	5.4
Landline	2005	26	3.3	Broadband	2007	—	—

Education and health

Educational attainment of those age 25 and over having attended school (1999)[8]: none or unknown 81.4%; primary 7.8%; secondary 6.8%; higher 4.0%. *Literacy* (2006): percentage of total population age 15 and over literate 29.5%; males literate 42.6%; females literate 18.1%.

Education (2003–04)

	schools[9]	teachers	students	student/teacher ratio
Primary (age 7–12)	5,765	25,361	1,147,388	45.2
Secondary (age 13–18)	557	10,465	341,804	32.7
Voc., teacher tr.	41	. .	6,976	...
Higher	7	1,054	17,218	16.3

Health (2004): physicians 987 (1 per 9,323 persons); hospital beds 2,990 (1 per 3,078 persons); infant mortality rate per 1,000 live births (2006) 96.0; undernourished population (2002–04) 2,000,000 (24% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2007): 9,700 (army 87.7%, navy 4.1%, air force 8.2%). *Military expenditure as percentage of GDP* (2005): 2.8%; per capita expenditure U.S.$8.

[1]Constitution suspended from Dec. 22/23, 2008. [2]Significantly influenced by traditional beliefs and rituals. [3]Based on the national Enquête Intégrale sur les Conditions de Vie des Ménages avec Module Budget et Consommation, comprising 4,416 households. [4]Indirect taxes and import duties. [5]Passenger service has been limited and irregular since the late 1980s. [6]The press is subject to rigorous government censorship. [7]Subscribers. [8]Based on the national Enquête Démographique et de Santé, comprising 5,090 households. [9]2002–03.

Internet resources for further information:
- **National Statistics Directorate**
  http://www.stat-guinee.org

Guinea-Bissau

Official name: República da Guiné-Bissau (Republic of Guinea-Bissau).
Form of government: republic[1] with one legislative house (National People's Assembly [102]).
Head of state and government: President assisted by the Prime Minister.
Capital: Bissau.
Official language: Portuguese.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Regions	Chief towns	area sq mi	area sq km	population 2004 estimate[2]
Bafatá	Bafatá	2,309	5,981	182,959
Biombo	Quinhámel	324	840	63,835
Bolama	Bolama	1,013	2,624	27,959
Cacheu	Cacheu	1,998	5,175	164,676
Gabú	Gabú	3,533	9,150	178,318
Oio	Bissorã	2,086	5,403	179,048
Quinara	Fulacunda	1,212	3,138	52,134
Tombali	Catió	1,443	3,736	91,930
Autonomous sector				
Bissau	—	30	78	354,983
TOTAL		13,948[3]	36,125[3]	1,295,841[4]

Demography

Population (2008): 1,503,000.
Density (2008)[5]: persons per sq mi 138.4, persons per sq km 53.4.
Urban-rural (2003): urban 34.0%; rural 66.0%.
Sex distribution (2005): male 48.53%; female 51.47%.
Age breakdown (2005): under 15, 41.6%; 15–29, 28.1%; 30–44, 16.1%; 45–59, 9.4%; 60–74, 4.1%; 75 and over, 0.7%.
Population projection: (2010) 1,565,000; (2020) 1,893,000.
Doubling time: 33 years.
Ethnic composition (1996): Balante 30%; Fulani 20%; Mandyako 14%; Malinke 13%; Pepel 7%; nonindigenous Cape Verdean mulatto 2%; other 14%.
Religious affiliation (2005): traditional beliefs *c.* 49%; Muslim *c.* 42%; Christian/other *c.* 9%.
Major cities (2004): Bissau 305,700; Bafatá 15,000; Cacheu 14,000; Gabú 10,000.

Vital statistics

Birth rate per 1,000 population (2005): 37.6 (world avg. 20.3).
Death rate per 1,000 population (2005): 16.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 20.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 4.93.
Marriage/divorce rates per 1,000 population: n.a./n.a.
Life expectancy at birth (2005): male 44.8 years; female 48.5 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 165, HIV/AIDS 126, accidents, poisoning, and violence 114, malignant neoplasms (cancers) 66, chronic respiratory diseases 41.

National economy

Budget (2005). Revenue: CFAF 41,378,000,000 (tax revenue 44.3%, of which taxes on international trade 15.5%, general sales tax 13.6%; grants 32.4%; nontax revenue 23.3%, of which fishing licenses 18.2%). Expenditures: CFAF 60,524,000,000 (current expenditures 72.7%, of which wages and salaries 35.1%, scheduled external interest payments 11.1%; capital expenditures 27.3%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): roots and tubers 116,000, rice 88,700, cashew nuts 81,000, oil palm fruit 80,000, millet 50,000, coconuts 45,500, plantains 40,000, peanuts (groundnuts) 21,000, pork 12,200, seed cotton 5,500, cattle meat 5,450; livestock (number of live animals) 549,800 cattle, 390,500 pigs; roundwood (2006) 592,000 cu m, of which fuelwood 71%; fisheries production (2006) 6,200 (from aquaculture, none). Mining and quarrying: extraction of construction materials only. Manufacturing (2003): processed wood 11,000; bakery products 7,900; wood products 4,400; dried and smoked fish 3,800; soap 2,400; vegetable oils 37,000 hectolitres. Energy production (consumption): electricity (kW-hr; 2005) 61,000,000 (61,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (88,000); natural gas, none (none).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 1.6; remittances (2006) 29; foreign direct investment (2006 avg.) 18; official development assistance (2006) 82. Disbursements for (U.S.$'000,000): tourism (2005) 10; remittances (2006) 5.
Population economically active (2003): total 643,000; activity rate of total population 47.2% (participation rates [1995]: over age 10, 65.5%; female 39.9%; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.3	106.8	103.0	103.9	107.4	109.5	114.5

Public debt (external, outstanding; 2006): U.S.$695,000,000.

Household income and expenditure. Average household size (1996) 6.9; income per household: n.a.; sources of income: n.a.; expenditure (2001–02)[6, 7]: food and nonalcoholic beverages 59.7%, housing and energy 13.6%, clothing and footwear 7.6%, transport and communications 6.5%, household furnishings 4.4%.
Gross national income (GNI; 2007): U.S.$331,000,000 (U.S.$200 per capita); purchasing power parity GNI (U.S.$470 per capita).

Structure of gross domestic product and labour force

	2005 in value CFAF '000,000[8]	2005 % of total value[8]	1995 labour force	1995 % of labour force
Agriculture	94,193	60.2	373,000	76.0
Mining, Manufacturing, Public utilities	13,605	8.7	20,000	4.1
Construction	4,647	3.0		
Transportation and communications	4,270	2.7		
Trade	26,274	16.8	98,000	20.0
Finance, services	559	0.4		
Pub. admin., defense	12,757	8.2		
TOTAL	156,305	100.0	491,000	100.0[9]

Land use as % of total land area (2003): in temporary crops 10.7%, in permanent crops 8.9%, in pasture 38.4%; overall forest area (2005) 73.5%.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−4.0	+0.2	−7.0	−18.3	−34.0	−40.0
% of total	3.6%	0.1%	4.4%	8.3%	21.0%	22.2%

Imports (2005): U.S.$119,100,000 (construction material 17.3%; petroleum products 13.3%; foodstuffs 12.6%, of which rice 9.1%; transportation equipment 11.1%; equipment and machinery 10.1%; beverages and tobacco 5.0%). *Major import sources:* Senegal 34.6%; Italy 20.4%; Portugal 12.7%; The Netherlands 3.0%; France 2.5%.
Exports (2005): U.S.$100,800,000 (cashew nuts 89.5%; cotton 1.4%; wood products 1.4%). *Major export destinations:* India 67.4%; Nigeria 19.0%; Senegal 1.5%; Portugal 1.1%.

Transport and communications

Transport. Railroads: none. Roads (2003): total length 1,710 mi, 2,755 km (paved 28%). Vehicles (1996): passenger cars 7,120; trucks and buses 5,640. Air transport (1998): passenger-mi 6,200,000, passenger-km 10,000,000; short ton-mi cargo, n.a., metric ton-km cargo, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	47	36	PCs	..	...	...
Telephones				Dailies	2005	6[11]	4.2[11]
Cellular	2007	296[12]	201[12]	Internet users	2006	37	26
Landline	2005	4.6	3.1	Broadband	2007	—	—

Education and health

Educational attainment: n.a. *Literacy* (2003): total population age 15 and over literate 32.2%; males literate (2001) 55.2%; females literate (2001) 24.7%.

Education (1999)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	759	4,306	149,530	34.7
Secondary (age 13–17)	..	1,913	25,314[13]	13.2
Higher		.	463	..

Health: physicians (2004) 188 (1 per 7,374 persons); hospital beds (2001) 1,448 (1 per 902 persons); infant mortality rate per 1,000 live births (2005) 107.2; undernourished population (2002–04) 600,000 (39% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2007): 9,250 (army 73.5%, navy 3.8%, air force 1.1%, paramilitary [gendarmerie] 21.6%). *Military expenditure as percentage of GNP* (2005): 4.0%; per capita expenditure U.S.$6.

[1]Legal ambiguity persisted in September 2008. A constitution adopted by the National Assembly in 2001 had been neither promulgated nor vetoed by the President. [2]Projection based on 1991 census. [3]Includes water area of about 3,089 sq mi (8,000 sq km). [4]Reported total is 1,295,841; summed total is 1,295,842. [5]Based on land area of 10,859 sq mi (28,125 sq km). [6]Bissau only. [7]Weights of consumer price index components. [8]At factor cost. [9]Detail does not add to total given because of rounding. [10]Imports c.i.f.; exports f.o.b. [11]Circulation of official government daily newspapers. [12]Subscribers. [13]Includes vocational.

Internet resources for further information:

- **La Banque de France: La Zone Franc**
  http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm
- **National Institute of Statistics and Census**
  http://www.stat-guinebissau.com

Guyana

Official name: Co-operative Republic of Guyana.
Form of government: unitary multiparty republic with one legislative house (National Assembly [65]).
Head of state and government: President.
Capital: Georgetown.
Official language: English.
Official religion: none.
Monetary unit: Guyanese dollar (G$); valuation (Sept. 8, 2008) 1 U.S.$ = G$204.15; 1 £ = G$360.67.

Area and population

Administrative regions		Capitals	area sq mi	area sq km	population 2002 census
Region 1	(Barima-Waini)	Mabaruma	7,853	20,339	24,275
Region 2	(Pomeroon-Supenaam)	Anna Regina	2,392	6,195	49,253
Region 3	(Essequibo Islands–West Demerara)	Vreed en Hoop	1,450	3,755	103,061
Region 4	(Demerara-Mahaica)	Paradise	862	2,232	310,320
Region 5	(Mahaica-Berbice)	Fort Wellington	1,618	4,190	52,428
Region 6	(East Berbice–Corentyne)	New Amsterdam	13,990	36,234	123,695
Region 7	(Cuyuni-Mazaruni)	Bartica	18,229	47,213	17,597
Region 8	(Potaro-Siparuni)	Mahdia	7,742	20,051	10,095
Region 9	(Upper Takutu–Upper Essequibo)	Lethem	22,297	57,750	19,387
Region 10	(Upper Demerara–Berbice)	Linden	6,579	17,040	41,112
TOTAL			83,012[1]	214,999[1]	751,223

Demography

Population (2008): 736,000.
Density (2008)[2]: persons per sq mi 9.7, persons per sq km 3.7.
Urban-rural (2005): urban 38.5%; rural 61.5%.
Sex distribution (2007): male 50.06%; female 49.94%.
Age breakdown (2005): under 15, 26.5%; 15–29, 29.7%; 30–44, 23.0%; 45–59, 13.3%; 60–74, 5.6%; 75 and over, 1.9%.
Population projection: (2010) 731,000; (2020) 700,000.
Doubling time: 69 years.
Ethnic composition (2002): East Indian 43.5%; black 30.2%; mixed race 16.7%; Amerindian 9.2%; other 0.4%.
Religious affiliation (2002): Christian 57.3%, of which Protestant/independent Christian 48.2% (including Anglican 6.9%), Roman Catholic 8.0%, Jehovah's Witness 1.1%; Hindu 28.4%; Muslim 7.2%; Rastafarian 0.5%; nonreligious 4.3%; other/unknown 2.3%.
Major cities (2002): Georgetown 134,497; Linden 29,298; New Amsterdam 17,033; Anna Regina 12,391; Corriverton 11,494.

Vital statistics

Birth rate per 1,000 population (2005): 18.5 (world avg. 20.3).
Death rate per 1,000 population (2005): 8.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 10.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.05.
Marriage/divorce rates per 1,000 population (2006): 6.1/n.a.
Life expectancy at birth (2005): male 62.9 years; female 68.3 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 210; accidents and violence 91; malignant neoplasms (cancers) 58; diabetes mellitus 52; HIV/AIDS 48.
Adult population (ages 15–49) *living with HIV* (2007): 2.5%[3] (world avg. 0.8%).

National economy

Budget (2005): Revenue: G$69,414,800,000 (tax revenue 76.2%, of which income taxes 34.2%, consumption taxes 31.0%, taxes on international trade 6.9%; nontax revenue 4.6%; grants 11.4%; other revenue 7.8%). Expenditures: G$88,861,400,000 (current expenditure 60.5%, of which wages and salaries 20.9%, transfers 13.3%, interest payments 4.9%; development expenditure 39.5%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 3,250,000, rice 475,000, coconuts 45,000, cassava (manioc) 29,000, plantains 17,000, bananas 17,000, mangoes 12,000, oranges 6,000, pineapples 4,500; livestock (number of live animals) 130,000 sheep, 110,000 cattle, 21,500,000 chickens; roundwood (2006) 1,433,952 cu m, of which fuelwood 60%; fisheries production (2006) 54,660 (from aquaculture 1%), of which shrimp or prawns 19,860. Mining and quarrying (2007): bauxite 2,248,929; gold 7,412 kg; diamonds 268,945 carats. Manufacturing (2006): flour 37,400; margarine 2,265; rum 119,000 hectolitres; beer and stout 90,000 hectolitres; soft drinks 4,043,100 cases; pharmaceuticals 14,200,000 tablets. Energy production (consumption): electricity (kW-hr; 2005) 862,000,000 (862,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (485,000); natural gas, none (none).
Population economically active (2006): total 279,100; activity rate of total population *c.* 37% (participation rates: ages 15–65, *c.* 60%; female [2002] 34.1%; unemployed [2002] 11.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.7	108.2	114.6	119.9	128.2	136.7	153.5
Earnings index	...	.		...	...	...	...

Gross national income (GNI; 2007): U.S.$959,000,000 (U.S.$1,300 per capita); purchasing power parity GNI (U.S.$3,270 per capita).

Structure of gross domestic product and labour force

	2006 in value G$'000,000	2006 % of total value	1997 labour force	1997 % of labour force
Sugar	20,457	11.3		
Other agriculture	18,636	10.3	66,789	25.3
Fishing, forestry	13,744	7.6		
Mining	14,133	7.8	7,299	2.8
Manufacturing	5,467	3.0	27,869	10.6
Public utilities			2,547	0.9
Construction	9,677	5.4	16,545	6.3
Transp. and commun	17,237	9.6	20,154	7.6
Trade	7,961	4.4	44,653	16.9
Finance, real estate	13,327	7.4	12,219	4.6
Pub. admin., defense	27,341	15.2	15,219	5.8
Services	3,219	1.8	22,558	8.6
Other	29,084[4]	16.1[4]	27,955[5]	10.6[5]
TOTAL	180,282[6]	100.0[6]	263,807	100.0

Public debt (external, outstanding; 2007): U.S.$718,513,000.
Household income and expenditure. Average household size (2002) 4.1.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 37; remittances (2007) 218; foreign direct investment (2004–06 avg.) 70; official development assistance (2006) 173. Disbursements for (U.S.$'000,000): tourism (2006) 49; remittances (2007) 48.
Land use as % of total land area (2003): in temporary crops 2.4%, in permanent crops 0.2%, in pasture 6.2%; overall forest area (2005) 76.7%.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006
U.S.$'000,000	−118.0	−84.7	−92.8	−239.4	−325.5
% of total	11.7%	9.1%	7.9%	18.2%	24.7%

Imports (2006): U.S.$892,900,000 (refined petroleum 29.1%, machinery and apparatus 20.4%, chemicals and chemical products 10.2%, food 10.1%). *Major import sources:* Trinidad and Tobago 33.6%; U.S. 27.2%; China 5.1%; U.K. 4.5%; Netherlands Antilles 4.0%.
Exports (2006): U.S.$567,400,000 (sugar 22.9%, gold 14.0%, rice 8.8%, sawn wood 8.0%, diamonds 6.8%, shrimp 6.7%, bauxite 5.5%). *Major export destinations:* U.K. 20.4%; Canada 18.0%; U.S. 15.5%; The Netherlands 6.3%; Trinidad and Tobago 6.2%.

Transport and communications

Transport. Railroads (2001): 187 km[8]. Roads (2000): total length 4,952 mi, 7,970 km (paved 7%). Vehicles (2001): passenger cars 61,300; trucks and buses 15,500. Air transport (2001)[9]: passenger-mi 109,000,000, passenger-km 174,800,000; short ton-mi cargo 1,015,000, metric ton-km cargo 1,600,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	125	169	PCs	2005	29	39
Telephones				Dailies	2005	67[10]	88[10]
Cellular	2005	281[11]	375[11]	Internet users	2007	190	258
Landline	2005	110	146	Broadband	2005	2.0[11]	2.6[11]

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: no formal schooling 3.0%; primary education 26.0%; secondary 62.1%; post-secondary 3.7%; higher 4.8%; other 0.4%. *Literacy* (2005): total population age 15 and over literate 99.0%; males literate 99.2%; females literate 98.7%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	428[12]	4,202	110,828	26.4
Secondary (age 12–17)	109[12]	..	59,108	..
Voc., teacher tr.	7[12]	186[13]	5,846	...
Higher[14]	1	305	6,933	22.7

Health (2005): physicians 323 (1 per 2,325 persons); hospital beds 3,267 (1 per 230 persons); infant mortality rate per 1,000 live births 33.3; undernourished population (2002–04) 60,000 (8% of total population based on the consumption of a minimum daily requirement of 1,880 calories).

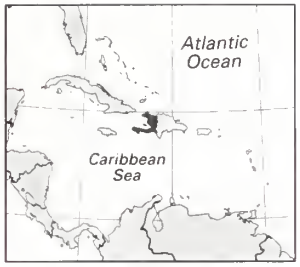
Military

Total active duty personnel (November 2007): 1,100 (army 81.8%, navy 9.1%, air force 9.1%). *Military expenditure as percentage of GDP* (2004): 1.8%; per capita expenditure U.S.$19.

[1]Includes inland water area equaling *c.* 7,000 sq mi (*c.* 18,000 sq km). [2]Based on land area only. [3]Statistically derived midpoint within range. [4]Indirect taxes less subsidies. [5]Includes 23,960 unemployed. [6]Detail does not add to total given because of rounding. [7]Imports are c.i.f.; exports f.o.b. [8]Entire length devoted to transportation of ore. [9]Scheduled traffic only. [10]Circulation of daily newspapers. [11]Subscribers. [12]1999–2000. [13]2001–02. [14]2003–04.

Internet resources for further information:
- **Bank of Guyana http://www.bankofguyana.org.gy**
- **Bureau of Statistics http://www.statisticsguyana.gov.gy**

Haiti



Official name: Repiblik Dayti (Haitian Creole); République d'Haïti (French) (Republic of Haiti).
Form of government: republic with two legislative houses (Senate [30]; Chamber of Deputies [99]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Port-au-Prince.
Official languages: Haitian Creole; French.
Official religions: [1].
Monetary unit: gourde (G); valuation (Sept. 8, 2008) 1 U.S.$ = G 39.15; 1 £ = G 69.17.

Area and population

Departements	Capitals	area sq mi	area sq km	population 2003 census
Artibonite	Gonaïves	1,924	4,984	1,299,398
Centre	Hinche	1,419	3,675	581,505
Grand'Anse / Nippes[2]	Jérémie	1,278	3,310	626,928
Nord	Cap-Haïtien	813	2,106	823,043
Nord-Est	Fort-Liberté	697	1,805	308,385
Nord-Ouest	Port-de-Paix	840	2,176	531,198
Ouest	Port-au-Prince	1,864	4,827	3,096,967
Sud	Les Cayes	1,079	2,794	621,651
Sud-Est	Jacmel	781	2,023	484,675
TOTAL		10,695[3]	27,700[3]	8,373,750

Demography

Population (2008): 9,751,000.
Density (2008): persons per sq mi 911.7, persons per sq km 352.0.
Urban-rural (2007): urban 40.1%; rural 59.9%.
Sex distribution (2005): male 49.29%; female 50.71%.
Age breakdown (2005): under 15, 42.6%; 15–29, 30.5%; 30–44, 14.2%; 45–59, 7.5%; 60–74, 4.2%; 75 and over, 1.0%.
Population projection: (2010) 10,060,000; (2020) 11,584,000.
Ethnic composition (2000): black 94.2%; mulatto 5.4%; other 0.4%.
Religious affiliation (2003): Roman Catholic 54.7%[4]; Protestant/independent Christian 28.5%, of which Baptist 15.4%, Pentecostal 7.9%; voodoo 2.1%; nonreligious 10.2%; other/unknown 4.5%.
Major cities (2003): Port-au-Prince 703,023 (metropolitan area 1,977,036); Carrefour (1999) 336,222[5]; Delmas (1999) 284,079[5]; Cap-Haïtien 111,094; Gonaïves 104,825.

Vital statistics

Birth rate per 1,000 population (2007): 27.9 (world avg. 20.3).
Death rate per 1,000 population (2007): 9.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 18.7 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 3.50.
Life expectancy at birth (2007): male 59.1 years; female 62.8 years.
Major causes of death per 100,000 population (2002): communicable diseases 351.2, diseases of the circulatory system 227.9, accidents and violence 59.3, malignant neoplasms (cancers) 55.3, diabetes mellitus 31.1.
Adult population (ages 15–49) *living with HIV* (2007): 2.2%[6] (world avg. 0.8%).

National economy

Budget (2007). Revenue: G 25,323,750,000 (customs duties 53.1%; sales tax 27.5%; individual taxes on income and profits 17.8%). Expenditures: G 29,534,070,000 (current expenditure 77.1%, of which wages 33.9%, transfers 4.2%, interest on public debt 2.3%; capital expenditure 22.9%).
Gross national income (GNI; 2007): U.S.$5,366,000,000 (U.S.$560 per capita); purchasing power parity GNI (U.S.$1,310 per capita).

Structure of gross domestic product and labour force

	2006–07 in value G '000,000[7]	2006–07 % of total value	1990 labour force[8]	1990 % of labour force[8]
Agriculture, forestry	3,413	25.3	1,535,444	57.3
Mining	15	0.1	24,012	0.9
Manufacturing	1,032	7.7	151,387	5.6
Construction	1,042	7.7	28,001	1.0
Public utilities	57	0.4	2,577	0.1
Transp. and commun.	883	6.6	20,691	0.8
Trade, restaurants	3,612	26.8	352,970	13.2
Finance, real estate	1,638	12.1	5,057	0.2
Services / Pub. admin., defense	1,449	10.7	155,347	5.8
Other	357[9]	2.6[9]	403,654[10]	15.1[10]
TOTAL	13,498	100.0	2,679,140	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 1,000,000, cassava (manioc) 330,000, bananas 293,000, plantains 280,000, mangoes 260,000, yams 198,000, corn (maize) 190,000, sweet potatoes 172,000, rice 100,000, avocados 43,000, coffee 22,000, cacao 4,500; livestock (number of live animals) 1,900,000 goats, 1,450,000 cattle, 1,000,000 pigs, 500,000 horses; roundwood (2006) 2,247,047 cu m, of which fuelwood 89%; fisheries production (2006) 10,000 (from aquaculture, none). Mining and quarrying (2006): sand 2,000,000 cu m. Manufacturing (value added in G '000,000; 2002[7]): food and beverages 484.5; textiles, wearing apparel, and footwear 195.7; chemical and rubber products 63.8; tobacco products 38.2. Energy production (consumption): electricity (kW-hr; 2007) 241,990,000 (215,380,000[11]); crude petroleum, none (none); petroleum products (metric tons; 2005) none (527,000).
Population economically active (2003)[12]: total 3,467,000; activity rate of total population 41.8% (participation rates: ages 15–64, 69.5%; female 41.5%; unemployed 32.7%[13]).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	114.2	125.4	174.7	214.5	248.3	280.7	304.7
Daily earnings index[14]	100.0	100.0	194.4	194.4	194.4	194.4	..

Public debt (external, outstanding; December 2007): U.S.$1,478,000,000.
Household income and expenditure. Average household size (2003) 4.6; sources of income (2001): self-employment 37%, transfers 25%, wages 20%, self-consumption 11%; expenditure (1996)[15]: food, beverages, and tobacco 49.4%, housing and energy 9.1%, transportation 8.7%, clothing and footwear 8.5%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 135; remittances (2007) 1,184; foreign direct investment (2004–06 avg.) 64; official development assistance (2006) 581. Disbursements for (U.S.$'000,000): tourism (2006) 56; remittances (2007) 68.
Land use as % of total land area (2003): in temporary crops 28.3%, in permanent crops 11.6%, in pasture 17.8%; overall forest area (2005) 3.8%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−750.2	−706.0	−783.6	−832.8	−849.6	−1,112.1
% of total	58.8%	56.3%	54.1%	52.4%	48.1%	52.1%

Imports (2006): U.S.$1,623,600,000 (food 21.9%, refined petroleum 19.7%, machinery and transport equipment 17.1%). *Major import sources* (2004): U.S. 52.9%; Dominican Republic 6.0%; Japan 2.9%.
Exports (2006): U.S.$511,500,000 (reexports to U.S. 88.4%, of which apparel or clothing accessories 87.7%; mangoes 1.8%; cacao 1.5%; essential oils 1.3%; coffee 1.0%). *Major export destinations* (2004): U.S. 81.8%; Dominican Republic 7.2%; Canada 4.2%.

Transport and communications

Transport. Railroad: none. Roads (1999): total length 2,585 mi, 4,160 km (paved 24%). Vehicles (1999): passenger cars 93,000; trucks and buses 61,600. Air transport: n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	60	7.2	PCs	2005	16	1.9
Telephones				Dailies	2005	11[16]	1.3[16]
Cellular	2007	2,200[17]	229[17]	Internet users	2007	1,000	104
Landline	2006	150	17	Broadband	2007	...	...

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling or unknown 46.1%; incomplete primary education 28.9%; primary 5.3%; incomplete secondary 15.6%; secondary 1.8%; higher 2.3%. *Literacy* (2007): total population age 15 and over literate 62.1%; males literate 60.1%; females literate 64.0%.

Education (1994–95)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	10,071	30,205	1,110,398	36.8
Secondary (age 13–18) / Voc., teacher tr.	1,038	15,275	195,418	12.8
Higher[18, 19]	2	899	12,348	13.7

Health: physicians (1999) 1,910 (1 per 4,000 persons); hospital beds (2000) 6,431 (1 per 1,234 persons); infant mortality rate per 1,000 live births (2007) 71.0; undernourished population (2002–04) 3,800,000 (46% of total population based on the consumption of a minimum daily requirement of 1,940 calories).

Military

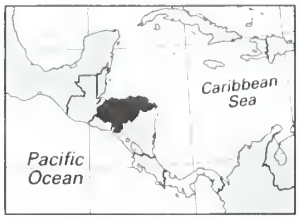
Total active duty personnel: [20, 21].

[1]Roman Catholicism has special recognition per concordat with the Vatican; voodoo became officially sanctioned per governmental decree of April 2003. [2]Formally created from eastern Grand'Anse in late 2003. [3]Approximate figure. Includes four offshore islands totaling about 382 sq mi (989 sq km) in area; excludes the 2.1 sq mi (5.4 sq km) Navassa (Navase) Island, which is administered by the U.S. but also claimed by Haiti. [4]About 80% of all Roman Catholics also practice voodoo. [5]Within Port-au-Prince metropolitan area. [6]Statistically derived midpoint within range. [7]At prices of 1986–87. [8]The 2004 labour force equaled 3,710,000, of which agriculture sector equaled 2,232,000. [9]Import duties less imputed bank service charges. [10]Includes 63,975 not adequately defined and 339,679 officially unemployed. [11]Excluding December. [12]Estimates of the ILO Employment Trends Unit. [13]Census figure; unofficial estimate is *c.* 70%. [14]Standard minimum wage rate. [15]Weights of consumer price index components. [16]Circulation of daily newspapers. [17]Subscribers. [18]Port-au-Prince universities only. [19]2000–01. [20]The Haitian army was disbanded in 1995. The national police force had 2,000 personnel in late 2007. [21]There were 7,105 UN troops and 1,935 UN personnel in Haiti in July 2008.

Internet resources for further information:

- **Embassy of Haiti (Washington, D.C.) http://www.haiti.org**
- **Banque de la République d'Haïti http://www.brh.net**

Honduras



Official name: República de Honduras (Republic of Honduras).
Form of government: multiparty republic with one legislative house (National Congress [128]).
Head of state and government: President.
Capital: Tegucigalpa.
Official language: Spanish.
Official religion: none.
Monetary unit: lempira (L); valuation (Sept. 8, 2008) 1 U.S.$ = L 18.90; 1 £ = L 33.38.

Area and population

Departments	Administrative centres	area sq mi	area sq km	population 2001 census
Atlántida	La Ceiba	1,688	4,372	344,099
Choluteca	Choluteca	1,515	3,923	390,805
Colón	Trujillo	1,683	4,360	246,708
Comayagua	Comayagua	3,185	8,249	352,881
Copán	Santa Rosa de Copán	1,978	5,124	288,766
Cortés	San Pedro Sula	1,252	3,242	1,202,510
El Paraíso	Yuscarán	2,892	7,489	350,054
Francisco Morazán	Tegucigalpa	3,328	8,619	1,180,676
Gracias a Dios	Puerto Lempira	6,563	16,997	67,384
Intibucá	La Esperanza	1,206	3,123	179,862
Islas de la Bahía	Roatán	91	236	38,073
La Paz	La Paz	975	2,525	156,560
Lempira	Gracias	1,632	4,228	250,067
Ocotepeque	Nueva Ocotepeque	629	1,630	108,029
Olancho	Juticalpa	9,230	23,905	419,561
Santa Bárbara	Santa Bárbara	1,940	5,024	342,054
Valle	Nacaome	643	1,665	151,841
Yoro	Yoro	3,004	7,781	465,414
TOTAL		43,433[1]	112,492	6,535,344[2]

Demography

Population (2008): 7,639,000.
Density (2008): persons per sq mi 175.9, persons per sq km 67.9.
Urban-rural (2006): urban 45.5%; rural 54.5%.
Sex distribution (2006): male 48.47%; female 51.53%.
Age breakdown (2005): under 15, 40.5%; 15–29, 29.2%; 30–44, 16.7%; 45–59, 8.6%; 60–74, 3.9%; 75 and over, 1.1%.
Population projection: (2010) 7,944,000; (2020) 9,360,000.
Ethnic composition (2000): mestizo 86.6%; Amerindian 5.5%; black (including Black Carib) 4.3%; white 2.3%; other 1.3%.
Religious affiliation (2002): Roman Catholic *c.* 63%; Evangelical Protestant *c.* 23%; other *c.* 14%.
Major cities (2007): Tegucigalpa 944,400; San Pedro Sula 600,600; Choloma 200,400; La Ceiba 162,200; El Progreso 114,500.

Vital statistics

Birth rate per 1,000 population (2005): 28.5 (world avg. 20.3).
Death rate per 1,000 population (2005): 6.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 22.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 3.50.
Marriage/divorce rates per 1,000 population (2000–02): 1.0/n.a.
Life expectancy at birth (2005): male 66.5 years; female 70.7 years.
Major causes of death (percent of total; 2000–02): diseases of the circulatory system 23.6%; accidents and violence 21.3%; malignant neoplasms (cancers) 12.2%; diseases of the respiratory system 10.9%.

National economy

Budget (2005). Revenue: L 32,305,100,000 (tax revenue 82.7%; nontax revenue 5.8%; transfers 11.5%). Expenditures: L 37,017,900,000 (current expenditure 78.6%; capital expenditure 21.4%).
Public debt (external, outstanding; March 2006): U.S.$4,327,500,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 5,000,000, oil palm fruit 1,250,000, bananas 910,000, corn (maize) 555,000, plantains 290,000, oranges 290,000, coffee 200,000, cantaloupes 195,000, pineapples 154,000; livestock (number of live animals) 2,510,000 cattle, 490,000 pigs, 19,000,000 chickens; roundwood (2006) 9,541,133 cu m, of which fuelwood 91%; fisheries production (2006) 46,294 (from aquaculture 64%). Mining and quarrying (2005): gypsum 60,000; zinc (metal content) 42,698; silver 53,617 kg; gold 3,600 kg. Manufacturing (value added in U.S.$'000,000; 2005): food and beverages 542; wearing apparel 371; bricks, cement, and ceramics 94; fabricated metals 61. Energy production (consumption): electricity (kW-hr; 2005) 5,545,000,000 (5,604,000,000); coal (metric tons; 2005) none (32,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (2,157,000); natural gas, none (none).
Land use as % of total land area (2003): in temporary crops 9.5%, in permanent crops 3.2%, in pasture 13.5%; overall forest area (2005) 41.5%.
Population economically active (2005): total 2,651,300; activity rate of total population 36.5% (participation rates: ages 15 and over 57.7%; female 32.4%; unemployed [2006] unofficially 27.9%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	109.6	118.0	127.1	137.5	149.6	157.9	168.9
Earnings index[3]	116.4	126.1	143.0	153.3	...	...	...

Gross national income (GNI; 2007): U.S.$11,339,000,000 (U.S.$1,600 per capita); purchasing power parity GNI (U.S.$3,500 per capita).

Structure of gross domestic product and labour force

	2006 in value L '000,000	2006 % of total value	2005 labour force	2005 % of labour force
Agriculture	21,765	12.4	997,300	37.6
Mining	2,814	1.6	6,200	0.2
Manufacturing	31,163	17.7	378,100	14.3
Construction	7,023	4.0	135,500	5.1
Public utilities	8,187	4.7	11,000	0.4
Transp. and commun.	9,634	5.5	87,400	3.3
Trade, hotels	19,334	11.0	503,800	19.0
Finance, real estate	26,720	15.2	81,700	3.1
Public admin., defense	11,697	6.7	337,800	12.7
Services	19,624	11.2		
Other	17,779[4]	10.1[4]	112,500[5]	4.2[5]
TOTAL	175,740	100.0[1]	2,651,300	100.0[1]

Household income and expenditure (2004). Average household size (2006) 4.8; average annual income per household L 85,860 (U.S.$4,716); sources of income: wages and salaries *c.* 51%, self-employment *c.* 34%, remittances *c.* 8%, other *c.* 7%; expenditure (December 1999)[6]: food and nonalcoholic beverages 32%, housing and energy 19%, transportation 9%, clothing and footwear 8%, household furnishings 7%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 488; remittances (2007) 2,675; foreign direct investment (FDI; 2004–06 avg.) 361; official development assistance (2006) 587. Disbursements for (U.S.$'000,000): tourism (2006) 283; remittances (2007) 1; FDI (2004–06 avg.) 23.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–1,442	–1,655	–2,073	–2,422	–3,055	–3,992
% of total	34.6%	37.5%	39.3%	40.7%	43.5%	44.0%

Imports (2006): U.S.$5,417,800,000 (mineral fuels and lubricants 20.6%, food products and live animals 16.6%, machinery and electrical equipment 15.6%, chemicals and chemical products 12.9%, fabricated metal products 7.6%, transportation equipment 7.0%). *Major import sources* (2005): U.S. 37.5%; Guatemala 9.0%; El Salvador 5.9%; Costa Rica 5.5%; Mexico 5.3%.
Exports (2006): U.S.$1,929,500,000 (coffee 20.9%, bananas 13.0%, shrimp 9.4%, zinc 5.8%, gold 4.1%, wood and wood products 3.4%). *Major export destinations* (2005): U.S. 36.8%; El Salvador 10.5%; Germany 8.5%; Guatemala 7.9%; Belgium 5.4%.

Transport and communications

Transport. Railroads (2005): serviceable lines 157 mi (253 km); most tracks are out of use but not dismantled. Roads (2005): total length 8,525 mi, 13,720 km (paved 22%). Vehicles (2003): passenger cars 386,468; trucks and buses 113,744. Air transport (1995): passenger-km 341,000,000; metric ton-km cargo 33,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,000	143	PCs	2005	120	17
Telephones				Dailies	2005	198[8]	28[8]
Cellular	2006	2,241[9]	306[9]	Internet users	2006	337	46
Landline	2006	708	97	Broadband	2006	...	...

Education and health

Educational attainment (1988). Percentage of population age 10 and over having: no formal schooling 33.4%; primary education 50.1%; secondary education 13.4%; higher 3.1%. *Literacy* (2005): total population age 15 and over literate 78.0%; males literate 77.6%; females literate 78.3%.

Education (2003)

	schools	teachers	students	student/teacher ratio
Primary (age 6–14)	11,115	42,788	1,589,074	37.1
Secondary (age 15–17) Voc., teacher tr.	871	16,435	151,790	9.2
Higher[10]	21	5,997	110,996	18.5

Health: physicians (2001) 5,681 (1 per 1,149 persons); hospital beds (2005) 5,546 (1 per 1,292 persons); infant mortality rate (2005) 26.5; undernourished population (2002–04) 1,600,000 (23% of total population based on the consumption of a minimum daily requirement of 1,780 calories).

Military

Total active duty personnel (November 2007): 12,000 (army 69.2%, navy 11.7%, air force 19.1%); U.S. troops (end of March 2008) 406. *Military expenditure as percentage of GDP* (2005): 0.6%; per capita expenditure U.S.$7.

[1]Detail does not add to total given because of rounding. [2]Census population adjusted for underenumeration; unadjusted census figure is 6,071,200. [3]Minimum wage. [4]Indirect taxes less subsidies. [5]Includes 107,800 unemployed; unofficial estimates of unemployment are significantly higher. [6]Weights of consumer price index components. [7]Import figures are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [8]Circulation of daily newspapers. [9]Subscribers. [10]2004.

Internet resources for further information:
- **Banco Central de Honduras http://www.bch.hn**
- **Instituto Nacional de Estadística http://www.ine-hn.org**

Hong Kong

Official name: Xianggang Tebie Xingzhengqu (Chinese); Hong Kong Special Administrative Region (English).
Political status: special administrative region of China with one legislative house (Legislative Council [60[1]]).
Chief of state: President of China.
Head of government: Chief Executive.
Government offices: Central & Western District (overlaps with the historic capital area of Victoria), Hong Kong Island.
Official languages: Chinese; English.
Official religion: none.
Monetary unit: Hong Kong dollar (HK$); valuation (Sept. 8, 2008) 1 U.S.$ = HK$7.81; 1 £ = HK$13.79.

Area and population

Geographic areas[2]	area sq mi	area sq km	population 2006 by-census
Hong Kong Island	31	81	1,268,112
Kowloon	18	47	2,019,533
New Territories (mainland)	289	748	3,436,513
New Territories (islands[3])	88	228	137,122
marine	—	—	3,066
TOTAL	426	1,104	6,864,346

Demography

Population (2008): 6,992,000.
Density (2008): persons per sq mi 16,413, persons per sq km 6,333.
Urban-rural (2003): urban 100.0%.
Sex distribution (2006): male 47.68%; female 52.32%.
Age breakdown (2006[4]): under 15, 14.2%; 15–29, 19.9%; 30–44, 27.0%; 45–59, 23.3%; 60–74, 10.2%; 75–84, 4.2%; 85 and over, 1.2%.
Population projection: (2010) 7,112,000; (2020) 7,738,000.
Ethnic composition (2006): Chinese 95.0%; Filipino 1.6%; Indonesian 1.3%; assorted Caucasian 0.5%; Indian 0.3%; Nepalese 0.2%; other 1.1%.
Religious affiliation (2002): nonreligious/non-practitioner of religion *c.* 57%; participant of religious practice *c.* 43%, of which Protestant *c.* 4.5%, Roman Catholic *c.* 3.5%, Muslim *c.* 1.5%, remainder (mostly Buddhist, Taoist, or Confucianist) 33.5%.
Major built-up areas (2006): Kowloon 2,019,533; Victoria 981,714; Tuen Mun 488,249; Sha Tin 425,140; Tseung Kwan O 344,872.

Vital statistics

Birth rate per 1,000 population (2006): 9.6 (world avg. 20.3).
Death rate per 1,000 population (2006): 5.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 4.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 0.97.
Marriage/divorce rates per 1,000 population: (2006) 7.3/(2003) 2.0.
Life expectancy at birth (2006): male 79.5 years; female 85.6 years.
Major causes of death per 100,000 population (2006): malignant neoplasms (cancers) 177.3; diseases of the circulatory system 131.5; pneumonia 60.0; chronic lower respiratory diseases 28.5.

National economy

Budget (2005–06). Revenue: HK$247,035,000,000 (earnings and profits taxes 45.6%; indirect taxes 20.4%; capital revenue 17.3%; other 16.7%). Expenditures: HK$245,000,000,000 (education 22.0%; social welfare 13.6%; health 12.9%; police 10.1%; housing 6.2%; economic services 5.3%).
Public debt (external, outstanding; 2007[4]): U.S.$1,673,000,000.
Gross national income (GNI; 2007): U.S.$218,910,000,000 (U.S.$31,610 per capita); purchasing power parity GNI (U.S.$44,050 per capita).

Structure of gross domestic product and labour force

	2005 in value HK$'000,000[5]	% of total value[5]	labour force	% of labour force
Agriculture	942	0.1	8,800	0.2
Mining	172	—	—	—
Manufacturing	51,560	3.2	238,500	6.7
Construction	47,611	2.9	301,900	8.5
Public utilities	41,885	2.6	15,000	0.4
Transp. and commun.	167,997	10.4	374,300	10.6
Trade	451,310	27.8	1,157,300	32.7
Finance, insurance, and real estate	360,152	22.2	523,900	14.8
Pub. admin., defense, and services	269,038	16.6	897,200	25.4
Other	230,239[6]	14.2[6]	20,000[7]	0.7[7]
TOTAL	1,620,906[8]	100.0	3,536,900	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): vegetables 21,200, fruits 450, eggs 3,583,000 units, cut flowers are also produced; livestock (number of live animals) 381,200 pigs, 9,155,000 chickens; roundwood, n.a.; fisheries production 158,661 (from aquaculture 3%). Quarrying (2006): stone/aggregates 6,000,000. Manufacturing (value added in HK$'000,000; 2004): publishing and printed materials 11,270; textiles 6,067; food 5,031; wearing apparel 4,454; electronic parts and components 3,326; machinery and apparatus 3,050; transport equipment 3,001; chemicals and chemical products 1,679. Energy production (consumption): electricity (kWhr; 2005) 38,451,000,000 (44,955,000,000); hard coal (metric tons; 2005) none (10,893,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (3,816,000); natural gas (cu m; 2005) none (2,198,000,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 11,461; remittances (2007) 348; foreign direct investment (FDI; 2004–06 avg.) 36,847. Disbursements for (U.S.$'000,000): tourism (2006) 13,974; remittances (2007) 380; FDI (2004–06 avg.) 38,792.
Population economically active (2004): total 3,529,000; activity rate of total population 52.0% (participation rates: 15–64, 70.2%; female 44.2%; unemployed [January 2007–March 2007] 4.3%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	98.4	95.4	93.0	92.6	93.6	95.3	97.2
Average earnings index[9]	102.1	100.9	97.9	97.3	99.1	100.5	...

Household income and expenditure. Average household size (2006) 2.8; median annual income per household (2001) HK$224,500 (U.S.$28,800); sources of income: n.a.; expenditure (2001): housing and energy 22.2%, clothing and footwear 15.2%, food and nonalcoholic beverages 13.5%, household furnishings 12.6%, transportation 11.0%.
Land use as % of total land area (2000): in temporary and permanent crops 5.4%, in pasture 29.3%[10]; overall forest area 18.0%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
HK$'000,000,000	–58.9	–63.4	–92.0	–79.3	–138.8	–180.5
% of total	1.9%	1.8%	2.2%	1.7%	2.7%	3.2%

Imports (2007): HK$2,868,000,000,000 (capital goods 29.4%, consumer goods 26.6%, mineral fuels and lubricants 3.1%, foodstuffs 2.7%). *Major import sources:* China 46.4%; Japan 10.0%; Taiwan 7.2%; EU 7.2%; Singapore 6.8%.
Exports (2007): HK$2,687,500,000,000 (reexports 95.9%, of which capital goods 30.7%, consumer goods 30.3%; domestic exports 4.1%, of which clothing accessories and apparel 1.4%). *Major export destinations*[12]: China 48.7%; U.S. 13.7%; EU 13.5%; Japan 4.3%.

Transport and communications

Transport. Railroads (2003): route length 40 mi, 64 km[13]; passenger-km 4,256,000,000[14]; metric ton-km cargo, n.a. Roads (2006): total length 1,233 mi, 1,984 km (paved 100%). Vehicles (2006): passenger cars 378,000; trucks and buses 131,000. Air transport (2005)[15]: passenger-km 71,595,000,000; metric ton-km cargo 8,026,729,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,467	507	PCs	2005	4,172	602
Telephones				Dailies	2005	2,468[16]	356[16]
Cellular	2007	10,550[17]	1,516[17]	Internet users	2007	3,961	572
Landline	2007	3,875	559	Broadband	2007	1,879[17]	271[17]

Education and health

Educational attainment (2005)[8]. Percentage of population age 15 and over having: no formal schooling 6.5%; primary education 19.5%; secondary 45.9%; matriculation 5.2%; nondegree higher 7.9%; higher degree 15.1%. *Literacy* (2000): total population age 15 and over literate 93.5%; males literate 96.5%; females literate 90.2%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	668	23,695	410,516	17.3
Secondary (age 12–18)	528	28,634	480,775	16 8
Vocational	1	1,700	60,123	35 4
Higher	25	6,066	120,396	19 8

Health (2006[4]): physicians 11,775[18, 19] (1 per 588 persons); hospital beds 33,939 (1 per 204 persons); infant mortality rate per 1,000 live births (2006) 1.8; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 7,000 troops of Chinese military (including elements of army, navy, and air force); Hong Kong residents are exempted from military service.

[1]Thirty seats are directly elected by ordinary voters, and the remaining 30 are elected by special interest groups. [2]Hong Kong is administratively divided into 18 districts, of which 9 are in the New Territories, 5 are in Kowloon, and 4 are on Hong Kong Island. [3]Primarily Lantau. [4]January 1. [5]At constant prices of 2000. [6]Includes ownership of premises and taxes on production and imports. [7]Unemployed not previously employed. [8]Detail does not add to total given because of rounding. [9]Manufacturing sector only. [10]Represents grassland that may not be grazed. [11]Imports are c.i.f., exports f.o.b. [12]Includes reexports and domestic exports. [13]Combined length of East Rail and West Rail; West Rail was inaugurated in December 2003. [14]East Rail only. [15]Cathay Pacific and Dragonair only. [16]Circulation of daily newspapers. [17]Subscribers. [18]Registered personnel; all may not be present and working in the country. [19]There were an additional 4,848 practitioners of traditional Chinese medicine in Hong Kong at the beginning of 2006.

Internet resources for further information:
- **Census and Statistics Department http://www.censtatd.gov.hk**
- **Hong Kong Government site http://www.info.gov.hk**

Hungary

Official name: Magyar Köztársaság (Republic of Hungary).
Form of government: unitary multiparty republic with one legislative house (National Assembly [386]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Budapest.
Official language: Hungarian.
Official religion: none.
Monetary unit: forint (Ft); valuation (Sept. 8, 2008) 1 U.S.$ = Ft 170.21; 1 £ = Ft 300.72.

Area and population

Counties	Capitals	area sq mi	area sq km	population 2008[1] estimate
Bács-Kiskun	Kecskemét	3,261	8,445	533,710
Baranya	Pécs	1,710	4,430	396,633
Békés	Békéscsaba	2,174	5,631	376,657
Borsod-Abaúj-Zemplén	Miskolc	2,798	7,247	709,634
Csongrád	Szeged	1,646	4,263	424,139
Fejér	Székesfehérvár	1,683	4,359	428,572
Győr-Moson-Sopron	Győr	1,579	4,089	444,384
Hajdú-Bihar	Debrecen	2,398	6,211	543,802
Heves	Eger	1,404	3,637	316,874
Jász-Nagykun-Szolnok	Szolnok	2,155	5,582	399,200
Komárom-Esztergom	Tatabánya	875	2,265	314,649
Nógrád	Salgótarján	982	2,544	210,182
Pest	Budapest[2]	2,468	6,393	1,195,020
Somogy	Kaposvár	2,331	6,036	325,024
Szabolcs-Szatmár-Bereg	Nyíregyháza	2,292	5,937	571,018
Tolna	Szekszárd	1,430	3,703	238,431
Vas	Szombathely	1,288	3,336	261,877
Veszprém	Veszprém	1,781	4,613	361,620
Zala	Zalaegerszeg	1,461	3,784	291,678
Capital city				
Budapest[2]		203	525	1,702,297
TOTAL		35,919	93,030	10,045,401

Demography

Population (2008): 10,032,000.
Density (2008): persons per sq mi 279.3, persons per sq km 107.8.
Urban-rural (2004): urban 64.8%; rural 35.2%.
Sex distribution (2008[1]): male 47.48%; female 52.52%.
Age breakdown (2005): under 15, 15.6%; 15–29, 21.3%; 30–44, 20.4%; 45–59, 21.3%; 60–74, 14.7%; 75–84, 5.6%; 85 and over, 1.1%.
Population projection: (2010) 9,997,000; (2020) 9,732,000.
Ethnic composition (2000): Hungarian 84.4%; Rom 5.3%; Ruthenian 2.9%; German 2.4%; Romanian 1.0%; Slovak 0.9%; Jewish 0.6%; other 2.5%.
Religious affiliation (2001): Roman Catholic 51.9%; Reformed 15.9%; Lutheran 3.0%; Greek Catholic 2.6%; Jewish 0.1%; nonreligious 14.5%; other/unknown 12.0%.
Major cities (2008[1]): Budapest 1,702,297; Debrecen 205,084; Miskolc 171,096; Szeged 167,039; Pécs 156,664; Győr 128,808.

Vital statistics

Birth rate per 1,000 population (2007): 9.7 (world avg. 20.3); (2004) within marriage 66.0%; outside of marriage 34.0%.
Death rate per 1,000 population (2007): 13.2 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 1.32.
Marriage/divorce rates per 1,000 population (2007): 4.1/2.5.
Life expectancy at birth (2007): male 69.2 years; female 77.3 years.
Major causes of death per 100,000 population (2003): heart diseases *c.* 392; malignant neoplasms (cancers) *c.* 329; cerebrovascular diseases *c.* 183; arteriosclerosis *c.* 68; accidents *c.* 68; liver diseases *c.* 62.

National economy

Budget (2005). Revenue: Ft 6,458,391,000,000 (VAT 27.6%, personal income taxes 15.5%, taxes on business 15.5%, excise taxes 11.4%). Expenditures: Ft 7,003,392,000,000 (general administration 47.6%, public debt 13.1%, family benefits 7.1%, housing grant 3.3%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 8,400,000, wheat 3,988,177, sugar beets 1,676,000, sunflower seeds 1,043,000, grapes 543,400, apples 538,000, Hungarian red paprika (2006) 32,633; livestock (number of live animals) 3,987,000 pigs, 702,000 cattle, 2,708,000 geese; roundwood (2006) 5,913,000 cu m, of which fuelwood 55%; fisheries production (2006) 22,229 (from aquaculture 66%). Mining and quarrying (2005): bauxite 535,000. Manufacturing (value added in U.S.$'000,000; 2004): electrical machinery and apparatus 2,087; motor vehicles and parts 1,988; food products 1,868; chemicals and chemical products 1,774; nonelectrical machinery and apparatus 1,165; fabricated metal products 1,122. Energy production (consumption): electricity ('000,000 kW-hr; 2007) 32,749 ([2005] 41,983); hard coal ('000 metric tons; 2005) none (1,341); lignite ('000 metric tons; 2007) 9,813 ([2005] 10,247); crude petroleum ('000 barrels; 2007) 5,630 ([2005] 51,800); petroleum products ('000 metric tons; 2005) 6,178 (5,988); natural gas ('000,000 cu m; 2007) 2,535 ([2005] 14,628).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 4,254; remittances (2007) 363; foreign direct investment (FDI; 2004–06 avg.) 6,074. Disbursements for (U.S.$'000,000): tourism (2006) 2,126; remittances (2007) 190; FDI (2004–06 avg.) 2,154.
Land use as % of total land area (2003): in temporary crops 51.3%, in permanent crops 2.3%, in pasture 11.9%; overall forest area (2005) 21.5%.
Population economically active (2006): total 4,246,900; activity rate of total population 42.2% (participation rates: ages 15–64, 62.0%; female [2004] 45.7%; unemployed 7.5%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	109.2	115.0	120.3	128.5	133.0	138.2	149.1
Annual earnings index	113.2	130.2	146.7	159.1	173.1	186.6	192.2

Gross national income (GNI; 2007): U.S.$116,303,000,000 (U.S.$11,570 per capita); purchasing power parity GNI (U.S.$17,210 per capita).

Structure of gross domestic product and labour force

	2005 in value Ft '000,000	% of total value	labour force	% of labour force
Agriculture, forestry	815,892	3.7	194,000	4.6
Mining	42,316	0.2	14,900	0.4
Manufacturing	4,188,032	19.0	869,400	20.7
Construction	899,871	4.1	315,100	7.5
Public utilities	547,064	2.5	64,600	1.5
Transp. and commun.	1,438,362	6.5	285,400	6.8
Trade, restaurants	2,356,354	10.7	740,200	17.6
Finance, real estate	4,152,417	18.9	356,100	8.5
Public administration, defense	1,644,631	7.5	297,900	7.1
Services	2,780,276	12.6	763,900	18.2
Other	3,161,548[3]	14.4[3]	303,900[4]	7.2[4]
TOTAL	22,026,763	100.0[5]	4,205,400	100.0[5]

Public debt (external, outstanding; 2006): U.S.$28,017,000,000.
Household income and expenditure. Average household size (2005) 2.6; income per household[6] (2001) Ft 2,898,000 (U.S.$10,300); sources of income (2001): wages 48.3%, transfers 25.7%, self-employment 16.3%; expenditure (2005): food products 22.8%, transportation and communications 20.1%, housing and energy 19.1%, recreation 8.1%.

Foreign trade[7]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
Ft '000,000,000	–917	–830	–823	–970	–704	–615
% of total	5.0%	4.5%	4.1%	4.2%	2.8%	1.9%

Imports (2006): Ft 16,196,000,000,000 (electrical machinery 14.9%, nonelectrical machinery 13.0%, chemicals and chemical products 9.1%, mineral fuels 7.4%, road vehicles 7.3%). *Major import sources* (2006): Germany 27.4%; Russia 8.2%; Austria 6.2%; China 5.1%; France 4.7%.
Exports (2006): Ft 15,581,000,000,000 (nonelectrical machinery 16.9%, of which engines/parts 9.2%; telecommunications equipment 10.9%; electrical machinery 10.5%; road vehicles 9.5%). *Major export destinations* (2006): Germany 29.4%; Italy 5.4%; Austria 4.8%; France 4.6%; U.K. 4.5%.

Transport and communications

Transport. Railroads (2003): route length 7,898 km; passenger-km (2007) 8,751,000,000; metric ton-km cargo (2007) 9,998,000,000. Roads (2003): total length 159,568 km (paved 44%). Vehicles (2007): passenger cars 3,012,165; trucks and buses 416,045. Air transport (2007)[8]: passenger-km 4,537,000,000; metric ton-km cargo 29,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	4,810	475	PCs	2005	1,504	149
Telephones				Dailies	2004	1,820[9]	181[9]
Cellular	2007	11,030[10]	1,100[10]	Internet users	2007	4,200	419
Landline	2007	3,251	324	Broadband	2007	1,510[10]	150[10]

Education and health

Educational attainment (2002). Population age 25–64 having: no formal schooling through lower-secondary education 29%; upper secondary/higher vocational 57%; university 14%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13)	3,592	83,607	831,342	9.9
Secondary (age 14–17)	1,763	40,538	534,423	13.2
Vocational	724	10,326	134,029	13.0
Higher[11]	69	23,787	421,500	17.7

Health (2004): physicians 38,877 (1 per 260 persons); hospital beds 79,610 (1 per 127 persons); infant mortality rate per 1,000 live births (2007) 5.9.

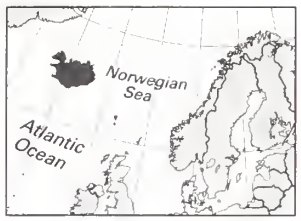
Military

Total active duty personnel (November 2007): 32,300 (army 74.2%, air force 23.2%, headquarters staff 2.6%). *Military expenditure as percentage of GDP* (2005): 1.5%; per capita expenditure U.S.$158.

[1]January 1. [2]Budapest acts as the capital of Pest county even though it is administratively not part of Pest county. [3]Net taxes less imputed bank service charges. [4]Unemployed. [5]Detail does not add to total given because of rounding. [6]Adjusted disposable income including government transfers. [7]Imports c.i.f.; exports f.o.b. [8]Malév Hungarian Airlines only. [9]Circulation of daily newspapers. [10]Subscribers. [11]2004–05.

Internet resource for further information:
• Hungarian Central Statistical Office http://portal.ksh.hu

Iceland



Official name: Lýdhveldidh Ísland (Republic of Iceland).
Form of government: unitary multiparty republic with one legislative house (Althingi [63]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Reykjavík.
Official language: Icelandic.
Official religion: Evangelical Lutheran.
Monetary unit: króna (ISK); valuation (Sept. 8, 2008) 1 U.S.$ = ISK 88.20; 1 £ = ISK 155.81.

Area and population

Geographical regions[2]	Principal centres	area sq mi	area sq km	population 2007[1] estimate
Capital region[3]	Reykjavík	410	1,062	191,919
East	Egilsstadhir	8,773	22,721	15,366
Northeast	Akureyri	8,482	21,968	28,561
Northwest	Saudhárkrókur	4,918	12,737	7,457
South	Selfoss	9,469	24,526	22,967
Southwest	Keflavík	320	829	18,912
West	Borgarnes	3,689	9,554	15,029
Westfjords	Ísafjördhur	3,633	9,409	7,461
REMAINDER	—	75	194	0
TOTAL		39,769	103,000	307,672

Demography

Population (2008): 315,000.
Density (2008)[4]: persons per sq mi 34.3, persons per sq km 13.2.
Urban-rural (2007): urban 92.6%; rural 7.4%.
Sex distribution (2008): male 51.10%; female 48.90%.
Age breakdown (2006[1]): under 15, 21.8%; 15–29, 21.9%; 30–44, 21.5%; 45–59, 18.9%; 60–74, 10.2%; 75–84, 4.3%; 85 and over, 1.4%.
Population projection: (2010) 321,000; (2020) 355,000.
Ethnic composition (2008)[5]: Icelandic 93.2%; European 5.5%, of which Polish 2.7%, Nordic 0.6%; Asian 0.8%; other 0.5%.
Religious affiliation (2007): Evangelical Lutheran 80.7%; Roman Catholic 2.5%; other Christian 6.8%; other/not specified 10.0%.
Major cities (2008): Reykjavík 119,000 (urban area [2006[1]] 187,426); Kópavogur 29,795[6]; Hafnarfjördhur 25,434[6]; Akureyri 17,390; Garðabær 10,272[6].

Vital statistics

Birth rate per 1,000 population (2007): 14.6 (world avg. 20.3); within marriage 36.2%; outside of marriage 63.8%.
Death rate per 1,000 population (2007): 6.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 8.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 2.10.
Marriage/divorce rates per 1,000 population (2007): 5.5/1.6.
Life expectancy at birth (2007): male 79.4 years; female 82.9 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 188.0, of which ischemic heart diseases 95.7, cerebrovascular disease 41.7; malignant neoplasms (cancers) 154.2; diseases of the nervous system 52.0; accidents and violence 43.9; diseases of the respiratory system 39.4.

National economy

Budget (2007). Revenue: ISK 454,588,000,000 (tax revenue 78.4%, of which VAT 42.9%, individual income tax 31.5%; nontax revenue 21.6%, of which social security contributions 8.9%). Expenditures: ISK 403,199,000,000 (social security and health 48.8%, education 10.6%, social affairs 9.4%, interest payment 6.9%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 13,000, cereals 11,246, tomatoes 1,603, hay 1,993,773 cu m; livestock (number of live animals) 454,812 sheep, 70,660 cattle, 41,497 mink; roundwood, n.a.; fisheries production (value in ISK '000,000) 80,251, of which cod 29,585, haddock 14,538, redfish 7,646, herring 5,700, saithe 4,263, capelin 4,247, blue whiting 3,022; fisheries production by tonnage 1,395,716 (from aquaculture [2006] 1%). Mining and quarrying (2005): diatomite 3,236. Manufacturing (value of sales in ISK '000,000; 2007): food products and beverages (mainly preserved and processed fish) 202,606; base metals 76,581; printing and publishing 37,075; cement, bricks, and ceramics 32,781; fabricated metal products 26,335; machinery and apparatus 14,064. Energy production (consumption): electricity (kW-hr; 2006) 9,924,900,000 (9,925,000,000); coal (metric tons; 2005) none (117,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (720,000); natural gas, none (none).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 439; remittances (2007) 41; foreign direct investment (FDI; 2004–06 avg.) 2,555. Disbursements for (U.S.$'000,000): tourism (2006) 1,076; remittances (2007) 100; FDI (2004–06 avg.) 4,815.
Population economically active (2007): total 181,500; activity rate of total population 58.5% (participation rates: ages 16–74, 83.3%; female 45.5%; unemployed [July 2007–June 2008] 2.4%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	106.4	111.9	114.2	117.4	122.3	130.5	137.1
Annual earnings index	109.6	115.5	121.7	129.0	138.3	151.9	164.9

Gross national income (GNI; 2007): U.S.$16,826,000,000 (U.S.$54,100 per capita); purchasing power parity GNI (U.S.$33,960 per capita).

Structure of gross domestic product and labour force

	2005 in value ISK '000,000	2005 % of total value	2007 labour force	2007 % of labour force
Agriculture	10,859	1.1	6,000	3.3
Fishing	38,830	3.8	4,500	2.5
Fish processing	86,860	8.5	2,900	1.6
Manufacturing, mining			16,300	9.0
Construction	80,639	7.9	15,700	8.7
Public utilities	33,931	3.3	1,700	0.9
Transp. and commun.	53,070	5.2	11,100	6.1
Trade, restaurants	104,779	10.3	31,600	17.4
Finance, real estate	229,916	22.5	25,900	14.3
Services	168,046	16.4	52,100	28.7
Public administration	51,531	5.0	8,900	4.9
Other	163,049[7]	16.0[7]	4,800[8]	2.6[8]
TOTAL	1,021,510	100.0	181,500	100.0

Public debt (December 2005): U.S.$4,222,000,000.
Household income and expenditure. Average household size (2006) 2.5; annual employment income per household (2003) ISK 2,428,000 (U.S.$31,700); sources of income (2001): wages and salaries 78.6%, pension 10.3%, self-employment 2.0%, other 9.1%; expenditure (2006): housing and energy 25.6%, transportation and communications 19.7%, recreation, education, and culture 13.3%, food 12.8%, household furnishings 6.4%.
Land use as % of total land area (2003): in temporary crops 0.07%, in permanent crops, none, in pasture 22.7%; overall forest area (2005) 0.5%.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
ISK '000,000	+13,098	−16,932	−37,787	−94,540	−158,462	−90,059
% of total	3.3%	4.4%	8.5%	19.6%	24.6%	12.9%

Imports (2006): ISK 420,545,000,000 (nonelectrical machinery 13.2%, road vehicles 10.9%, refined petroleum 8.2%, aircraft/parts 7.5%, electrical machinery 7.3%). *Major import sources:* U.S. 13.1%; Germany 12.4%; Norway 7.2%; Sweden 7.1%; Denmark 6.2%; U.K. 5.4%.
Exports (2006): ISK 242,390,000,000 (fresh fish 33.1%, aluminum 23.5%, dried/salted fish 9.8%, aircraft/parts 6.2%, fish foodstuff for animals 4.2%). *Major export destinations:* The Netherlands 16.6%; U.K. 15.6%; Germany 15.0%; U.S. 10.9%; Spain 6.4%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 8,101 mi, 13,038 km (paved *c.* 33%). Vehicles (2008[1]): passenger cars 207,513; trucks and buses 33,038. Air transport (2007)[10]: passenger-km 4,252,000; metric ton-km cargo [2005] 121,591,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	101	345	PCs	2005	142	481
Telephones				Dailies	2006	251[11]	838[11]
Cellular	2007	348[12]	1,154[12]	Internet users	2007	202	672
Landline	2007	187	620	Broadband	2007	105[12]	348[12]

Education and health

Educational attainment (2003): Percentage of population ages 25–64 having unknown to lower secondary education 34%; upper secondary 40%; higher 26%. *Literacy:* virtually 100%.

Education (2007)

	schools	teachers	students	student/teacher ratio
Primary/lower secondary (age 7–15)	173[13]	4,237	43,802	10.3
Upper secondary (age 16–19)	37[14]	1,499	25,090	16.7
Higher	17[14]	2,090	17,726	8.5

Health: physicians (2006) 1,120 (1 per 270 persons); hospital beds (2002) 2,432 (1 per 118 persons); infant mortality rate per 1,000 live births (2007) 2.4; undernourished population (2002–04) less than 2.5% of total population.

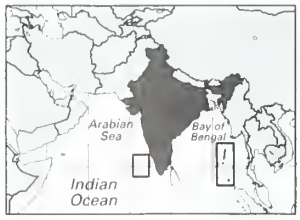
Military

Total active duty personnel (November 2007): 130 coast guard personnel; NATO-sponsored U.S.-manned Iceland Defense Force (December 2005): 1,250[15]. *Coast guard expenditure as percentage of GDP* (2005): 0.3%; per capita expenditure U.S.$140.

[1]January 1. [2]Actual local administration is based on 79 municipalities and 26 rural districts. [3]Includes municipalities adjacent to Reykjavík. [4]Population density calculated with reference to 9,191 sq mi (23,805 sq km) area free of glaciers (covering 4,603 sq mi [11,922 sq km]), lava fields or wasteland (covering 24,918 sq mi [64,538 sq km]), and lakes (covering 1,064 sq mi [2,757 sq km]). [5]By citizenship. [6]Within Reykjavík urban area. [7]Taxes on products less subsidies. [8]Includes 4,200 unemployed. [9]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [10]Icelandair only. [11]Circulation of daily newspapers. [12]Subscribers. [13]2006. [14]2004. [15]U.S. military withdrew permanently in September 2006. NATO agreed to begin regular supervision of Icelandic airspace from July 2007.

Internet resources for further information:
- **Statistics Iceland http://www.statice.is**
- **Central Bank of Iceland http://www.sedlabanki.is**

India



Official name: Bharat (Hindi); Republic of India (English).
Form of government: multiparty federal republic with two legislative houses (Council of States [245[1]]; House of the People [545[2]]).
Chief of state: President.
Head of government: Prime Minister.
Capital: New Delhi.
Official languages: Hindi; English.
Official religion: none.
Monetary unit: Indian rupee (Re, plural Rs); valuation (Sept. 8, 2008) 1 U.S.$ = Rs 44.65; 1 £ = Rs 78.88.

Area and population

States	Capitals	area sq mi	area sq km	population 2008 projection[3]
Andhra Pradesh	Hyderabad	106,204	275,068	82,180,000
Arunachal Pradesh	Itanagar	32,333	83,743	1,200,000
Assam	Dispur	30,285	78,438	29,929,000
Bihar	Patna	38,301	99,200	93,823,000
Chhattisgarh	Raipur	52,199	135,194	23,646,000
Goa	Panaji	1,429	3,702	1,628,000
Gujarat	Gandhinagar	75,685	196,024	56,408,000
Haryana	Chandigarh	17,070	44,212	23,772,000
Himachal Pradesh	Shimla	21,495	55,673	6,550,000
Jammu and Kashmir	Srinagar	39,146	101,387	12,366,000
Jharkhand	Ranchi	28,833	74,677	30,010,000
Karnataka	Bengaluru (Bangalore)	74,051	191,791	57,399,000
Kerala	Thiruvananthapuram (Trivandrum)	15,005	38,863	34,232,000
Madhya Pradesh	Bhopal	119,016	308,252	69,279,000
Maharashtra	Mumbai (Bombay)	118,800	307,690	106,894,000
Manipur	Imphal	8,621	22,327	2,627,000
Meghalaya	Shillong	8,660	22,429	2,536,000
Mizoram	Aizawl	8,139	21,081	980,000
Nagaland	Kohima	6,401	16,579	2,187,000
Orissa	Bhubaneshwar	60,119	155,707	39,899,000
Punjab	Chandigarh	19,445	50,362	26,591,000
Rajasthan	Jaipur	132,139	342,239	64,641,000
Sikkim	Gangtok	2,740	7,096	594,000
Tamil Nadu	Chennai (Madras)	50,216	130,058	66,396,000
Tripura	Agartala	4,049	10,486	3,510,000
Uttar Pradesh	Lucknow	93,933	243,286	190,891,000
Uttarakhand	Dehra Dun	19,739	51,125	9,497,000
West Bengal	Kolkata (Calcutta)	34,267	88,752	87,869,000
Union Territories				
Andaman and Nicobar Islands	Port Blair	3,185	8,249	411,000
Chandigarh	Chandigarh	44	114	1,063,000
Dadra and Nagar Haveli	Silvassa	190	491	262,000
Daman and Diu	Daman	43	112	188,000
Lakshadweep	Kavaratti	12	32	69,000
Puducherry (Pondicherry)	Puducherry (Pondicherry)	190	492	1,074,000
National Capital Territory				
Delhi	Delhi	573	1,483	17,076,000
TOTAL		1,222,559[4,5]	3,166,414[4]	1,147,677,000

Demography

Population (2008): 1,147,996,000[6].
Density (2008)[4]: persons per sq mi 939.0, persons per sq km 362.6.
Urban-rural (2004): urban 28.5%; rural 71.5%.
Sex distribution (2005): male 51.57%; female 48.43%.
Age breakdown (2005): under 15, 32.1%; 15–29, 27.1%; 30–44, 20.2%; 45–59, 12.7%; 60–74, 6.2%; 75–84, 1.4%; 85 and over, 0.3%.
Population projection: (2010) 1,184,090,000; (2020) 1,362,053,000.
Doubling time: 44 years.
Major cities (2001; *urban agglomerations,* 2001): Greater Mumbai (Greater Bombay) 11,978,450 (16,434,386); Delhi 9,879,172 (12,877,470); Kolkata (Calcutta) 4,580,546 (13,205,697); Chennai (Madras) 4,343,645 (6,560,242); Bengaluru (Bangalore) 4,301,326 (5,701,446); Hyderabad 3,637,483 (5,742,036); Ahmadabad 3,520,085 (4,525,013); Kanpur 2,551,337 (2,715,555); Pune (Poona) 2,538,473 (3,760,636); Surat 2,433,835 (2,811,614); Jaipur 2,322,575 (2,322,575); New Delhi[7] 302,363.

Other principal cities (2001)

	population		population		population
Agra	1,275,134	Jabalpur	932,484	Shambajinagar (Aurangabad)	873,311
Allahabad	975,393	Jodhpur	851,051	Sholapur (Solapur)	872,478
Amritsar	966,862	Kalyan-Dombivali[8]	1,193,512	Srinagar	898,440
Bareilly	718,395	Lucknow	2,185,927	Thane (Thana)[8]	1,262,551
Bhopal	1,437,354	Ludhiana	1,398,467	Thiruvananthapuram (Trivandrum)	744,983
Chandigarh	808,515	Madurai	928,869	Tiruchirappalli	752,066
Coimbatore	930,882	Meerut	1,068,772	Vadodara (Baroda)	1,306,227
Faridabad	1,055,938	Mysuru (Mysore)	755,379	Varanasi (Benares)	1,091,918
Ghaziabad	968,256	Nagpur	2,052,066	Vijayawada	851,282
Guwahati	809,895	Nashik (Nasik)	1,077,236	Vishakhapatnam	982,904
Gwalior	827,026	Patna	1,366,444		
Howrah (Haora)[9]	1,007,532	Pimpri-Chinchwad[10]	1,012,472		
Hubli-Dharwad	786,195	Rajkot	967,476		
Indore	1,474,968	Ranchi	847,093		

Linguistic composition (2001)[11]: Hindi 41.03%; Bengali 8.11%; Telugu 7.19%; Marathi 6.99%; Tamil 5.91%; Urdu 5.01%; Gujarati 4.48%; Kannada 3.69%; Malayalam 3.21%; Oriya 3.21%; Punjabi 2.83%; Assamese 1.28%; Maithili 1.18%; Bhili/Bhilodi 0.93%[12]; Santhali 0.63%; Kashmiri 0.54%; Nepali 0.28%; Gondi 0.26%[12]; Sindhi 0.25%; Konkani 0.24%; Dogri 0.22%; Khandeshi 0.20%[12]; Tulu 0.17%[12]; Kurukh/Oraon 0.17%[12]; Manipuri 0.14%; Bodo 0.13%; Khasi 0.11%[12]; Mundari 0.10%[12]; Ho 0.10%[12]; Sanskrit 0.0013%; other *c.* 1.41%. Hindi (roughly 66%) and English (roughly 33%) are also spoken as lingua francas.
Castes/tribes (2001): number of Scheduled Castes (formerly referred to as "Untouchables" 166,635,700; number of Scheduled Tribes (aboriginal peoples) 84,326,240.
Religious affiliation (2005): Hindu 72.04%; Muslim 12.26%, of which Sunnī 8.06%, Shī'ī 4.20%; Christian 6.81%, of which Independent 3.23%, Protestant 1.74%, Roman Catholic 1.62%, Orthodox 0.22%; traditional beliefs 3.83%; Sikh 1.87%[13]; Buddhist 0.67%; Jain 0.51%; Bahā'ī 0.17%; Zoroastrian (Parsi) 0.02%[14]; nonreligious 1.22%; atheist 0.17%; remainder 0.43%.
Households (2001). Total number of households 193,579,954. Average household size 5.3. Type of household: permanent 51.8%; semipermanent 30.0%; temporary 18.2%. Average number of rooms per household 2.2; 1 room 38.4%, 2 rooms 30.0%, 3 rooms 14.3%, 4 rooms 7.5%, 5 rooms 2.9%, 6 or more rooms 3.7%, unspecified number of rooms 3.2%.

Vital statistics

Birth rate per 1,000 population (2006): 23.5 (world avg. 20.3).
Death rate per 1,000 population (2006): 7.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 16.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.78.
Marriage/divorce rates per 1,000 population: n.a./n.a.
Life expectancy at birth (2005): male 63.6 years; female 65.2 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 420, of which HIV/AIDS 34; diseases of the circulatory system 268, of which ischemic heart disease 146; accidents, homicide, and other violence 100; malignant neoplasms (cancers) 71; chronic respiratory diseases 58.
Adult population (ages 15–49) *living with HIV* (2007): 0.3% (world avg. 0.8%).

Social indicators

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 48.1%; incomplete primary education 9.0%; complete primary 22.1%; secondary 13.7%; higher 7.1%.

Distribution of expenditure (2004–05)

percentage of household expenditure by decile/quintile

1	2	3	4	5	6	7	8	9	10 (highest)
3.6	4.5	—11.3—		—14.9—		—20.4—		14.2	31.1

Quality of working life. Average workweek (2006): *c.* 50 hours[15]. Rate of fatal injuries per 100,000 employees (2004) 28[15]. Agricultural workers in servitude to creditors (early 1990s) 10–20%. Children ages 5–14 working as child labourers (2003): 35,000,000 (14% of age group). Percentage of population living below the poverty line (2004–05): 21.7%.
Access to services (2001). Percentage of total (urban, rural) households having access to: electricity for lighting purposes (2003) 61.5% (90.8%, 51.6%), kerosene for lighting purposes 36.9% (8.3%, 46.6%), water closets 18.0% (46.1%, 7.1%), pit latrines 11.5% (14.6%, 10.3%), no latrines 63.6% (26.3%, 78.1%), closed drainage for waste water 12.5% (34.5%, 3.9%), open drainage for waste water 33.9% (43.4%, 30.3%), no drainage for waste water 53.6% (22.1%, 65.8%). Type of fuel used for cooking in households (2003): firewood 61.1% (20.0%, 74.9%), LPG (liquefied petroleum gas) 20.8% (55.4%, 9.1%), cow dung 7.4% (1.8%, 9.3%), kerosene 4.7% (13.0%, 1.9%), coal 1.5% (3.3%, 0.9%), other 4.6% (6.6%, 3.9%). Source of drinking water: hand pump or tube well 41.3% (21.3%, 48.9%), piped water 36.7% (68.7%, 24.3%), well 18.2% (7.7%, 22.2%), river, canal, spring, public tank, pond, or lake 2.7% (0.7%, 3.5%).
Social participation. Eligible voters participating in April/May 2004 national election: 58.1%. Registered trade unions (2004): 74,403.
Social deviance (2003)[16]. Offense rate per 100,000 population for: murder 3.1; rape 1.5; dacoity (gang robbery) 0.5; theft 23.0; riots 5.4. Rate of suicide per 100,000 population (2002): 11.2, in Kerala 30.8.
Material well-being (2001). Total (urban, rural) households possessing: television receivers 31.6% (64.3%, 18.9%), telephones 9.1% (23.0%, 3.8%), scooters, motorcycles, or mopeds 11.7% (24.7%, 6.7%), cars, jeeps, or vans 2.5% (5.6%, 1.3%). Households availing banking services 35.5% (49.5%, 30.1%).

National economy

Gross national income (GNI; 2007): U.S.$1,069,427,000,000 (U.S.$950 per capita); purchasing power parity GNI (U.S.$2,740 per capita).

Structure of gross domestic product and labour force

	2004–05 in value Rs '000,000,000	2004–05 % of total value	1999–2000 labour force	1999–2000 % of labour force
Agriculture, forestry	5,982	19.3	190,940,000	52.6
Mining	800	2.6	2,260,000	0.6
Manufacturing	4,558	14.7	40,790,000	11.2
Construction	1,746	5.6	14,950,000	4.1
Public utilities	580	1.9	1,150,000	0.3
Transp. and commun.	6,747	21.7	13,650,000	3.8
Trade, restaurants			37,540,000	10.3
Finance, real estate	3,879	12.5	4,620,000	1.3
Pub. admin., defense	4,014	12.9	30,840,000	8.5
Services			...	...
Other	2,750[17]	8.8[17]	26,580,000[18]	7.3[18]
TOTAL	31,055[5]	100.0	363,330,000[5]	100.0

Budget (2004). Revenue: Rs 3,941,400,000,000 (tax revenue 80.6%, of which taxes on income and profits 35.4%, excise taxes 27.7%; nontax revenue

18.1%; other 1.3%). Expenditures: Rs 5,104,800,000,000 (general public services 59.3%, of which public debt payments 24.6%; economic affairs 17.7%; defense 15.1%; housing 4.2%; education 2.2%; health 1.5%).

Public debt (external, outstanding; 2006): U.S.$59,570,000,000.

Production (in '000 metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 355,520, cereals 252,121 (of which rice 141,134, wheat 74,890, corn [maize] 16,780, millet 10,610, sorghum 7,402), fruits 51,142 (of which bananas 21,766, mangoes 13,501, oranges 3,900, lemons and limes 2,060, apples 2,001, pineapples 1,308), oilseeds 45,321 (of which soybeans 9,433, rapeseed 7,097, peanuts [groundnuts] 6,600, sunflower seeds 1,420, castor beans 830, sesame 670), potatoes 26,280, pulses 14,500 (of which chickpeas 5,970, dry beans 3,000, pigeon peas 2,510), seed cotton 9,480, coconuts 9,400, eggplants 8,450, cauliflower 5,014, okra 3,497, jute 2,140, anise, badian, fennel, and coriander 1,100, tea 949, natural rubber 803, garlic 645, tobacco 555, betel 520, ginger 420; livestock (number of live animals) 177,840,000 cattle, 125,456,000 goats, 98,700,000 water buffalo, 64,269,000 sheep, 14,000,000 pigs, 632,000 camels; roundwood (2006) 329,444,448 cu m, of which fuelwood 93%; fisheries production (2006) 6,979 (from aquaculture 45%). Mining and quarrying (2005): mica 1.6 (world rank: 1); iron ore 90,000[t9] (world rank: 4); bauxite 11,957; chromium 3,255; barite 1,000; manganese 640[t9]; zinc 200[t9]; lead 42.0[t9]; copper 26.9[t9]; gold 3,200 kg; gem diamonds 16,000 carats. Manufacturing (value added in U.S.$'000,000; 2003): refined petroleum 5,955; iron and steel 5,834; paints, soaps, varnishes, drugs, and medicines 4,891; industrial chemicals 4,105; food products 3,467; textiles 3,432; motor vehicles and parts 3,193; nonelectrical machinery and apparatus 2,333; cements, bricks, and tiles 2,029.

Manufacturing enterprises (1995–96)[20]

	no. of factories	no. of persons engaged	avg wages as a % of avg. of all wages	annual value added (Rs '000,000)[21]
Chemicals and chemical products,	9,206	758,500	140.3	237,093
of which synthetic fibres	395	97,100	183.8	68,420
fertilizers/pesticides	753	104,500	217.4	59,521
drugs and medicine	2,542	204,600	129.3	40,050
Transport equipment,	6,120	838,600	142.7	120,207
of which motor vehicles	3,758	392,400	162.4	77,240
Textiles	16,228	1,579,400	80.2	99,855
Iron and steel	3,519	507,700	152.9	97,274
Nonelectrical machinery/apparatus	9,075	548,400	137.2	92,762
Food products,	22,878	1,285,900	60.4	92,163
of which refined sugar	1,285	341,000	92.0	28,125
Electrical machinery/apparatus,	5,472	443,700	149.4	84,320
of which industrial machinery	2,048	165,600	190.8	35,717
Refined petroleum	161	31,100	349.3	52,778
Bricks, cement, plaster products	10,067	394,500	70.3	49,413
Nonferrous basic metals	3,301	228,700	124.3	42,252
Fabricated metal products	7,984	277,700	98.6	32,565
Paper and paper products	2,742	175,200	99.5	26,380
Wearing apparel	3,463	263,700	55.0	23,485

Energy production (consumption): electricity (kW-hr; 2007) 695,196,000,000 ([2005] 699,048,000,000); hard coal (metric tons; 2007) 445,448,000 ([2005] 432,271,000); lignite (metric tons; 2007) 33,292,000 ([2005] 29,555,000); crude petroleum (barrels; 2007) 253,500,000 ([2005] 968,200,000); petroleum products (metric tons; 2005–06) 121,940,000 ([2005] 88,854,000); natural gas (cu m; 2007) 32,229,000,000 ([2005] 27,226,000,000).

Financial aggregates[22]

	2001	2002	2003	2004	2005	2006	2007
Exchange rate, Rs per:							
U.S. dollar	48.18	48.03	45.61	43.59	45.07	44.25	39.42
£	69.88	77.41	81.40	84.19	77.61	86.86	78.97
SDR	60.55	65.30	67.77	67.69	64.41	66.56	62.29
International reserves (U.S.$)							
Total (excl. gold; '000,000)	45,870	67,665	98,938	126,593	131,924	170,738	266,988
SDRs ('000,000)	5	7	3	5	4	1	3
Reserve pos. in IMF ('000,000)	614	665	1,318	1,424	902	550	432
Foreign exchange ('000,000)	45,251	66,994	97,617	125,164	131,018	170,187	266,553
Gold ('000,000 fine troy oz)	11.502	11.502	11.502	11.502	11.502	11.502	11.502
% world reserves	1.2	1.2	1.3	1.3	1.3	1.3	1.3
Interest and prices							
Central bank discount (%)	6.50	6.25	6.00	6.00	6.00	6.00	6.00
Advance (prime) rate (%)	12.1	11.9	11.5	10.9	10.8	11.2	13.0
Industrial share prices (2000 = 100)	75.5	70.7	117.6	138.6	198.5	295.3	441.5
Balance of payments (U.S.$'000,000)							
Balance of visible trade	−6,418	−3,559	−8,870	−17,600	−32,526	−43,078	...
Imports, f.o.b.	−51,211	−54,700	−68,208	−95,539	−134,702	−166,695	...
Exports, f.o.b.	44,793	51,141	59,338	77,939	102,176	123,617	...
Balance of invisibles	+7,828	+10,618	+15,723	+18,380	+24,691	+33,663	...
Balance of payments, current account	+1,410	+7,059	+6,853	+780	−7,835	−9,415	...

Land use as % of total land area (2003): in temporary crops 53.6%, in permanent crops 3.4%, in pasture 3.6%; overall forest area (2005) 22.8%.

Population economically active (2001): total 402,234,724; activity rate of total population 39.1% (participation rates: ages 15–69, 60.2%; female 31.6%; unemployed [2005] 9.9%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.7	108.2	112.4	116.6	121.5	128.6	136.8

Household income and expenditure. Average household size (2004) 5.4; sources of income: n.a.; expenditure (2003): food and nonalcoholic beverages 50.0%, housing and energy 11.2%, clothing and footwear 7.8%, health 6.7%, transportation 4.1%, tobacco and intoxicants 2.3%.

Service enterprises (net value added in Rs '000,000,000; 1998–99): wholesale and retail trade 1,562; finance, real estate, and insurance 1,310; transport and storage 804; community, social, and personal services 763; construction 545.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 8,934; remittances (2007) 27,000; foreign direct investment (FDI; 2004–06 avg.) 9,776; official development assistance (2006) 1,379. Disbursements for (U.S.$'000,000): tourism (2006) 7,352; remittances (2007) 1,580; FDI (2004–06 avg.) 4,783.

Foreign trade

Balance of trade (current prices)[23]

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07
U.S.$'000,000	−7,586	−8,693	−14,306	−27,981	−46,075	−59,388
% of total	8.0%	7.6%	10.1%	14.3%	18.3%	19.7%

Imports (2006): U.S.$185,385,000,000 (crude petroleum 25.4%, nonelectrical machinery and apparatus 8.3%, gold 7.8%, organic/inorganic chemicals 4.2%, diamonds 3.9%, telecommunications equipment/parts 3.8%, refined petroleum 3.5%, iron and steel 3.4%, copper ore and concentrates 2.8%, aircraft 2.8%). *Major import sources:* China 9.4%; Saudi Arabia 7.2%; U.S. 6.3%; Switzerland 4.9%; U.A.E. 4.7%; Iran 4.1%; Germany 4.1%; Nigeria 3.8%; Australia 3.8%; Kuwait 3.2%.

Exports (2006): U.S.$126,125,000,000 (refined petroleum 14.5%, diamonds 8.0%, food 7.6%, apparel and clothing accessories 7.5%, machinery and apparatus 7.5%, textile yarn, fabrics, made-up articles 7.1%, iron and steel 5.6%, organic chemicals 4.3%, gold/silver jewelry 3.9%). *Major export destinations:* U.S. 15.0%; U.A.E. 9.5%; China 6.6%; Singapore 4.8%; U.K. 4.4%; Hong Kong 3.7%; Germany 3.1%; Italy 2.8%; Belgium 2.7%; Japan 2.3%.

Transport and communications

Transport. Railroads (2005–06): route length 63,000 km; passenger-km 616,000,000,000; metric ton-km cargo 440,000,000,000. Roads (2002): total length 3,319,644 km (paved 46%). Vehicles (2003): passenger cars 8,619,000; trucks and buses 4,215,000. Air transport (2006): passenger-km 55,524,000,000; metric ton-km cargo 763,536,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	88,876	83	PCs	2005	17,000	15
Telephones				Dailies	2005	78,700[24]	71[24]
Cellular	2007	233,620[25]	200[25]	Internet users	2007	81,000	69
Landline	2007	39,420	34	Broadband	2007	3,130[25]	2.8[25]

Education and health

Literacy (2003): percentage of total population age 15 and over literate 59.5%; males literate 70.2%; females literate 48.3%.

Education (2004)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–10)	651,382[26]	3,038,204	125,568,597	41.3
Secondary (age 11–17)	382,481[26]	2,507,357	80,339,753	32.0
Higher	42,057[27]	428,078	11,295,041	26.4

Health: physicians (2005) 767,500 (1 per 1,425 persons); hospital beds (2003) 963,720 (1 per 1,111 persons); infant mortality rate per 1,000 live births (2006) 57.0; undernourished population (2002–04) 209,500,000 (20% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

Military

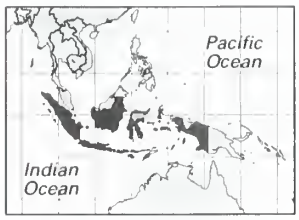
Total active duty personnel (November 2007): 1,288,000 (army 85.4%, navy 4.3%, air force 10.3%); personnel in paramilitary forces 1,300,586. *Military expenditure as percentage of GDP* (2005): 2.8%; per capita expenditure U.S.$20.

[1]Council of States can have a maximum of 250 members; a maximum of 12 of these members may be nominated by the President. [2]House of the People can have a maximum of 552 members; this number includes 2 nonelective seats. [3]Populations are March 1, 2008, official projections based on the 2001 Indian census results. [4]Excludes 46,660 sq mi (120,849 sq km) of territory claimed by India as part of Jammu and Kashmir but occupied by Pakistan or China; inland water constitutes 9.6% of total area of India (including all of Indian-claimed Jammu and Kashmir). [5]Detail does not add to total given because of rounding. [6]Estimate of the U.S. Bureau of the Census International Database (August 2006 update). [7]Within Delhi urban agglomeration. [8]Within Greater Mumbai urban agglomeration. [9]Within Kolkata urban agglomeration. [10]Within Pune urban agglomeration. [11]Data are for the 22 scheduled ("officially recognized") languages of India (including associated languages/dialects of each of the 22) unless otherwise footnoted. [12]Non-scheduled ("not officially recognized") language. [13]As of 2001 census. [14]2000 estimate. [15]Data apply to the workers employed in the "organized sector" only (27.8 million in 2001, of which 19.1 million were employed in the public sector and 8.7 million were employed in the private sector); few legal protections exist for the more than 370 million workers in the "unorganized sector." [16]Crimes reported to National Crime Records Bureau by police authorities of state governments. [17]Indirect taxes less subsidies. [18]Unemployed. [19]Metal content. [20]Establishments with at least 10 workers on any workday and all establishments employing 20 or more workers. [21]In factor values. [22]End-of-period. [23]Balance of trade data is for fiscal year beginning April 1. [24]Circulation of daily newspapers. [25]Subscribers. [26]2003. [27]2002.

Internet resources for further information:

- **India Portal: Directory of Government Web Sites http://www.india.gov.in**
- **Reserve Bank of India http://www.rbi.org.in**
- **Ministry of Statistics and Programme Implementation http://mospi.nic.in**

Indonesia



Official name: Republik Indonesia (Republic of Indonesia).
Form of government: multiparty republic with two legislative houses (Regional Representatives Council [128]; House of Representatives [550]).
Head of state and government: President.
Capital: Jakarta.
Official language: Indonesian.
Official religion: monotheism.
Monetary unit: rupiah (Rp); valuation (Sept. 8, 2008) 1 U.S.$ = Rp 9,375; 1 £ = Rp 16,563.

Area and population

Island(s) Provinces	area sq km	population 2005 census[1]
Bali and the Lesser Sunda Islands	71,296	11,828,277
Bali	5,449	3,383,572
East Nusa Tenggara	46,138	4,260,294
West Nusa Tenggara	19,709	4,184,411
Celebes (Sulawesi)[2]	193,847	15,787,955
Central Sulawesi	68,090	2,294,841
Gorontalo	12,165	922,176
North Sulawesi	13,931	2,128,780
South Sulawesi	46,117	7,509,704
Southeast Sulawesi	36,757	1,963,025
West Sulawesi	16,787	969,429
Java[2]	129,307	128,470,536
Banten	9,019	9,028,816
Central Java	32,800	31,977,968
East Java	46,690	36,294,280
Jakarta[3]	740	8,860,381
West Java	36,925	38,965,440
Yogyakarta[4]	3,133	3,343,651
Kalimantan[2, 5]	507,412	12,098,036
Central Kalimantan	153,565	1,914,900
East Kalimantan	194,849	2,848,798
South Kalimantan	38,884	3,281,993
West Kalimantan	120,114	4,052,345
Maluku[6] & Papua[2]	511,811	4,654,081
Maluku	47,350	1,251,539
North Maluku	39,960	884,142
Papua	309,935	1,875,388
West Papua[7]	114,566	643,012
Sumatra[2]	446,687	46,029,906
Aceh[8]	56,501	4,031,589
Bangka-Belitung	16,424	1,043,456
Bengkulu	19,795	1,549,273
Jambi	45,349	2,635,968
Lampung	37,735	7,116,177
North Sumatra	72,428	12,450,911
Riau	87,844	4,579,219
Riau Islands	8,084	1,274,848
South Sumatra	60,302	6,782,339
West Sumatra	42,225	4,566,126
TOTAL	1,860,360	218,868,791

Demography

Population (2008): 234,342,000[9].
Density (2008): persons per sq mi 326.3, persons per sq km 126.0.
Urban-rural (2003): urban 45.6%; rural 54.4%.
Sex distribution (2006): male 50.01%; female 49.99%.
Age breakdown (2006): under 15, 29.1%; 15–29, 27.0%; 30–44, 22.2%; 45–59, 13.5%; 60–74, 6.7%; 75–84, 1.4%; 85 and over, 0.1%.
Population projection: (2010) 239,600,000; (2020) 261,868,000.
Ethnic composition (2000): Javanese 36.4%; Sundanese 13.7%; Malay 9.4%; Madurese 7.2%; Han Chinese 4.0%; Minangkabau 3.6%; other 25.7%.
Religious affiliation (2005): Muslim (excluding syncretists) 55.8%; Neo-religionists (syncretists) 21.2%; Christian 13.2%; Hindu 3.2%; traditional beliefs 2.6%; nonreligious 1.8%; other 2.2%.
Major municipalities (2005): Jakarta 8,603,349; Surabaya 2,611,506; Bandung 2,288,570; Medan 2,029,797; Bekasi 1,940,308; Tangerang 1,451,595; Semarang 1,352,869; Depok 1,339,263; Palembang 1,323,169; Makasar 1,168,258.

Vital statistics

Birth rate per 1,000 population (2006): 20.1 (world avg. 20.3).
Death rate per 1,000 population (2006): 6.3 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 2.41.
Life expectancy at birth (2006): male 67.4 years; female 72.4 years.
Adult population (ages 15–49) *living with HIV* (2007): 0.2% (world avg. 0.8%).

National economy

Budget (2005). Revenue: Rp 495,444,000,000,000 (tax revenue 70.0%, of which income tax 35.4%,VAT 20.4%; nontax revenue 30.0%, of which revenue from petroleum 14.7%). Expenditures: Rp 509,419,000,000,000 (current expenditure 58.5%; regional expenditure 29.5%; developmental expenditure 12.0%).
Public debt (external, outstanding; December 2007): U.S.$80,609,000,000.
Population economically active (2006): total 106,388,935; activity rate 46.5% (participation rates: over age 15, 66.2%; unemployed 10.3%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	111.5	124.7	133.0	141.3	156.0	176.5	187.8

Household income and expenditure. Average household size (2004) 4.0.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 57,048,558, sugarcane 25,200,000, cassava 19,610,071, coconuts 17,000,000, corn (maize) 12,381,561, natural rubber 2,540,000, cloves 84,000, cinnamon 60,000; livestock (number of live animals) 14,873,516 goats, 11,365,873 cattle, 9,859,667 sheep; roundwood (2006) 98,817,686 cu m, of which fuelwood 72%; fisheries production (2006) 6,051,979 (from aquaculture 21%); aquatic plants production 920,466 (from aquaculture 99%). Mining and quarrying (2006): bauxite 1,502,000; copper (metal content) 793,000; nickel (metal content) 140,000; silver 327,557 kg; gold 164,400 kg. Manufacturing (value added in U.S.$'000,000; 2003): textiles, clothing, and footwear 5,011; tobacco products 4,584; transport equipment 4,189; food products 3,970; chemicals and chemical products 3,464; paper products 1,774. Energy production (consumption): electricity (kW-hr; 2005) 127,362,000,000 (127,362,000,000); hard coal (metric tons; 2007) 174,800,000 ([2005] 41,300,000); crude petroleum (barrels; 2007) 357,500,000 ([2005] 424,100,000); petroleum products (metric tons; 2005) 44,196,000 (58,025,000); natural gas (cu m; 2007) 85,200,000,000 (37,700,000,000).
Gross national income (GNI; 2007): U.S.$373,125,000,000 (U.S.$1,650 per capita); purchasing power parity GNI (U.S.$3,580 per capita).

Structure of gross domestic product and labour force

	2006			
	in value Rp '000,000,000	% of total value	labour force	% of labour force
Agriculture, fishing, forestry	430,494	12.9	40,136,242	37.7
Mining	354,627	10.6	923,591	0.9
Manufacturing	936,362	28.0	11,890,170	11.1
Public utilities	30,398	0.9	228,018	0.2
Construction	249,128	7.5	4,697,354	4.4
Transp. and commun.	230,922	6.9	5,663,956	5.3
Trade, hotels	496,336	14.9	19,215,660	18.1
Finance, real estate	271,543	8.1	1,346,044	1.3
Public admin., defense	167,800	5.0	11,355,900	10.7
Services	170,586	5.1		
Other	—	—	10,932,000[10]	10.3[10]
TOTAL	3,338,196	100.0[11]	106,388,935	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 4,448; remittances (2007) 6,143; foreign direct investment (FDI; 2004–06 avg.) 5,263; official development assistance (2006) 1,404. Disbursements for (U.S.$'000,000): tourism (2006) 3,600; remittances (2007) 2,003; FDI (2004–06 avg.) 3,297.
Land use as % of total land area (2003): in temporary crops 12.7%, in permanent crops 7.4%, in pasture 6.2%; overall forest area (2005) 48.8%.

Foreign trade[12]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+20,824	+21,863	+15,890	+11,463	+23,153	+25,640
% of total	21.4%	20.6%	12.6%	7.1%	12.6%	12.1%

Imports (2005–06): U.S.$65,712,154,000 (petroleum and natural gas 23.7%, machinery and apparatus 16.8%, chemicals and chemical products 10.4%, base metals 8.8%, transport equipment 6.5%). *Major import sources* (2006): Singapore 16.4%; China 10.9%; Japan 9.0%; U.S. 6.7%; Saudi Arabia 5.5%.
Exports (2005–06): U.S.$78,740,892,000 (petroleum and natural gas 27.4%, rubber products 15.7%, machinery and apparatus 14.5%, textiles 10.8%, base metals 7.0%, paper products 4.2%). *Major export destinations* (2006): Japan 21.6%; U.S. 11.2%; Singapore 8.9%; China 8.3%; South Korea 7.6%.

Transport and communications

Transport. Railroads (2004): route length 6,458 km; passenger-km 15,077,000,000; metric ton-km cargo 4,698,000,000. Roads (2005): length 391,009 km (paved 55%). Vehicles (2005): passenger cars 5,494,034; trucks and buses 4,105,746. Air transport (2005): passenger-km 22,986,000,000; metric ton-km cargo (2004) 248,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	33,255	153	PCs	2005	3,285	15
Telephones				Dailies	2004	4,866[13]	22[13]
Cellular	2007	81,835[14]	353[14]	Internet users	2007	13,000	56
Landline	2007	17,828	77	Broadband	2007	257[14]	1.1[14]

Education and health

Educational attainment (2002–03). Percentage of population ages 15–64 having: no schooling or incomplete primary education 19.3%; primary and some secondary 57.2%; complete secondary 19.3%; higher 4.2%. *Literacy* (2003): total population age 15 and over literate 88.4%; males 92.8%; females 84.1%.

Education (2002–03)

	schools[15]	teachers	students	student/teacher ratio
Primary (age 7–12)	146,052	1,431,486	29,050,834	20.3
Secondary (age 13–18)	28,954	967,539	13,772,782	14.2
Voc., teacher tr.	4,943	147,559	2,099,753	14.2
Higher	1,924	233,359	3,441,429	14.7

Health: physicians (2003) 29,499 (1 per 7,368 persons); hospital beds (2001) 124,834 (1 per 1,697 persons); infant mortality rate (2006) 33.3; undernourished population (2002–04) 13,800,000 (6% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2007): 302,000 (army 77.2%, navy 14.9%, air force 7.9%). *Military expenditure as percentage of GDP* (2005): 1.2%; per capita expenditure U.S.$38.

[1]Intermediate census. [2]Includes area and population of nearby islands. [3]Special capital district. [4]Special district. [5]Kalimantan is the name of the Indonesian part of the island of Borneo. [6]Conventionally the Moluccas. [7]The final status of West Papua (the westernmost part of Papua known as West Irian Jaya prior to April 2007) was unresolved in mid-2008. [8]Autonomous province. [9]Estimate of *UN World Population Prospects (2006 revision).* [10]Unemployed. [11]Detail does not add to total given because of rounding. [12]Imports c.i.f.; exports f.o.b. [13]Circulation. [14]Subscribers. [15]Schools under the Ministry of National Education only.

Internet resources for further information:
- **Statistics Indonesia http://www.bps.go.id**

Iran

Official name: Jomhūrī-ye Eslamī-ye Irān (Islamic Republic of Iran).
Form of government: unitary Islamic republic with one legislative house (Islamic Consultative Assembly [290]).
Supreme political/religious authority: Leader.
Head of state and government: President.
Capital: Tehrān.
Official language: Farsī (Persian).
Official religion: Islam.
Monetary unit: rial (Rls); valuation (Sept. 8, 2008) 1 U.S.$ = Rls 9,650; 1 £ = Rls 17,049.

Area and population

Provinces	area sq km	population 2006–07 census[1]	Provinces	area sq km	population 2006–07 census[1]
Ardabīl	17,800	1,225,348	Khorāsān-e Shomālī	28,434	811,572
Āzārbāyjān-e Gharbī	37,411	2,873,459	Khūzestān	64,055	4,274,979
Āzārbāyjān-e Sharqī	45,650	3,603,456	Kohgīlūyeh va Būyer Ahmad	15,504	634,299
Būshehr	22,743	886,267	Kordestān	29,137	1,438,543
Chahār Mahāll va Bakhtīārī	16,332	857,910	Lorestān	28,294	1,716,527
Esfahān	107,029	4,559,256	Markazī	29,127	1,349,590
Fārs	122,608	4,336,878	Māzandarān	23,842	2,920,657
Gīlan	14,042	2,404,861	Qazvīn	15,567	1,143,200
Golestān	20,367	1,617,087	Qom	11,526	1,040,681
Hamadān	19,368	1,703,267	Semnān	97,491	589,742
Hormozgān	70,697	1,403,674	Sistān va Balūchestān	181,785	2,405,742
Ilām	20,133	545,787	Tehrān	18,814	13,413,348
Kermān	180,726	2,652,413	Yazd	129,285	990,818
Kermānshāh	24,998	1,879,385	Zanjān	21,773	964,601
Khorāsān-e Jonūbī	95,385	636,420	TOTAL	1,628,750[2]	70,472,846
Khorāsān-e Razavī	118,854	5,593,079			

Demography

Population (2008): 72,269,000.
Density (2008)[3]: persons per sq mi 113.6, persons per sq km 43.8.
Urban-rural (2007): urban 69.4%; rural 30.6%.
Sex distribution (2006–07): male 50.88%; female 49.12%.
Age breakdown (2006–07): under 15, 25.1%; 15–29, 35.4%; 30–44, 20.6%; 45–59, 11.6%; 60–74, 5.4%; 75–84, 1.6%; 85 and over, 0.3%.
Population projection: (2010) 74,330,000; (2020) 84,306,000.
Ethnic composition (2000): Persian 34.9%; Azerbaijani 15.9%; Kurd 13.0%; Lurī 7.2%; Gīlaki 5.1%; Mazāndarānī 5.1%; Afghan 2.8%; Arab 2.5%; other 13.5%.
Religious affiliation (2005): Muslim 98.2% (Shī'ī 86.1%, Sunnī 10.1%, other 2.0%); Bahā'ī 0.5%; Christian 0.4%; Zoroastrian 0.1%; other 0.8%.
Major cities (2007): Tehrān 7,873,000; Mashhad 2,469,000; Esfahān 1,628,000; Karaj 1,423,000; Tabriz 1,240,000.

Vital statistics

Birth rate per 1,000 population (2006–07): 17.8 (world avg. 20.3).
Death rate per 1,000 population (2006–07): 5.8 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2005): 1.82.
Marriage/divorce rates per 1,000 population (2006–07): 11.0/1.3.
Life expectancy at birth (2005): male 68.6 years; female 71.4 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 232; accidents and violence 104; malignant neoplasms (cancers) 65.

National economy

Budget (2005–06). Revenue: Rls 503,765,000,000,000 (petroleum and natural gas revenue 71.8%; taxes 20.4%, of which corporate taxes 10.4%, import duties 7.1%; other 7.8%). Expenditures: Rls 484,332,000,000,000 (current expenditure 68.3%; development expenditures 24.1%; other 7.6%).
Public debt (external, outstanding; 2006): U.S.$11,090,000,000.
Gross national income (GNI; 2007): U.S.$246,544,000,000 (U.S.$3,470 per capita); purchasing power parity GNI (U.S.$10,800 per capita).

Structure of gross domestic product and labour force

	2006–07 in value Rls '000,000,000	2006–07 % of total value	2005 labour force	2005 % of labour force
Agriculture, forestry	211,275	10.3	4,929,000	22.1
Petroleum	540,091	26.4	122,000	0.5
Other mining	15,327	0.8		
Manufacturing	221,487	10.8	3,632,000	16.3
Construction	88,408	4.3	2,061,000	9.2
Public utilities	24,224	1.2	189,000	0.9
Transportation and communications	149,777	7.3	1,740,000	7.8
Trade, restaurants	226,542	11.1	2,990,000	13.4
Finance, real estate	350,604	17.2	645,000	2.9
Pub. admin., defense	212,696	10.4	1,259,000	5.6
Services	55,013	2.7	2,190,000	9 8
Other	–51,420[4]	–2.5[4]	2,560,000[5]	11.5[5]
TOTAL	2,044,024	100.0	22,317,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 15,000,000, sugarcane 5,700,000, sugar beets 5,300,000, potatoes 5,240,000, tomatoes 5,000,000, rice 3,500,000, grapes 3,000,000, barley 3,000,000, apples 2,660,000, oranges 2,300,000, dates 1,000,000, pistachios 230,000, cherries 225,000; livestock (number of live animals) 52,220,000 sheep, 25,860,000 goats, 9,776,000 cattle, 146,000 camels; roundwood (2006) 794,000 cu m, of which fuelwood 8%; fisheries production (2006) 575,560 (from aquaculture 23%). Mining and quarrying (2004–05): iron ore 9,000,000[6]; chromite 223,563; copper ore 190,000[6]; zinc 125,000[6]. Manufacturing (value added in U.S.$'000,000; 2005): base metals 3,032; motor vehicles and parts 2,850; refined petroleum products 2,210; cement, bricks, and ceramics 2,158. Energy production (consumption): electricity (kW-hr; 2007) 189,356,000,000 ([2005–06] 134,238,000,000); coal (metric tons; 2005–06) 1,898,000 ([2005] 1,810,000); crude petroleum (barrels; 2007) 1,345,100,000 ([2005] 519,600,000); petroleum products (metric tons; 2005) 76,973,000 (68,951,000); natural gas (cu m; 2006–07) 143,200,000,000 (121,200,000,000).
Population economically active (2006–07): total 23,469,000; activity rate of total population 33.3% (participation rates: ages 10 and over, 39.4%; female 15.5%; unemployed 12.7%).

Price and earnings indexes (2000–01 = 100)

	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06
Consumer price index	100.0	111.4	129.0	149.1	171.8	192.6
Monthly earnings index[7]	100.0	111.7	118.2	124.9	134 6	...

Household income and expenditure (2004–05). Average household size (2006–07) 4.1; annual average monetary income per urban household Rls 41,697,965 (U.S.$4,742); sources of urban monetary income: wages 40.8%, self-employment 35.0%, other 24.2%; expenditure: housing and energy 26.8%, food, beverages, and tobacco 25.3%, transportation and communications 16.5%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,194; remittances (2007) 1,115; foreign direct investment (FDI; 2004–06 avg.) 514; official development assistance (2006) 121. Disbursements for (U.S.$'000,000): tourism (2006) 4,597; FDI (2004–06 avg.) 302.
Land use as % of total land area (2003): in temporary crops 10.3%, in permanent crops 1.3%, in pasture 26.9%; overall forest area (2005) 6.8%.

Foreign trade[8]

Balance of trade (current prices)

	2001–02	2002–03	2003–04	2004–05	2005–06
U.S.$'000,000	+5,775	+6,201	+4,430	+6,165	+19,044
% of total	13.7%	12.3%	7.0%	7.5%	18.9%

Imports (2005–06): U.S.$40,969,000,000 (nonelectrical machinery 23.5%, base metals 13.8%, road vehicles 13.0%, chemical products 10.7%). *Major import sources:* U.A.E. 19.7%; Germany 13.1%; France 6.8%; Italy 6.0%; China 5.5%.
Exports (2005–06): U.S.$60,013,000,000 (crude petroleum 73.1%; chemical products 5.2%; fruits and nuts 2.2%, of which pistachios 1.4%; wool carpets 0.8%). *Major export destinations:* Japan 16.9%; China 11.9%; Turkey 5.8%; Italy 5.7%; South Korea 5.7%.

Transport and communications

Transport. Railroads (2006–07): route length 5,322 mi, 8,565 km; passenger-km 12,549,000,000; metric ton-km cargo 20,542,000,000. Roads (2006–07): length 45,118 mi, 72,611 km (paved 92%). Vehicles (2006–07): passenger cars 920,136; trucks and buses 184,629. Air transport (2005)[9]: passenger-km 7,347,795,000; metric ton-km cargo 83,396,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	11,566	173	PCs	2005	8,694	125
Telephones				Dailies	2005	1,205[10]	17[10]
Cellular	2007	29,770[11]	418[11]	Internet users	2007	23,000	323
Landline	2007	23,835	335	Broadband	2006	465[11]	6.7[11]

Education and health

Educational attainment: n.a. *Literacy* (2006–07): total population age 6 and over literate 84.6%; males literate 88.7%; females literate 80.3%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 7–11)	65,507	274,922	6,006,700	21.8
Secondary (age 12–18)	64,186	374,535	8,787,400	23.5
Higher	.	122,068	2,388,500	19 6

Health (2006–07): physicians 29,937[12] (1 per 2,355 persons); hospital beds 116,474 (1 per 605 persons); infant mortality rate (2005) 41.6; undernourished population (2002–04) 2,500,000 (4% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

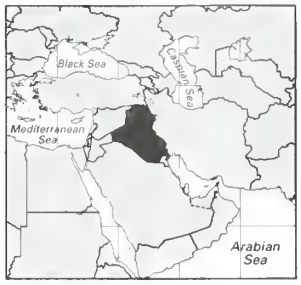
Military

Total active duty personnel (November 2007): 545,000 (revolutionary guard corps 22.9%, army 64.2%, navy 3.3%, air force 9.6%). *Military expenditure as percentage of GDP* (2005): 5.8%; per capita expenditure U.S.$130.

[1]Preliminary; final census population figure is 70,495,782. [2]Reported total of land area only (summed land area total equals 1,628,777 sq km); estimated total area is 1,648,200 sq km. [3]Based on estimated total area. [4]Indirect taxes less imputed bank service charges. [5]Includes 2,556,000 unemployed. [6]Metal content. [7]Minimum wage. [8]Imports c.i.f.; exports f.o.b. [9]Iran Air. [10]Circulation of 8 daily newspapers only. [11]Subscribers. [12]Excludes private sector physicians.

Internet resources for further information:
- **Statistical Centre of Iran http://www.sci.org.ir**
- **Central Bank of Iran http://www.cbi.ir/default_en.aspx**

Iraq



Official name: Al-Jumhūrīyah al-ʿIrāqīyah (Republic of Iraq).
Form of government: multiparty republic with one legislative house (Council of Representatives [275]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Baghdad.
Official languages: Arabic; Kurdish.
Official religion: Islam.
Monetary unit: Iraqi dinar (ID); valuation (Sept. 8, 2008) 1 U.S.$ = ID 1,180; 1 £ = ID 2,085.

Area and population

Governorates	Capitals	area sq mi	area sq km	population 2004 estimate
Al-Anbār	Ar-Ramādī	53,208	137,808	1,328,776
Bābil	Al-Ḥillah	2,163	5,603	1,493,718
Baghdād	Baghdad	1,572	4,071	6,554,126
Al-Baṣrah	Al-Baṣrah	7,363	19,070	1,797,821
Dhī Qār	An-Nāṣirīyah	4,981	12,900	1,472,405
Diyālā[1]	Baʿqūbah	6,828	17,685	1,418,455
Karbalāʾ	Karbalāʾ	1,944	5,034	787,072
Maysān	Al-ʿAmārah	6,205	16,072	762,872
Al-Muthannā	As-Samāwah	19,977	51,740	554,994
An-Najaf	An-Najaf	11,129	28,824	978,400
Nīnawā[1]	Mosul	14,410	37,323	2,554,270
Al-Qādisiyah	Ad-Dīwānīyah	3,148	8,153	911,641
Ṣalāḥ ad-Dīn	Tikrīt	9,407	24,363	1,119,369
At-Taʾmīm[1]	Karkūk (Kirkūk)	3,737	9,679	854,470
Wāsiṭ	Al-Kūt	6,623	17,153	971,280
Region				
Kurdistan Region (in part)	Irbīl	14,923	38,650	3,579,916
TOTAL		167,618	434,128	27,139,585

Demography

Population (2008): 29,492,000[2].
Density (2008): persons per sq mi 175.9, persons per sq km 67.9.
Urban-rural (2007): urban 66.5%; rural 33.5%.
Sex distribution (2007): male 50.35%; female 49.65%.
Age breakdown (2007): under 15, 43.1%; 15–29, 27.9%; 30–44, 16.4%; 45–59, 8.2%; 60–74, 3.3%; 75 and over, 1.0%.
Population projection: (2010) 30,688,000; (2020) 39,161,000.
Doubling time: 26 years.
Ethnic composition (2000): Arab 64.7%; Kurd 23.0%; Azerbaijani 5.6%; Turkmen 1.2%; Persian 1.1%; other 4.4%.
Religious affiliation (2000): Shīʿī Muslim 62.0%; Sunnī Muslim 34.0%; Christian (primarily Chaldean rite and Syrian rite Catholic and Nestorian) 3.2%; other (primarily Yazīdī syncretist) 0.8%.
Major urban agglomerations (2007): Baghdad 5,054,000; Mosul 1,316,000; Irbīl 926,000; Al-Baṣrah 870,000; Karkūk (2003) 750,000.

Vital statistics

Birth rate per 1,000 population (2005): 32.5 (world avg. 20.3).
Death rate per 1,000 population (2005): 5.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 27.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 4.28.
Marriage/divorce rates per 1,000 population: (2000) 7.3/(1997) 1.3.
Life expectancy at birth (2005): male 67.5 years; female 70.0 years.
Major causes of death per 100,000 population (2002): communicable diseases 377, diseases of the circulatory system 187, accidents and violence 115, malignant neoplasms (cancers) 54.

National economy

Budget (2006). Revenue: ID 61,650,000,000,000 (petroleum revenue 79.9%; grants 20.1%). Expenditures: ID 53,480,000,000,000 (current expenditure 79.8%; development expenditure 20.2%).
Public debt (external, outstanding; December 2007): U.S.$100,900,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 1,700,000, tomatoes 830,000, potatoes 740,000, barley 500,000, cucumbers/gherkins 480,000, eggplants 380,000, dates 290,000, grapes 285,000, oranges 245,000; livestock (number of live animals) 6,200,000 sheep, 1,500,000 cattle; roundwood (2006) 116,000 cu m, of which fuelwood 49%; fisheries production (2006) 74,126 (from aquaculture 20%). Mining and quarrying (2005): phosphate rock 1,000. Manufacturing (value added in U.S.$'000,000; 1995): refined petroleum 143; bricks, tiles, and cement 103; food products 59; industrial chemicals 52; metal products 27. Energy production (consumption): electricity (kW-hr; 2005) 34,000,000,000 (35,388,000,000); coal, none (none); crude petroleum (barrels; 2007) 783,000,000 ([2005] 171,100,000); petroleum products (metric tons; 2005) 19,099,000 (21,960,000); natural gas (cu m; 2006) 1,800,000,000 ([2005] 2,580,000,000).
Population economically active (1997)[3]: total 4,757,000; activity rate of total population 24.8% (participation rates: ages 15–59, 42.9%; female 10.5%; unemployed [2004] 28%).

Price index (2003 = 100)

	2003	2004	2005	2006	2007
Consumer price index	100.0	127.0	173.9	266.5	348.6

Household income and expenditure (2004). Average household size 6.4; median annual household income ID 2,230,000 (U.S.$1,517); sources of income: n.a.; expenditure (1993)[4]: food 63.2%, housing 11.5%, clothing 9.7%.
Gross national income (2006): U.S.$55,726,000,000 (U.S.$1,955 per capita).

Structure of gross domestic product and labour force

	2003 in value ID '000,000	2003 % of total value	2000 labour force	2000 % of labour force
Agriculture	2,582,601	10.5	...	...
Crude petroleum	20,349,772	82.5	...	...
Other mining	22,633	0.1	...	...
Manufacturing	514,297	2.1	...	...
Public utilities	26,405	0.1	...	...
Construction	220,915	0.9	...	...
Transp. and commun.	2,745,802	11.1	...	...
Trade	2,426,115	9.8	...	...
Finance, real estate	386,986	1.6	...	...
Pub. admin., defense	325,323	1.3	...	...
Services	526,722	2.1	...	...
Other	–5,464,492[5]	–22.1[5]	...	...
TOTAL	24,663,079	100.0	6,339,000	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2002) 45; remittances, n.a.; foreign direct investment (FDI; 2004–06 avg.) 362; official development assistance (2006) 8,661. Disbursements for (U.S.$'000,000): tourism (2002) 26; remittances, n.a.; FDI (2001–05 avg.) negligible.
Land use as % of total land area (2003): in temporary crops 13.1%, in permanent crops 0.6%, in pasture 9.1%; overall forest area (2005) 1.9%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	...	...	...	+3,695	+11,822	+21,301
% of total	...	...	...	8.5%	24.0%	36.8%

Imports (2007): U.S.$18,289,000,000 (private sector imports 55.7%, of which capital goods 41.8%, consumer good 13.9%; government imports 44.3%, of which refined petroleum 7.9%). *Major import sources* (2006): Syria 29.9%; Turkey 19.3%; U.S. 10.8%; Jordan 4.9%; China 4.6%.
Exports (2007): U.S.$39,590,000,000 (crude petroleum 95.4%; refined petroleum 4.0%; remainder 0.6%). *Major export destinations* (2006): U.S. 40.0%; Italy 13.7%; Spain 5.6%; Canada 5.5%; France 4.7%.

Transport and communications

Transport. Railroads (2006): route length 360 mi (580 sq km)[6]. Roads (2002): total length 45,550 km (paved 84%). Vehicles (2001): passenger cars 754,066; trucks and buses 372,241. Air transport: [7].

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	472	19	PCs	2002	212	8.3
Telephones				Dailies	2005	...	...
Cellular	2007	14,021[8]	484[8]	Internet users	2007	54	1.9
Landline	2004	1,034	40	Broadband	2007	...	...

Education and health

Educational attainment (2004)[9]. Percentage of population age 25 and over having: no formal schooling 28%; incomplete primary education 12%; primary 36%; secondary 9%; higher 15%. *Literacy* (2003): total population age 15 and over literate 40.4%; males 55.9%; females 24.4%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	11,066	206,953	4,280,602	20.7
Secondary (age 12–17)	2,968	74,681	1,454,775	19.5
Voc., teacher tr.	259	7,677	128,981	16.8
Higher[10]	65	14,700	240,000	16.3

Health (2003): physicians 16,594 (1 per 1,587 persons); hospital beds 34,505 (1 per 763 persons); infant mortality rate per 1,000 live births (2005) 50.3; undernourished population, n.a.

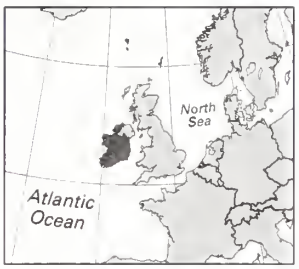
Military

Total active duty personnel (March 2008)[11]: 444,500 (army 40.6%, army support 4.4%, navy 0.3%, air force 0.3%, ministry of interior/police 53.6%, special operations 0.8%); U.S./allied coalition forces (July 2008/November 2007): 147,400/12,400. *Military expenditure as percentage of GDP:* n.a.

[1]Kurdistan Region has de facto authority in part. [2]Including about 1,400,000 Iraqi refugees in Syria, 500,000 Iraqi refugees in Jordan, and 400,000 elsewhere; nearly 2.8 million Iraqis were internally displaced in March 2008. [3]Excludes Kurdish Autonomous Region. [4]Weights of consumer price index components. [5]Less imputed bank service charges and less indirect taxes. [6]Represents the Baghdad-Mosul line, the only operational route in July 2006. [7]Iraqi Airways resumed international flights in September 2004 after 14 years of being grounded by war and sanctions. [8]Subscribers. [9]Based on the Iraq Living Conditions Survey, which comprised 21,668 households and was conducted between March and August 2004. [10]2002–03. [11]Data are for all trained security forces.

Internet resources for further information:
- **Central Bank of Iraq http://www.cbi.iq/index2.htm**
- **Central Organization for Statistics http://cosit.gov.iq**

Ireland



Official name: Éire (Irish); Ireland[1] (English).
Form of government: unitary multiparty republic with two legislative houses (Senate [60[2]]; House of Representatives [166]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Dublin.
Official languages: Irish; English.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24[3].

Area and population

Provinces Counties/Cities	area sq km	population 2006 census	Provinces Counties/Cities	area sq km	population 2006 census
Connaught			South Dublin	224	246,935
(Connacht)	17,711	504,121	Westmeath	1,840	79,346
Galway	6,098	159,256	Wexford	2,367	131,749
Galway (city)	51	72,414	Wicklow	2,027	126,194
Leitrim	1,590	28,950	Munster	24,674	1,173,340
Mayo	5,586	123,839	Clare	3,450	110,950
Roscommon	2,548	58,768	Cork	7,460	361,877
Sligo	1,838	60,894	Cork (city)	40	119,418
Leinster	19,801[4]	2,295,123	Kerry	4,807	139,835
Carlow	897	50,349	Limerick	2,735	131,516
Dublin (city)	118	506,211	Limerick (city)	21	52,539
Dun Laoghaire-Rathdown	126	194,038	North Tipperary	2,046	66,023
Fingal	455	239,992	South Tipperary	2,258	83,221
Kildare	1,695	186,335	Waterford	1,816	62,213
Kilkenny	2,073	87,558	Waterford (city)	41	45,748
Laoighis	1,720	67,059	Ulster (part of)	8,088	267,264
Longford	1,091	34,391	Cavan	1,932	64,003
Louth	826	111,267	Donegal	4,861	147,264
Meath	2,342	162,831	Monaghan	1,295	55,997
Offaly	2,001	70,868	TOTAL	70,273[4]	4,239,848

Demography

Population (2008): 4,467,000.
Density (2008): persons per sq mi 164.6, persons per sq km 63.6.
Urban-rural (2005): urban 60.5%; rural 39.5%.
Sex distribution (2006): male 50.03%; female 49.97%.
Age breakdown (2006): under 15, 20.4%; 15–29, 23.7%; 30–44, 23.0%; 45–59, 17.6%; 60–74, 10.5%; 75–84, 3.7%; 85 and over, 1.1%.
Population projection: (2010) 4,686,000; (2020) 5,610,000.
Ethnic composition (2000): Irish 95.0%; British 1.7%, of which English 1.4%; Ulster Irish 1.0%; U.S. white 0.8%; other 1.5%.
Religious affiliation (2006): Roman Catholic 86.8%; Church of Ireland (Anglican) 3.0%; other Christian 2.7%; nonreligious 4.4%; other 3.1%.
Major cities (2006): Dublin 506,211 (urban agglomeration 1,186,159); Cork 119,418; Galway 72,414; Limerick 52,539; Waterford 45,748.

Vital statistics

Birth rate per 1,000 population (2006): 15.2 (world avg. 20.3); within marriage 66.8%; outside of marriage 33.2%.
Death rate per 1,000 population (2006): 6.5 (world avg. 8.6).
Marriage/divorce rates per 1,000 population: (2006) 5.1/(2004) 0.8.
Total fertility rate (avg. births per childbearing woman; 2006): 1.90.
Life expectancy at birth (2005): male 75.0 years; female 80.3 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 227.9; malignant neoplasms (cancers) 185.6; diseases of the respiratory system 93.8; accidents and violence 30.5.

National economy

Budget (2005). Revenue: €39,849,000,000 (VAT 30.3%, income taxes 28.3%, corporate taxes 13.5%). Expenditures: €33,496,000,000 (current expenditure 88.4%, capital expenditure 11.6%).
Total public debt (December 2005): U.S.$50,288,000,000.
Gross national income (GNI; 2007): U.S.$210,168,000,000 (U.S.$48,140 per capita); purchasing power parity GNI (U.S.$37,090 per capita).

Structure of gross domestic product and labour force

	2001		2005[5]	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture	3,546.8	3.1	113,700	5.6
Mining	644.5	0.6	9,000	0.4
Manufacturing	33,865.4	29.6	272,100	13.5
Public utilities	1,316.0	1.1	13,100	0.7
Construction	7,477.2	6.5	242,400	12.0
Transp. and commun.	5,667.3	4.9	118,200	5.9
Trade, hotels	13,110.0	11.5	377,900	18.8
Pub. admin., defense	4,013.9	3.5	98,200	4.9
Services	12,476.8	10.9	414,100	20.6
Finance, real estate	20,792.9	18.2	257,100	12.8
Other	11,568.0[6]	10.1[6]	99,000[7]	4.9[7]
TOTAL	114,479.0[4]	100.0	2,014,800	100.0[4]

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): barley 1,125,000, wheat 713,000, potatoes 399,000, mushrooms 75,000, sugar beets 45,000; livestock (number of live animals) 6,704,000 cattle, 5,522,000 sheep, 1,588,000 pigs; roundwood (2006) 2,671,000 cu m, of which fuelwood 1%; fisheries production (2006) 264,232 (from aquaculture 20%). Mining and quarrying (2005): zinc ore 428,596[8]; lead ore 63,810[8]. Manufacturing (gross value added in €'000,000; 2003): chemicals and chemical products 15,988; food, beverages, and tobacco 9,111; electrical and optical equipment 6,677; paper products, printing, and publishing 4,227. Energy production (consumption): electricity (kW-hr; 2007) 27,888,000,000 ([2005] 28,072,000,000); coal (metric tons; 2005) none (2,923,000); crude petroleum (barrels; 2005) none (24,200,000); petroleum products (metric tons; 2005) 3,115,000 (7,104,000); natural gas (cu m; 2007) 498,000,000 ([2005] 4,126,000,000); peat (metric tons; 2006) 4,300,000 (n.a.).
Population economically active (2005): total 2,014,800[5]; activity rate 48.8% (participation rates: ages 15–64, 70.2%; female 42.3%; unemployed [March 2005–February 2006] 4.4%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.9	109.7	113.6	116.1	118.9	123.6	129.6
Weekly earnings index	109.3	115.2	122.6	128.7	133.6	137.2	143.8

Household income and expenditure. Average household size (2006) 2.8; average annual disposable income per household (1999–2000): £1r 22,589 (U.S.$28,800); expenditure (2004): housing and energy 20.7%, food, beverages, and tobacco 14.9%, hotels and restaurants 14.2%, transportation and communications 14.0%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 6,677; remittances (2007) 580; foreign direct disinvestment (2004–06 avg.) –9,643. Disbursements for (U.S.$'000,000): tourism (2006) 6,862; remittances (2007) 2,554; foreign direct investment (2004–06 avg.) 17,913.
Land use as % of total land area (2003): in temporary crops 17.2%, in permanent crops 0.03%, in pasture 46.2%; overall forest area (2005) 9.7%.

Foreign trade[9]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
€'000,000	+35,306	+38,047	+34,212	+33,304	+31,649	+26,196
% of total	23.5%	25.5%	26.3%	24 6%	21.7%	17.8%

Imports (2006): €60,665,000,000 (machinery 33.0%, of which office machines and parts 17.2%, electrical machinery 6.3%; chemicals and chemical products 13.2%; transportation equipment 9.0%; mineral fuels 7.7%; food 6.7%). *Major import sources* (2006): U.K. 31.9%; U.S. 11.2%; Germany 8.2%; China 7.3%; The Netherlands 4.0%.
Exports (2006): €86,861,000,000 (organic chemicals 19.6%; medicinal and pharmaceutical products 16.4%; office machines and parts 16.2%; food 8.1%). *Major export destinations* (2006): U.S. 18.7%; U.K. 17.9%; Belgium 14.1%; Germany 8.1%; France 5.8%.

Transport and communications

Transport. Railroads (2004): route length 3,312 km; passenger-km 1,581,698,000; metric ton-km cargo 343,747,000. Roads (2003): length 96,602 km (paved 100%). Vehicles (2003): passenger cars 1,507,106; trucks and buses 251,130. Air transport (2007)[10]: passenger-km 14,807,000,000; metric ton-km cargo 75,400,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	2,707	694	PCs	2005	2,198	530
Telephones				Dailies	2004	742[11]	183[11]
Cellular	2007	4,940[12]	1,149[12]	Internet users	2007	1,708	397
Landline	2007	2,112	502	Broadband	2007	705[12]	163[12]

Education and health

Educational attainment (2005). Percentage of population ages 25–64 having: no formal schooling/primary education 16.8%; some/complete secondary 52.4%; some higher 10.4%; complete higher 17.9%; unknown 2.5%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	3,328	26,282	455,782	17.3
Secondary (age 12–18)	406	11,553	185,026	16.0
Voc., teacher tr.	337	9,481	150,136	15.8
Higher	59	14,254[13]	143,546	9.4[13]

Health: physicians (2004) 11,141 (1 per 365 persons); hospital beds (2004) 12,377[14] (1 per 330 persons); infant mortality rate (2007) 2.9; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 10,460 (army 81.3%, navy 10.5%, air force 8.2%). *Military expenditure as percentage of GDP* (2005): 0.6%; per capita expenditure U.S.$275.

[1]As provided by the constitution. [2]Includes 11 nonelective seats. [3]The Irish pound was the former monetary unit; on Jan. 1, 2002, 1 £Ir = €1.27. [4]Detail does not add to total given because of rounding. [5]In 2005 there were 243,000 foreigners in the labour force, of which 120,000 were from Poland. [6]Taxes less subsidies and less statistical discrepancy. [7]Includes 85,600 unemployed. [8]Metal content. [9]Imports c.i.f.; exports f.o.b. [10]Aer Lingus only. [11]Circulation of daily newspapers. [12]Subscribers. [13]2003–04. [14]Publicly funded acute hospitals only.

Internet resources for further information:
- **Central Statistics Office (Ireland) http://www.cso.ie**
- **Central Bank of Ireland http://www.centralbank.ie**

Isle of Man

Official name: Isle of Man[1].
Political status: crown dependency (United Kingdom) with two legislative bodies[2] (Legislative Council [11[3]]; House of Keys [24]).
Chief of state: British Monarch represented by Lieutenant-Governor.
Head of government: Chief Minister assisted by the Council of Ministers.
Capital: Douglas.
Official language: English[4].
Official religion: none.
Monetary unit: Manx pound (£M)[5]; valuation (Sept. 8, 2008) 1 £M = U.S.$1.77.

Area and population

	area sq km	population 2006 census		area sq km	population 2006 census
Towns			**Parishes** (cont.)		
Castletown	2.3	3,109	Ballaugh	23.6	1,042
Douglas	10.1	26,218	Braddan	42.6	3,151
Peel	1.7	4,280	Bride	21.7	418
Ramsey	3.7	7,309	German	45.3	995
			Jurby	17.7	659
Villages			Lezayre	62.3	1,237
Laxey	2.4	1,768	Lonan	35.2	1,563
Onchan	24.7	9,172	Malew	47.1	2,304
Port Erin	2.6	3,575	Marown	26.7	2,086
Port St. Mary	1.4	1,913	Maughold	34.5	950
			Michael	33.9	1,640
Parishes			Patrick	42.2	1,294
Andreas	31.1	1,381	Rushen	24.6	1,591
Arbory	17.7	1,723	Santon	16.9	680
			TOTAL	572.0[6]	80,058

Demography

Population (2008): 81,800.
Density (2008): persons per sq mi 370.3, persons per sq km 143.0.
Urban-rural (2006): urban 71.6%; rural 28.4%.
Sex distribution (2006): male 49.37%; female 50.63%.
Age breakdown (2006): under 15, 16.9%; 15–29, 17.2%; 30–44, 22.0%; 45–59, 21.1%; 60–74, 14.4%; 75–84, 6.0%; 85 and over, 2.4%.
Population projection: (2010) 83,000; (2020) 87,000.
Population by place of birth (2006): Isle of Man 47.6%; United Kingdom 43.9%, of which England 37.2%, Scotland 3.4%, Northern Ireland 2.1%, Wales 1.2%; Ireland 2.1%; other Europe 2.0%; other 4.4%.
Religious affiliation (2000): Christian 63.7%, of which Anglican 40.5%, Methodist 9.9%, Roman Catholic 8.2%; other (mostly nonreligious) 36.3%.
Major towns (2006): Douglas 26,218; Onchan 9,172; Ramsey 7,309; Peel 4,280; Port Erin 3,575.

Vital statistics

Birth rate per 1,000 population (2007): 11.3 (world avg. 20.3); (2004) within marriage 63.9%; outside of marriage 36.1%.
Death rate per 1,000 population (2007): 9.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 1.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.65.
Marriage/divorce rates per 1,000 population: (2004) 4.5/(2003) 4.4.
Life expectancy at birth (2006): male 75.3 years; female 81.2 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 454.9, of which ischemic heart diseases 146.9, diseases of pulmonary circulation 130.2; malignant neoplasms (cancers) 244.8; diseases of the respiratory system 144.3; cerebrovascular disease 104.4; accidents 33.5.

National economy

Budget (2006–07). Revenue: £606,415,000 (customs duties and excise taxes 72.3%; income taxes 26.7%, of which resident 25.7%, nonresident 1.0%; nontax revenue 1.0%). Expenditures: £528,200,000 (health and social security 40.8%; education 18.0%; transportation 7.6%; home affairs 6.7%; tourism and recreation 5.0%).
Public debt: n.a.
Production. Agriculture, forestry, fishing: main crops include hay, oats, barley, wheat, and orchard crops; livestock (number of live animals; 2007) 145,864 sheep, 36,934 cattle, 565 pigs; fish catch (value of principal catch in £; 2006): 3,053,961, of which scallops 1,505,919, queen scallops 803,205, crab 372,656, lobster 328,618; fisheries production by tonnage (2007) 3,547 metric tons (from aquaculture, none). Mining and quarrying: sand and gravel. Manufacturing (value added in U.S.$; 2001–02): electrical and nonelectrical machinery/apparatus, textiles, other 76,100,000; food and beverages 21,900,000. Energy production (consumption): electricity (kW-hr; 2006) n.a. (379,200,000); crude petroleum, none (n.a.); petroleum products, n.a. (n.a.); natural gas, none (n.a.).
Household income and expenditure. Average household size (2006) 2.4; income per household (1995–96) £24,180 (U.S.$37,965); sources of income (1995–96): wages and salaries 63.0%, transfer payments 16.0%, self-employment 10.0%, property income 8.0%, other 3.0%; expenditure (January 2008)[7]: recreation and culture 22.2%, housing and energy 15.5%, food and nonalcoholic beverages 13.1%, transportation 12.0%, restaurants and hotels 8.1%, household furnishings 5.7%.
Gross national income (at current market prices; 2004–05): U.S.$2,719,000,000 (U.S.$33,960 per capita).

Structure of gross domestic product and labour force

	2006–07 in value £'000[8]	2006–07 % of total value[8]	2006 labour force	2006 % of labour force
Agriculture, fishing	18,514	1.0	642	1.5
Mining	10,822	0.6	2,248	5.4
Manufacturing	135,303	7.4		
Construction	135,297	7.4	3,374	8.1
Public utilities	33,043	1.8	603	1.4
Transp. and commun.	115,686	6.4	3,171	7.6
Trade, hotels	188,854	10.4	6,809[9]	16.3[9]
Finance, real estate, insurance	721,428[10]	39.7[10]	11,143	26.7
International business	294,161[10]	16.2[10]		
Pub. admin., defense	89,823	5.0	2,898	6.9
Services	262,383	14.4	9,876	23.6
Other	−187,676[11]	−10.3[11]	1,029	2.5
TOTAL	1,817,638	100.0	41,793	100.0

Population economically active (2006): total 41,793; activity rate of total population 52.2% (participation rates: ages 16–64, 79.9%; female 45.8%; unemployed [August 2008] 1.4%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Retail price index	101.7	104.0	107.3	112.8	117.5	121.0	125.9
Weekly earnings index	106.6	112.3	120.4	123.3	124.5	136.5	140.3

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2007) 163; remittances, n.a.; foreign direct investment (FDI), n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.; FDI, n.a.
Land use as % of total land area (2003): in temporary crops 7.4%, in permanent crops 0.9%, in pasture 71.7%; overall forest area (2005) 6.1%.

Foreign trade[12]

Imports: n.a. *Major import sources:* mostly the United Kingdom.
Exports: traditional exports including scallops, herring, beef, lambs, and tweeds are of declining importance; light manufacturing is encouraged. *Major export destinations:* mostly the United Kingdom.

Transport and communications

Transport. Railroads (2006): route length 41 mi, 65 km[13]. Roads (2006): total length 500 mi, 800 km (paved virtually 100%). Vehicles (2003): passenger cars 50,596; trucks and buses 11,637. Air transport (1998)[14]: passenger-mi 526,161,000, passenger-km 846,775,000; short ton-mi cargo 115,000, metric ton-km cargo 168,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	29	355	PCs	2007	...	...
Telephones				Dailies	2007	0	0
Cellular	2001	32	424	Internet users	2007	...	...
Landline	2001	56	741	Broadband	2007	...	...

Education and health

Educational attainment: n.a. *Literacy:* n.a.

Education (2007)[15]

	schools	teachers	students	student/ teacher ratio
Primary (age 5–10)	35	...	6,683	...
Secondary (age 11–17)	5	...	5,629	...
Higher	1	...	7,606[16]	...

Health: physicians (2006) 130 (1 per 616 persons); hospital beds (2006) 355[17] (1 per 225 persons); infant mortality rate per 1,000 live births (2004–05) 2.3; undernourished population, n.a.

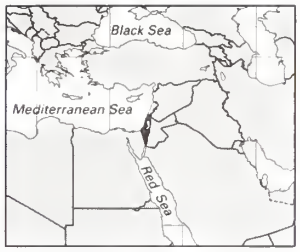
Military

Total active duty personnel: [18].

[1]Ellan Vannin in Manx Gaelic. [2]Collective name is Tynwald. [3]Includes 3 nonelected seats. [4]Manx Gaelic has limited official recognition. [5]Equivalent in value to pound sterling (£); the Isle of Man government issues both paper money and coins. [6]220.9 sq mi. [7]Weights of consumer price index components. [8]At factor cost. [9]Includes entertainment and catering. [10]The Isle of Man is an international finance centre with 54 banks and 30,934 registered companies in 2006; more than U.S.$53,000,000,000 was deposited in the island in mid-2008. [11]Ownership of dwellings less adjustments. [12]Because of the customs union between the Isle of Man and the U.K. since 1980, there are no customs controls on the movement of goods between the Isle of Man and the U.K. [13]Length of three tourist (novel) railways operating in summer. [14]Manx Airlines. [15]Public; in addition, there are two private schools. [16]Enrollees at Isle of Man College, 2006. [17]Combined total for Noble's Hospital and Ramsey and District Cottage Hospital. [18]The United Kingdom is responsible for defense.

Internet resources for further information:
- **Isle of Man Government: Economic Affairs**
  http://www.gov.im/treasury/economic/data/welcome.xml
- **Isle of Man Finance**
  http://www.gov.im/iomfinance

Israel



Official name: Medinat Yisra'el (Hebrew); Isrā'īl (Arabic) (State of Israel).
Form of government: multiparty republic with one legislative house (Knesset [120]).
Chief of state: President.
Head of government: Prime Minister.
Capital (proclaimed): Jerusalem; international recognition of its capital status has largely been withheld.
Official languages: Hebrew; Arabic.
Official religion: none.
Monetary unit: new (Israeli) sheqel (NIS); valuation (Sept. 8, 2008) 1 U.S.$ = NIS 3.61; 1 £ = NIS 6.37.

Area and population

Districts	Capitals	area[1] sq mi	area[1] sq km	population 2007[2] estimate
Central (Ha Merkaz)	Ramla	500	1,294	1,730,500
Haifa (Hefa)	Haifa	334	866	871,200
Jerusalem (Yerushalayim)	Jerusalem	252	653	889,300
Northern (Ha Zafon)	Tiberias	1,727	4,473	1,221,900
Southern (Ha Darom)	Beersheba	5,477	14,185	1,037,400
Tel Aviv	Tel Aviv–Yafo	66	172	1,216,500
TOTAL		8,357[3]	21,643	6,966,800[4]

Demography

Population (2008): 7,018,000[5].
Density (2008)[5]: persons per sq mi 839.8, persons per sq km 324.3.
Urban-rural (2004): urban 91.5%; rural 8.5%.
Sex distribution (2005): male 49.39%; female 50.61%.
Age breakdown (2005): under 15, 28.3%; 15–29, 24.2%; 30–44, 19.0%; 45–59, 15.6%; 60–74, 8.3%; 75–84, 3.6%; 85 and over, 1.0%.
Population projection[5]: (2010) 7,252,000; (2020) 8,361,000.
Ethnic composition (2005): Jewish 76.2%; Arab and other 23.8%.
Religious affiliation (2005): Jewish 76.3%, of which "secular" *c.* 33%, "traditionally observant" *c.* 30%, Orthodox *c.* 7%, ultra-Orthodox *c.* 6%; Muslim 16.1%; Christian 2.1%; Druze 1.6%; other 3.9%.
Major cities (2006): Jerusalem 729,100; Tel Aviv–Yafo 382,500 (metro area 3,040,400); Haifa 267,000 (metro area 996,000); Rishon LeZiyyon 221,500.

Vital statistics

Birth rate per 1,000 population (2007): 21.1 (world avg. 20.3).
Death rate per 1,000 population (2007): 5.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 15.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 2.90.
Marriage/divorce rates per 1,000 population (2006): 6.3/1.9.
Life expectancy at birth (2006): male 78.5 years; female 82.2 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 168; malignant neoplasms (cancers) 143; diabetes mellitus 42; diseases of the respiratory system 39; accidents and violence 31.

National economy

Budget (2005). Revenue: NIS 262,954,000,000 (tax revenue 67.3%; social contributions 15.5%; nontax revenue 13.2%; grants 4.0%). Expenditures: NIS 276,000,000,000 (social security and welfare 24.4%; defense 17.2%; education 15.2%; interest on loans 11.2%; health 10.5%).
Public debt (2004): U.S.$121,839,000,000.
Gross national income (GNI; 2007): U.S.$157,065,000,000 (U.S.$21,900 per capita); purchasing power parity GNI (U.S.$25,930 per capita).

Structure of net domestic product and labour force

	2005 in value NIS '000,000	2005 % of total value	2005 labour force	2005 % of labour force
Agriculture	9,797	1.7	50,000	1.8
Mining }	76,448	13.1	...	...
Manufacturing }			391,700	14.3
Construction	25,876	4.4	127,100	4.6
Public utilities	12,603	2.2	21,300	0.8
Transp. and commun.	37,782	6.5	162,600	5.9
Trade, hotels	54,561	9.4	452,300	16.5
Finance, real estate	134,020	23.0	417,400	15.2
Public admin., defense	98,439[6]	16.9[6]	116,000	4.2
Services	74,115	12.7	739,000	27.0
Other	58,651[7]	10.1[7]	262,800[8]	9.6[8]
TOTAL	582,292	100.0	2,740,100[3]	100.0[3]

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 579,000, tomatoes 472,000, grapefruit and pomelos 245,000, oranges 162,000, grapes 138,000, apples 110,000, olives 29,000, dates 17,900; livestock (number of live animals) 455,000 sheep, 440,000 cattle; roundwood (2006) 27,000 cu m, of which fuelwood 8%; fisheries production (2006) 26,036 (from aquaculture 85%). Mining and quarrying (2006): phosphate rock 2,949,000, potash 2,220,000. Manufacturing (value added in U.S.$'000,000; 2003): medical, measuring, and testing appliances 1,959; fabricated metals 1,766; food products 1,661; chemicals and chemical products 1,432; electronic components 1,052; transport equipment 932; telecommunications equipment 860. Energy production (consumption): electricity (kW-hr; 2005) 49,843,000,000 (48,180,000,000); hard coal (metric tons; 2005) none (12,124,000); lignite (metric tons; 2005) 413,000 (413,000); crude petroleum (barrels; 2006) 24,500 ([2005] 68,700,000); petroleum products (metric tons; 2005) 10,953,000 (11,422,000); natural gas (cu m; 2006) 2,313,000,000 ([2005] 1,549,000,000).
Population economically active (2004): total 2,678,500; activity rate 40.8% (participation rates: ages 15 and over, 54.9%; female 49.6%; unemployed [April 2006–March 2007] 8.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.1	106.8	107.6	107.1	108.6	110.9	111.4
Daily earnings index	108.6	109.7	111.9	114.5	117.7	123.1	128.5

Household income and expenditure. Average household size (2006) 3.3; gross annual income per household (2004) NIS 125,280 (U.S.$27,952); sources of income (2003)[9]: salaries and wages 66.1%, self-employment 10.5%; expenditure: housing 21.9%, transport and communications 20.4%, food and beverages 16.3%, education and entertainment 13.5%, health 5.1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 2,777; remittances (2007) 1,265; foreign direct investment (FDI; 2004–06 avg.) 7,044. Disbursements for (U.S.$'000,000): tourism (2006) 2,983; remittances (2007) 2,770; FDI (2004–06 avg.) 7,291.
Land use as % of total land area (2003): in temporary crops 15.6%, in permanent crops 4.0%, in pasture 5.9%; overall forest area (2005) 8.3%.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S $'000,000	–3,595	–2,428	–2,349	–2,262	–1,042	–2,556
% of total	5.7%	3.7%	3.0%	2.6%	1.1%	2.3%

Imports (2006): U.S.$47,834,000,000 (machinery and apparatus 20.6%, diamonds 18.9%, chemicals and chemical products 11.2%, crude petroleum 10.0%, road vehicles 5.6%). *Major import sources:* U.S. 12.4%; Belgium 8.2%; Germany 6.7%; Switzerland 5.9%; U.K. 5.1%; China 5.1%; unspecified 15.1%.
Exports (2006): U.S.$46,792,000,000 (worked diamonds 27.7%, machinery and apparatus 16.1%, rough diamonds 6.7%, medicine 6.4%, professional/scientific equipment 2.9%, special transactions 13.2%). *Major export destinations:* U.S. 38.4%; Belgium 6.6%; Hong Kong 5.9%; Germany 3.8%; U.K. 3.4%.

Transport and communications

Transport. Railroads (2007): route length 913 km; passenger-km 1,834,000,000, metric ton-km cargo 1,716,000,000. Roads (2007): total length 17,870 km (paved 100%). Vehicles (2006): passenger cars 1,684,694; trucks and buses 367,021. Air transport (2007)[11]: passenger-km 17,712,000,000; metric ton-km cargo 897,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	2,136	330	PCs	2004	5,037	734
Telephones				Dailies	2005	972[12]	145[12]
Cellular	2007	8,902[13]	1,285[13]	Internet users	2007	2,000	289
Landline	2006	3,005	439	Broadband	2007	1,529[13]	222[13]

Education and health

Educational attainment (2004). Percentage of population age 25 and over having: no formal schooling/unknown 3.7%; primary 12.5%; secondary 37.9%; postsecondary, vocational, and higher 45.9%. *Literacy* (2003): total population age 15 and over literate 95.4%; males literate 97.3%; females literate 93.6%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13)	2,414	65,494	785,142	12.0
Secondary (age 14–17)[14]	1,845	75,676	471,698	6.2
Voc., teacher tr	134		133,333	
Higher	. .	9,849[15]	204,768	.

Health (2005): physicians 25,058[16] (1 per 266 persons); hospital beds 42,632 (1 per 157 persons); infant mortality rate per 1,000 live births (2007) 3.9; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 176,500 (army 75.4%, navy 5.4%, air force 19.2%). *Military expenditure as percentage of GDP* (2005): 9.7%[17]; per capita expenditure U.S.$1,875.

[1]Excludes the West Bank (2,278 sq mi [5,900 sq km]), the Gaza Strip (140 sq mi [363 sq km]), the Sea of Galilee (63 sq mi [164 sq km]), and the Dead Sea (102 sq mi [265 sq km]); includes the Golan Heights (446 sq mi [1,154 sq km]) and East Jerusalem (27 sq mi [70 sq km]). [2]End of year. [3]Detail does not add to total given because of rounding. [4]Includes the population of the Golan Heights and East Jerusalem; excludes the Jewish population of the West Bank (282,400) and 200,000–300,000 foreign workers. [5]Excludes estimated mid-year Jewish population of West Bank ([2008] 290,000). [6]Includes community services. [7]Taxes on products less imputed bank service charges, subsidies, and statistical discrepancy. [8]Includes 16,400 not adequately classified and 246,400 unemployed. [9]Money income only. [10]Imports c.i.f.; exports f.o.b.; the import of military goods (equaling U.S.$2,493,000,000 in 2006) are excluded from foreign trade data. [11]El Al only. [12]Circulation of daily newspapers. [13]Subscribers. [14]Includes intermediate schools. [15]2003–04. [16]Up to age 65. [17]1/5 of which is military aid from the U.S.

Internet resources for further information:
- **Central Bureau of Statistics (Israel) http://www.cbs.gov.il/engindex.htm**
- **Bank of Israel http://www.bankisrael.gov.il/firsteng.htm**

Italy

Official name: Repubblica Italiana (Italian Republic).
Form of government: republic with two legislative houses (Senate [322[1]]; Chamber of Deputies [630]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Rome.
Official language: Italian.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Regions / Provinces	Capitals	area[2] sq mi	area[2] sq km	population 2006[3] estimate
Abruzzo	L'Aquila	4,156	10,763	1,305,307
Chieti	Chieti	999	2,587	391,470
L'Aquila	L'Aquila	1,944	5,034	305,101
Pescara	Pescara	473	1,225	309,947
Teramo	Teramo	752	1,948	298,789
Basilicata	Potenza	3,859	9,995	594,086
Matera	Matera	1,331	3,447	204,018
Potenza	Potenza	2,527	6,545	390,068
Calabria	Catanzaro	5,823	15,081	2,004,415
Catanzaro	Catanzaro	924	2,392	367,624
Cosenza	Cosenza	2,568	6,650	730,395
Crotone	Crotone	662	1,716	172,374
Reggio di Calabria	Reggio di Calabria	1,229	3,183	565,541
Vibo Valentia	Vibo Valentia	440	1,139	168,481
Campania	Naples	5,247	13,590	5,790,929
Avellino	Avellino	1,078	2,792	437,414
Benevento	Benevento	800	2,071	289,201
Caserta	Caserta	1,019	2,639	886,758
Napoli	Naples	452	1,171	3,086,622
Salerno	Salerno	1,900	4,922	1,090,934
Emilia-Romagna	Bologna	8,539	22,117	4,187,557
Bologna	Bologna	1,429	3,702	949,825
Ferrara	Ferrara	1,016	2,632	351,452
Forlì-Cesena	Forlì	969	2,510	374,678
Modena	Modena	1,039	2,690	665,367
Parma	Parma	1,332	3,449	416,803
Piacenza	Piacenza	1,000	2,589	275,861
Ravenna	Ravenna	718	1,859	369,427
Reggio nell'Emilia	Reggio nell'Emilia	885	2,292	494,212
Rimini	Rimini	154	400	289,932
Friuli-Venezia Giulia	Trieste	3,034	7,858	1,208,278
Gorizia	Gorizia	180	467	141,195
Pordenone	Pordenone	878	2,273	300,223
Trieste	Trieste	82	212	237,049
Udine	Udine	1,889	4,893	529,811
Lazio	Rome	6,655	17,236	5,304,778
Frosinone	Frosinone	1,251	3,239	491,333
Latina	Latina	869	2,251	524,533
Rieti	Rieti	1,061	2,749	154,406
Roma	Rome	2,066	5,352	3,831,959
Viterbo	Viterbo	1,395	3,612	302,547
Liguria	Genoa	2,093	5,422	1,610,134
Genova	Genoa	709	1,836	890,863
Imperia	Imperia	446	1,155	217,037
La Spezia	La Spezia	341	882	219,686
Savona	Savona	596	1,545	282,548
Lombardy	Milan	9,213	23,863	9,475,202
Bergamo	Bergamo	1,051	2,722	1,033,848
Brescia	Brescia	1,846	4,782	1,182,337
Como	Como	497	1,288	566,853
Cremona	Cremona	684	1,771	348,370
Lecco	Lecco	315	816	325,039
Lodi	Lodi	302	783	211,986
Mantova	Mantova	903	2,339	393,723
Milano	Milan	765	1,980	3,869,037
Pavia	Pavia	1,145	2,965	515,636
Sondrio	Sondrio	1,240	3,212	179,767
Varese	Varese	463	1,199	848,606
Marche	Ancona	3,743	9,694	1,528,809
Ancona	Ancona	749	1,940	464,427
Ascoli Piceno	Ascoli Piceno	806	2,087	380,648
Macerata	Macerata	1,071	2,774	315,065
Pesaro e Urbino	Pesaro	1,117	2,892	368,669
Molise	Campobasso	1,713	4,438	320,907
Campobasso	Campobasso	1,123	2,909	231,330
Isernia	Isernia	590	1,529	89,577
Piedmont	Turin	9,808	25,402	4,341,733
Alessandria	Alessandria	1,375	3,560	431,346
Asti	Asti	583	1,511	214,205
Biella	Biella	352	913	187,619
Cuneo	Cuneo	2,665	6,903	571,827
Novara	Novara	530	1,373	355,354
Torino	Turin	2,637	6,830	2,242,775
Verbano-Cusio-Ossola	Verbania	858	2,221	161,580
Vercelli	Vercelli	806	2,088	177,027
Puglia	Bari	7,474	19,358	4,071,518
Bari	Bari	1,980	5,129	1,595,359
Brindisi	Brindisi	710	1,838	403,786
Foggia	Foggia	2,774	7,185	684,273
Lecce	Lecce	1,065	2,759	807,424
Taranto	Taranto	941	2,437	580,676
Sardinia	Cagliari	9,301	24,090	1,655,677
Cagliari	Cagliari	1,764	4,570	543,310[4]
Carbonia-Iglesias[5]	Carbonia, Iglesias	577	1,495	131,890[4]
Medio Campidano[5]	Sanluri	585	1,516	105,400[4]
Nuoro	Nuoro	1,519	3,934	164,260[4]
Ogliastra[5]	Lanusei, Tortoli	716	1,854	58,389[4]
Olbia-Tempio[5]	Olbia, Tempio	1,312	3,399	138,334[4]
Oristano	Oristano	1,174	3,040	167,971[4]

Area and population (continued)

Regions / Provinces	Capitals	area[2] sq mi	area[2] sq km	population 2006[3] estimate
Sassari	Sassari	1,653	4,282	322,326[5]
Sicily	Palermo	9,927	25,711	5,017,212
Agrigento	Agrigento	1,175	3,042	457,039
Caltanissetta	Caltanissetta	822	2,128	274,001
Catania	Catania	1,371	3,552	1,075,657
Enna	Enna	989	2,562	174,199
Messina	Messina	1,254	3,248	655,640
Palermo	Palermo	1,927	4,992	1,239,808
Ragusa	Ragusa	623	1,614	308,103
Siracusa	Siracusa	814	2,109	398,330
Trapani	Trapani	951	2,462	434,435
Trentino-Alto Adige	Bolzano (Bozen)	5,254	13,607	985,128
Bolzano (Bozen)	Bolzano (Bozen)	2,857	7,400	482,650
Trento	Trento	2,401	6,218	502,478
Tuscany	Florence	8,878	22,993	3,619,872
Arezzo	Arezzo	1,248	3,232	335,500
Firenze	Florence	1,365	3,536	967,464
Grosseto	Grosseto	1,739	4,504	219,496
Livorno	Livorno	468	1,213	336,138
Lucca	Lucca	684	1,773	380,237
Massa-Carrara	Massa-Carrara	447	1,157	200,793
Pisa	Pisa	945	2,448	396,792
Pistoia	Pistoia	373	965	279,061
Prato	Prato	133	344	242,497
Siena	Siena	1,475	3,821	261,894
Umbria	Perugia	3,265	8,456	867,878
Perugia	Perugia	2,446	6,334	640,323
Terni	Terni	819	2,122	227,555
Valle d'Aosta (Vallée d'Aoste)	Aosta (Aoste)	1,260	3,263	123,978
Veneto	Venice	7,104	18,399	4,738,313
Belluno	Belluno	1,420	3,678	212,216
Padova	Padova	827	2,142	890,805
Rovigo	Rovigo	691	1,789	244,752
Treviso	Treviso	956	2,477	849,355
Venezia	Venice	950	2,460	832,326
Verona	Verona	1,195	3,096	870,122
Vicenza	Vicenza	1,051	2,722	838,737
TOTAL		116,346	301,336	58,751,711

Demography

Population (2008): 59,760,000.
Density (2008): persons per sq mi 513.6, persons per sq km 198.3.
Urban-rural (2005): urban 67.6%; rural 32.4%.
Sex distribution (2005[3]): male 48.54%; female 51.46%.
Age breakdown (2005): under 15, 14.0%; 15–29, 16.5%; 30–44, 23.8%; 45–59, 20.1%; 60–74, 16.3%; 75–84, 7.2%; 85 and over, 2.1%.
Population projection: (2010) 60,497,000; (2020) 62,462,000.
Ethnolinguistic composition (2000): Italian 96.0%; North African Arab 0.9%; Italo-Albanian 0.8%; Albanian 0.5%; German 0.4%; Austrian 0.4%; other 1.0%.
Religious affiliation (2005): Roman Catholic *c.* 83%, of which practicing *c.* 28%; Muslim *c.* 2%; nonreligious/atheist *c.* 14%; other *c.* 1%.
Major cities/urban agglomerations (2007): Rome 2,705,603 (3,339,000); Milan 1,303,437 (2,945,000); Naples 975,139 (2,250,000); Turin 900,569 (1,652,000); Palermo 666,552 (863,000); Genoa 615,686; Bologna 373,026; Florence 365,966; Bari 325,052; Catania 301,564; Venice 268,934; Verona 260,718; Messina 245,159; Padua 210,301.
Households. Average household size (2005[3]) 2.5; composition of households (2001): 1 person 24.9%, 2 persons 27.1%, 3 persons 21.6%, 4 persons 19.0%, 5 or more persons 7.4%. Family households (2001): 21,810,676, of which couple with children 41.5%, single family 24.9%, couple without children 20.8%, mother with children 7.3%, father with children 1.6%.
Immigration (2006): foreign residents *c.* 4,000,000 (mostly North African but also including *c.* 500,000 Romanians).

Vital statistics

Birth rate per 1,000 population (2006): 9.5 (world avg. 20.3); (2004) within marriage 85.1%; outside of marriage 14.9%.
Death rate per 1,000 population (2006): 9.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 0.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.35.
Marriage/divorce rates per 1,000 population: (2006) 4.2/(2003) 0.7.
Life expectancy at birth (2006): male 78.6 years; female 84.0 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 429.5; malignant neoplasms 282.9; diseases of the respiratory system 73.0; accidents and violence 45.5; diseases of the digestive system 42.9.
Adult population (ages 15–49) *living with HIV* (2007): 0.4%[6] (world avg. 0.8%).

Social indicators

Educational attainment (2002). Percentage of labour force ages 25 to 64 having: no formal schooling through lower secondary education 55.6%; completed upper secondary 34.0%; completed higher 10.4%.
Quality of working life. Average workweek (2004): 39.7 hours. Annual rate per 100,000 workers (2005) for: nonfatal injury 2,848; fatal injury 5. Number of working days lost to labour stoppages per 1,000 workers (2005): 40.
Material well-being. Rate per 100 households possessing (2006): mobile phone 82.3; personal computer 46.1; Internet access 35.6; satellite television 25.0.
Social participation. Eligible voters participating in last national election (April 9–10, 2006): 83%. Trade union membership in total workforce (2004): *c.* 30%.
Social deviance (2003). Offense rate per 100,000 population for: murder 1.2; rape 4.8; theft 2,306; robbery 72.5; drug trafficking 64.7; suicide 7.07.
Access to services (2002). Nearly 100% of dwellings have access to electricity, a safe water supply, and toilet facilities.

Leisure (2006). Favourite leisure activities (attendance per 100 people age 6 and over): cinema 48.9; museum/art exhibition 27.7; sporting events 27.3; discotheque 24.8; archaeological sites/monuments 21.1.

National economy

Gross national income (GNI; 2007): U.S.$1,991,284,000,000 (U.S.$33,540 per capita); purchasing power parity GNI (U.S.$29,850 per capita).

Structure of gross domestic product and labour force

	2005			
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture	28,761	2.0	947,000	3.9
Mining	231,240	16.3	40,000	0.2
Manufacturing			4,825,000	19.7
Construction	76,736	5.4	1,913,000	7.8
Public utilities	33,829	2.4	163,000	0.7
Transportation and communications	99,400	7.0	1,239,000	5.1
Trade, hotels	195,924	13.8	4,476,000	18.3
Finance, real estate	342,056	24.1	3,016,000	12.3
Pub. admin., defense	82,387	5.8	1,440,000	5.9
Services	182,429	12.9	4,503,000	18.4
Other	144,479[8]	10.2[8]	1,889,400[9]	7.7[9]
TOTAL	1,417,241	100.0[10]	24,451,400	100.0

Budget (2006). Revenue: €680,054,000,000 (current revenue 99.3%, of which indirect taxes 32.1%, direct taxes 31.4%, social security contributions 28.2%; capital revenue 0.7%). Expenditures: €745,558,000,000 (current expenditure 88.1%, of which social assistance benefits 39.5%, wages and salaries 21.9%, interest payments 9.1%; capital expenditure 11.9%).

Public debt (April 2008): U.S.$2,593,196,000,000.

Financial aggregates

	2002	2003	2004	2005	2006	2007
Exchange rate, € per[11]:						
U.S. dollar	0.95	0.79	0.73	0.85	0.76	0.68
£	1.54	1.41	1.42	1.46	1.49	1.36
SDR	1.30	1.18	1.14	1.21	1.14	1.07
International reserves (U.S.$)[11]						
Total (excl. gold; '000,000)	28,603	30,372	27,859	25,515	25,662	28,385
SDRs ('000,000)	108	156	145	229	272	331
Reserve pos. in IMF ('000,000)	3,907	4,154	3,703	1,758	977	735
Foreign exchange ('000,000)	24,588	26,062	24,011	23,528	24,413	27,319
Gold ('000,000 fine troy oz)	78.83	78.83	78.83	78.83	78.83	78.83
% world reserves	8.5	8.6	8.8	8.9	9.1	9.2
Interest and prices						
Central bank discount (%)	...	...	...	...	...	...
Govt. bond yield (%)	5.04	4.25	4.26	3.56	4.05	4.49
Share prices[12] (2000 = 100)	64.3	58.1	66.8	79.5	92.0	101.0
Balance of payments (U.S.$'000,000)						
Balance of visible trade	+13,412	+11,477	+10,893	+564	−12,511	+4,242
Imports, f.o.b.	−239,206	−286,641	−341,278	−371,814	−430,585	−498,142
Exports, f.o.b.	252,618	298,118	352,171	372,378	418,074	502,384
Balance of invisibles	−22,781	−30,884	−27,349	−30,277	−35,534	−55,274
Balance of payments, current account	−9,369	−19,407	−16,456	−29,713	−48,045	−51,032

Energy production (consumption): electricity (kW-hr; 2007) 312,840,000,000 ([2005] 352,854,000,000); coal (metric tons; 2005) 95,000 (24,248,000); crude petroleum (barrels; 2007) 39,300,000 ([2005] 687,000,000); petroleum products (metric tons; 2005) 91,405,000 (77,465,000); natural gas (cu m; 2007) 9,717,000,000 ([2005] 84,517,000,000).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 11,000,000, corn (maize) 9,891,362, grapes 8,519,418, wheat 7,260,309, tomatoes 6,025,613, sugar beets 4,629,900, olives 3,481,379, oranges 2,293,466, apples 2,072,500, potatoes 1,837,844, peaches and nectarines 1,718,938, cattle meat 1,100,000, pears 840,516, sheep milk 560,000, artichokes 474,253, kiwi fruit 454,609, hazelnuts 130,743; livestock (number of live animals) 9,281,000 pigs, 8,227,000 sheep, 6,109,500 cattle, 100,000,000 chickens; roundwood (2006) 8,618,000 cu m, of which fuelwood 65%; fisheries production (2006) 488,519 (from aquaculture 35%). Mining and quarrying (2005): limestone 120,000,000; marble 5,600,000; feldspar 3,000,000; pumice 600,000. Manufacturing (value added in U.S.$'000,000; 2003): nonelectrical machinery and apparatus 31,422; fabricated metal products 30,311; paints, soaps, pharmaceuticals 13,975; food products 13,203; bricks, cement, ceramics 11,749; printing and publishing 9,454; textiles 9,093; plastic products 8,473; motor vehicles and parts 7,796; wearing apparel 7,761; furniture 7,120; footwear and leather products 6,230.

Population economically active (2005): total 24,451,400; activity rate of total population 42.1% (participation rates: ages 15–64, 62.4%; female 40.1%; unemployed [2006] 6.8%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.8	105.3	108.1	110.5	112.7	115.1	117.2
Earnings index	101.8	104.5	107.2	110.5	113.9	117.5	120.8

Household income and expenditure. Average household size (2005[3]) 2.5; average annual disposable income per household (2000) *c.* €28,100 (*c.* U.S.$25,900); sources of income (1996): salaries and wages 38.8%, property income and self-employment 38.5%, transfer payments 22.0%; expenditure (2005[3]): housing and energy 30.1%, food and beverages 19.0%, transportation and communications 16.3%, clothing 6.6%, household operations 6.3%.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 38,257; remittances (2007) 3,165; foreign direct investment (FDI; 2004–06 avg.) 25,315. Disbursements for (U.S.$'000,000): tourism (2006) 23,152; remittances (2007) 11,287; FDI (2004–06 avg.) 34,373.

Land use as % of total land area (2003): in temporary crops 27.1%, in permanent crops 9.3%, in pasture 14.9%; overall forest area (2005) 33.9%.

Foreign trade[13]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+7,658	+2,047	−1,733	−11,879	−26,552	−10,140
% of total	1.5%	0.3%	0.2%	1.6%	3.1%	1.0%

Imports (2006): U.S.$437,397,000,000 (machinery and apparatus 16.5%, chemical products 12.4%, road vehicles/parts 10.6%, crude petroleum 9.2%, food 6.4%, iron and steel 5.1%). *Major import sources:* Germany 16.4%; France 9.1%; China 5.2%; The Netherlands 5.1%; Belgium 4.2%; Spain 4.1%; U.K. 3.5%; Libya 3.1%; U.S. 3.1%; Switzerland 3.0%.

Exports (2006): U.S.$410,845,000,000 (assorted manufactured goods 21.1%, of which iron and steel 4.8%, fabricated metal products 4.3%; nonelectrical machinery and apparatus 21.0%, of which general industrial machinery 9.6%, specialized machinery for particular industries 6.1%; chemicals and chemical products 10.5%; road vehicles/parts 7.8%; electrical machinery and apparatus 5.6%; apparel and clothing accessories 4.8%; food 4.5%). *Major export destinations:* Germany 13.1%; France 11.6%; U.S. 7.5%; Spain 7.2%; U.K. 6.0%; Switzerland 3.9%; Belgium 2.8%; Austria 2.4%; The Netherlands 2.4%; Russia 2.3%.

Transport and communications

Transport. Railroads: (2004) length 19,319 km; (2003) passenger-km 45,221,000,000; (2003) metric ton-km cargo 22,457,000,000. Roads (2003): total length 484,688 km (paved 100%). Vehicles (2004): passenger cars 33,973,147; trucks and buses 4,108,486. Air transport (2006)[14]: passenger-km 39,502,000,000; metric ton-km cargo 1,473,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	28,153	494	PCs	2005	21,486	370
Telephones				Dailies	2004	7,737[15]	134[15]
Cellular	2006	78,571[16]	1,333[16]	Internet users	2007	32,000	539
Landline	2005	25,049	431	Broadband	2007	10,860[16]	183[16]

Education and health

Literacy (2003): total population age 15 and over literate 98.6%; males literate 99.0%; females literate 98.3%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	18,575	256,650	2,778,877	10.8
Secondary (age 11–18)	7,883	263,563	3,829,583	14.5
Voc., teacher tr.	6,527	164,614	698,717	4.2
Higher		87,215	1,913,352	21.9

Health: physicians (2002) 353,692 (1 per 162 persons); hospital beds (2003) 237,216 (1 per 243 persons); infant mortality rate per 1,000 live births (2004) 6.1; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 186,049 (army 58.0%, navy 18.3%, air force 23.7%); U.S. military forces (March 2008) 9,700. *Military expenditure as percentage of GDP* (2005): 1.9%[17]; per capita expenditure U.S.$578.

[1]Included 7 nonelective seats in September 2008 (4 presidential appointees and 3 former presidents serving ex officio). [2]Region areas are based on an end-of-2002 survey; province areas are based on an older survey and therefore may not sum to the region area. [3]January 1. [4]2001 census figures. [5]Established May 2005. [6]Statistically derived midpoint within range. [7]2002. [8]Import duties less imputed bank service charges. [9]Unemployed. [10]Detail does not add to total given because of rounding. [11]End of year. [12]Yearly average. [13]Imports c.i.f.; exports f.o.b. [14]Alitalia and Alitalia Express only. [15]Circulation of daily newspapers. [16]Subscribers. [17]Includes military pensions.

Internet resources for further information:

- **National Statistical Institute http://www.istat.it**
- **Banca d'Italia http://www.bancaditalia.it**

Jamaica

Official name: Jamaica.
Form of government: constitutional monarchy with two legislative houses (Senate [21]; House of Representatives [60]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Kingston.
Official language: English.
Official religion: none.
Monetary unit: Jamaican dollar (J$); valuation (Sept. 8, 2008) 1 U.S.$ = J$72.02; 1 £ = J$127.24.

Area and population

Parishes	Capitals	area sq mi	area sq km	population 2001 census[1]
Clarendon	May Pen	462	1,196	237,025
Hanover	Lucea	174	450	67,037
Kingston	[2]	9	22	96,052
Manchester	Mandeville	320	830	185,801
Portland	Port Antonio	314	814	80,205
Saint Andrew	[2]	166	431	555,827
Saint Ann	Saint Ann's Bay	468	1,213	166,762
Saint Catherine	Spanish Town	460	1,192	482,308
Saint Elizabeth	Black River	468	1,212	146,404
Saint James	Montego Bay	230	595	175,127
Saint Mary	Port Maria	236	611	111,466
Saint Thomas	Morant Bay	287	743	91,604
Trelawny	Falmouth	338	875	73,066
Westmoreland	Savanna-la-Mar	312	807	138,947
TOTAL		4,244	10,991	2,607,631

Demography

Population (2008): 2,688,000.
Density (2008): persons per sq mi 633.4, persons per sq km 244.6.
Urban-rural (2005): urban 52.2%; rural 47.8%.
Sex distribution (2005): male 49.41%; female 50.59%.
Age breakdown (2005): under 15, 33.7%; 15–29, 29.4%; 30–44, 17.6%; 45–59, 9.5%; 60–74, 6.7%; 75 and over, 3.1%.
Population projection: (2010) 2,714,000; (2020) 2,828,000.
Doubling time: 66 years.
Ethnic composition (2001): black 91.6%; mixed race 6.2%; East Indian 0.9%; Chinese 0.2%; white 0.2%; other/unknown 0.9%.
Religious affiliation (2001): Protestant 61.2%, of which Church of God 23.8%[3], Seventh-day Adventist 10.8%, Pentecostal 9.5%; Roman Catholic 2.6%; other Christian 1.7%; Rastafarian 0.9%; nonreligious 20.9%; other 12.7%.
Major cities (2006): Kingston 585,300[4]; Spanish Town 148,800; Portmore 103,900; Montego Bay 82,700; Mandeville 47,700; May Pen 44,800.

Vital statistics

Birth rate per 1,000 population (2007): 17.0 (world avg. 20.3).
Death rate per 1,000 population (2007): 6.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 10.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.50.
Marriage/divorce rates per 1,000 population (2004): 8.3/0.7.
Life expectancy at birth (2005): male 69.2 years; female 72.7 years.
Major causes of death per 100,000 population (2002): circulatory diseases 321, of which cerebrovascular disease 135; malignant neoplasms (cancers) 130; communicable diseases 106; diabetes 81.

National economy

Budget (2005). Revenue: J$177,986,900,000 (tax revenue 88.4%, of which income taxes 35.2%, taxes on goods and services 27.5%, customs duties 8.6%; nontax revenue 6.4%; other 5.2%). Expenditures: J$204,513,700,000 (public debt 42.4%; wages and salaries 30.8%; capital expenditures 8.1%).
Public debt (external, outstanding; June 2008): U.S.$6,456,500,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 2,000,000, fruit 415,000 (of which oranges 142,000), coconuts 170,000, yams 127,000, bananas 125,000, chicken meat 101,500, pumpkins, squash, and gourds 36,300, pimiento and allspice (2005) 10,400, coffee 2,700; livestock (number of live animals) 430,000 cattle, 12,500,000 chickens; roundwood (2006) 837,490 cu m, of which fuelwood 67%; fisheries production (2006) 18,700 (from aquaculture 30%). Mining and quarrying (2006): bauxite 14,865,400; alumina 4,099,500; gypsum 375,000. Manufacturing (2005): cement 848,365,000; animal feeds 367,600; flour 135,000; sugar 127,001; molasses 60,927; beer 832,410 hectolitres; rum [and other distilled spirits] 246,740 hectolitres; cigarettes 724,313,000 units. Energy production (consumption): electricity (kW-hr; 2005) 7,526,000,000 (7,526,000,000); hard coal (metric tons; 2005) none (60,000); crude petroleum (barrels; 2005) none (3,450,000); petroleum products (metric tons; 2005) 460,000 (3,120,000); natural gas, none (none).
Land use as % of total land area (2003): in temporary crops 16.1%, in permanent crops 10.2%, in pasture 21.1%; overall forest area (2005) 31.3%.
Population economically active (2006): total 1,251,600; activity rate of total population 46.9% (participation rates: ages 14 and over 64.6%; female 44.2%; unemployed [April 2008] 8.9%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	107.0	114.6	126.4	143.6	165.6	179.8	196.5

Gross national income (GNI; 2007): U.S.$9,923,000,000 (U.S.$3,710 per capita); purchasing power parity GNI (U.S.$5,990 per capita).

Structure of gross domestic product and labour force

	2005 in value J$'000,000	2005 % of total value	2005 labour force	2005 % of labour force
Agriculture	31,814	5.3	190,800	16.0
Mining	23,838	3.9	4,600	0.4
Manufacturing	76,159	12.6	71,300	6.0
Construction	61,078	10.1	107,300	9.0
Public utilities	24,084	4.0	5,200	0.4
Transp. and commun.	67,917	11.2	76,400	6.4
Trade, hotels	120,279	19.9	254,500	21.3
Finance, real estate	74,080	12.2	54,300	4.6
Pub. admin., defense	64,968	10.7	295,600	24.8
Services	42,161	7.0		
Other	18,652[5]	3.1[5]	133,000[6]	11.1[6]
TOTAL	605,030	100.0	1,193,000	100.0

Household income and expenditure. Average household size (2004) 3.5; average annual income per household: n.a.; sources of income: n.a.; expenditure (2006)[7]: food and nonalcoholic beverages 37.5%, housing/energy 12.8%, transportation 12.8%, restaurants and hotels 6.2%, household furnishings 4.9%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,870; remittances (2007) 2,021; foreign direct investment (FDI; 2004–06 avg.) 711; official development assistance (2006) 37. Disbursements for (U.S.$'000,000): tourism (2006) 273; remittances (2007) 385; FDI (2004–06 avg.) 90.

Foreign trade[8]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007[9]
U.S.$'000,000	−2,439	−2,422	−2,528	−3,370	−3,052	−3,916
% of total	52.5%	50.3%	47.3%	52.7%	39.6%	49.8%

Imports (2006): U.S.$5,041,000,000 (petroleum 23.6%, machinery and apparatus 15.5%, food 12.5%, chemicals and chemical products 11.3%, road vehicles 6.1%). *Major import sources:* U.S. 36.8%; Trinidad and Tobago 11.5%; Venezuela 10.7%; Japan 4.2%; China 4.1%.
Exports (2006): U.S.$1,989,000,000 (alumina 52.3%; refined petroleum 13.5%; food 12.0%, of which raw sugar 4.5%, vegetables and fruit 2.9%, coffee 1.5%; alcoholic beverages 4.2%). *Major export destinations:* U.S. 30.4%; Canada 15.6%; China 15.1%; U.K. 10.3%; The Netherlands 7.0%.

Transport and communications

Transport. Railroads (2004): route length 125 mi, 201 km[10]. Roads (2005): total length 13,379 mi, 21,532 km (paved 74%). Vehicles (2004): passenger cars 357,660; trucks and buses 128,239. Air transport (2006)[11]: passenger-km 3,907,530,000; metric ton-km cargo 20,192,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,006	374	PCs	2005	179	68
Telephones				Dailies	2005	95[12]	36[12]
Cellular	2005	2,804[13]	1,058[13]	Internet users	2007	1,500	553
Landline	2005	342	125	Broadband	2006	79[13]	30[13]

Education and health

Educational attainment (2001). Percentage of population age 15 and over having: no formal schooling 0.9%; primary education 25.5%; secondary 55.5%; higher 12.3%, of which university 4.2%; other/unknown 5.8%. *Literacy* (2005): population age 15 and over literate 88.7%; males 85.0%; females 92.3%.

Education (2004–05)

	schools[14]	teachers	students	student/teacher ratio
Primary (age 6–11)	355[15]	11,793	326,411	27.7
Secondary (age 12–16)	161[15]	13,336	246,332	18.5
Higher[15]	15	1,051	11,600	11.0

Health: physicians (2003) 2,253 (1 per 1,193 persons); hospital beds (2004) 4,882 (1 per 556 persons); infant mortality rate (2005) 19.2; undernourished population (2002–04) 250,000 (9% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

Military

Total active duty personnel (November 2007): 2,830 (army 88.3%, coast guard 6.7%, air force 5.0%). *Military expenditure as percentage of GDP* (2005): 0.6%; per capita expenditure U.S.$20.

[1]Final adjusted figure. [2]The parishes of Kingston and Saint Andrew are jointly administered from the Half Way Tree section of Saint Andrew. [3]Includes numerous denominations. [4]Urban population of the amalgamated Kingston and St. Andrew parishes. [5]VAT less imputed bank service charges. [6]Includes 400 not adequately defined and 130,300 unemployed. [7]Weights of consumer price index components. [8]Imports c.i.f.; exports f.o.b. [9]Excludes December. [10]Inoperable since 1992 except for 35-mi (57-km) section leased to a mining operator. [11]Air Jamaica only. [12]Circulation of *Daily Gleaner* and *Daily Star* only. [13]Subscribers. [14]Excludes 349 all-age schools and 88 combined primary/lower secondary schools. [15]2003–04.

Internet resources for further information:
- **Statistical Institute of Jamaica http://www.statinja.com**
- **Bank of Jamaica http://www.boj.org.jm**

Japan

Official name: Nihon (Japan).
Form of government: constitutional monarchy with a national Diet consisting of two legislative houses (House of Councillors [242]; House of Representatives [480]).
Symbol of state: Emperor.
Head of government: Prime Minister.
Capital: Tokyo.
Official language: Japanese.
Official religion: none.
Monetary unit: yen (¥); valuation (Sept. 8, 2008) 1 U.S.$ = ¥106.45; 1 £ = ¥188.06.

Area and population

Regions / Prefectures	Capitals	area sq mi	area sq km	population 2007 estimate
Chūbu		25,786	66,786	21,819,000
Aichi	Nagoya	1,991	5,156	7,360,000
Fukui	Fukui	1,617	4,189	816,000
Gifu	Gifu	4,092	10,598	2,104,000
Ishikawa	Kanazawa	1,616	4,185	1,170,000
Nagano	Nagano	5,245	13,585	2,180,000
Niigata	Niigata	4,858	12,582	2,405,000
Shizuoka	Shizuoka	3,003	7,779	3,801,000
Toyama	Toyama	1,640	4,247	1,106,000
Yamanashi	Kōfu	1,724	4,465	877,000
Chūgoku		12,322	31,913	7,631,000
Hiroshima	Hiroshima	3,273	8,477	2,873,000
Okayama	Okayama	2,746	7,112	1,953,000
Shimane	Matsue	2,590	6,707	731,000
Tottori	Tottori	1,354	3,507	600,000
Yamaguchi	Yamaguchi	2,359	6,110	1,474,000
Hokkaidō		32,221	83,453	5,570,000
Hokkaidō	Sapporo	32,221	83,453	5,570,000
Kantō		12,522	32,432	41,825,000
Chiba	Chiba	1,991	5,156	6,098,000
Gumma	Maebashi	2,457	6,363	2,016,000
Ibaraki	Mito	2,354	6,096	2,969,000
Kanagawa	Yokohama	932	2,415	8,880,000
Saitama	Saitama	1,466	3,797	7,090,000
Tochigi	Utsunomiya	2,474	6,408	2,014,000
Tokyo-to	Tokyo	848	2,197	12,758,000
Kinki		12,783	33,108	22,737,000
Hyōgo	Kōbe	3,240	8,392	5,589,000
Kyōto-fu	Kyōto	1,781	4,613	2,635,000
Mie	Tsu	2,230	5,776	1,876,000
Nara	Nara	1,425	3,691	1,410,000
Ōsaka-fu	Ōsaka	731	1,893	8,812,000
Shiga	Ōtsu	1,551	4,017	1,396,000
Wakayama	Wakayama	1,825	4,726	1,019,000
Kyūshū		17,157	44,436	14,659,000
Fukuoka	Fukuoka	1,919	4,971	5,056,000
Kagoshima	Kagoshima	3,547	9,187	1,730,000
Kumamoto	Kumamoto	2,859	7,404	1,842,000
Miyazaki	Miyazaki	2,986	7,734	1,143,000
Nagasaki	Nagasaki	1,580	4,092	1,453,000
Ōita	Ōita	2,447	6,338	1,203,000
Okinawa	Naha	877	2,271	1,373,000
Saga	Saga	942	2,439	859,000
Shikoku		7,259	18,802	4,040,000
Ehime	Matsuyama	2,192	5,676	1,452,000
Kagawa	Takamatsu	724	1,876	1,006,000
Kōchi	Kōchi	2,743	7,105	782,000
Tokushima	Tokushima	1,600	4,145	800,000
Tohoku		25,825	66,886	9,504,000
Akita	Akita	4,483	11,612	1,121,000
Aomori	Aomori	3,709	9,606	1,407,000
Fukushima	Fukushima	5,321	13,782	2,067,000
Iwate	Morioka	5,899	15,278	1,364,000
Miyagi	Sendai	2,813	7,285	2,347,000
Yamagata	Yamagata	3,600	9,323	1,198,000
TOTAL		145,898[1]	377,873[1]	127,771,000[2]

Demography

Population (2008): 127,674,000.
Density (2008): persons per sq mi 875.0, persons per sq km 337.8.
Urban-rural (2003): urban 65.4%; rural 34.6%.
Sex distribution (2008): male 48.76%; female 51.24%.
Age breakdown (2008[3]): under 15, 13.5%; 15–29, 16.5%; 30–44, 21.1%; 45–59, 20.1%; 60–74, 18.5%; 75–84, 7.6%; 85 and over, 2.7%.
Population projection: (2010) 127,281,000; (2020) 122,837,000.
Composition by nationality (2004): Japanese 98.5%; Korean 0.5%; Chinese 0.4%; Brazilian 0.2%; other 0.4%.
Immigration/Emigration (2005[4]): permanent immigrants/registered aliens in Japan 2,011,555, from North and South Korea 29.8%, Taiwan, Hong Kong, Macau, and China 25.8%, Brazil 15.0%, Philippines 9.3%, Peru 2.9%, U.S. 2.5%, other 14.7%. Japanese living abroad 1,012,547, in the U.S. 34.7%, in China 11.3%, in Brazil 6.5%, in the U.K. 5.4%, in Australia 5.2%, other 36.9%.
Major cities (2008[5]): Tokyo 8,731,000; Yokohama 3,648,000; Ōsaka 2,651,000; Nagoya 2,246,000; Sapporo 1,898,000; Kōbe 1,533,000; Kyōto 1,467,000; Fukuoka 1,437,000; Kawasaki 1,388,000; Saitama 1,210,000; Hiroshima 1,166,000; Sendai 1,031,000; Kita-Kyūshū 985,000.
Major metropolitan areas (2005): Tokyo 35,197,000; Ōsaka-Kōbe 11,268,000; Nagoya 3,179,000; Fukuoka–Kita-Kyūshū 2,800,000; Sapporo 2,530,000; Sendai 2,224,000; Hiroshima 2,044,000; Kyōto 1,805,000.

Other principal cities (2006)

	population		population		population
Akita	331,834	Kawagoe	334,116	Okayama	676,490
Amagasaki	461,903	Kawaguchi	486,062	Okazaki	366,733
Aomori	309,108	Kōchi	332,317	Ōtsu	325,270
Asahikawa	353,540	Koriyama	339,071	Sagamihara	669,952
Chiba	930,388	Koshigaya	316,737	Sakai	832,142
Fujisawa	398,481	Kumamoto	670,097	Shizuoka	712,170
Fukuyama	459,881	Kurashiki	470,788	Suita	354,060
Funabashi	574,985	Kurume	305,805	Takamatsu	418,196
Gifu	413,036	Machida	409,272	Takatsuki	354,249
Hachiōji	563,077	Maebashi	318,302	Tokorozawa	337,277
Hamamatsu	807,073	Matsudo	474,934	Toyama	421,389
Higashi-Ōsaka	512,187	Matsuyama	515,060	Toyohashi	374,151
Himeji	536,067	Miyazaki	367,829	Toyonaka	387,198
Hirakata	404,742	Nagano	378,241	Toyota	415,843
Ichikawa	468,113	Nagasaki	451,738	Utsunomiya	459,433
Ichinomiya	373,427	Naha	313,498	Wakayama	373,533
Iwaki	352,360	Nara	368,989	Yokkaichi	304,941
Kagoshima	604,480	Niigata	812,631	Yokosuka	423,151
Kanazawa	454,795	Nishinomiya	471,572		
Kashiwa	384,420	Ōita	463,973		

Religious affiliation (2003): Shintō and related beliefs 84.2%[6]; Buddhism and related beliefs 73.6%[6]; Christian 1.7%; Muslim 0.1%; other 7.8%.
Households (2007). Total households (2006) 47,531,000; average household size 2.6; composition of households 1 person 28.2%, 2 persons 28.0%, 3 persons 18.5%, 4 persons 16.2%, 5 persons 6.1%, 6 or more persons 3.0%. Family households (2006) 32,351,000 (68.1%); nonfamily 15,180,000 (31.9%).

Type of household (2003)

Total number of occupied dwelling units: 46,863,000

	number of dwellings	percentage of total
by kind of dwelling		
exclusively for living	45,258,000	96.6
mixed use	1,523,600	3.3
combined with nondwelling	81,400	0.2
detached house	26,491,000	56.5
apartment building	18,733,000	40.0
tenement (substandard or overcrowded building)	1,483,000	3.2
other	156,000	0.3
by legal tenure of householder		
owned	28,666,000	61.2
rented	17,166,000	36.6
other	1,031,000	2.2
by kind of amenities		
flush toilet	41,407,600	88.4
bathroom	44,824,700	95.6
by year of construction		
1950 and earlier	2,188,300	4.7
1951–70	5,866,100	12.5
1971–80	9,541,400	20.4
1981–90	11,519,900	24.6
1991–2000	12,762,900	27.2
2001–2003 (Sept.)	2,786,200	5.9
not reported	2,198,200	4.7

Mobility (2007). Percentage of total population moving: within a prefecture 2.3%; between prefectures 2.0%.

Vital statistics

Birth rate per 1,000 population (2007): 8.6 (world avg. 20.3).
Death rate per 1,000 population (2007): 8.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): –0.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.34.
Marriage/divorce rates per 1,000 population (2007): 5.7 (average age at first marriage, men 30.1 years; women 28.3 years)/2.0.
Life expectancy at birth (2007): male 79.2 years; female 86.0 years.
Major causes of death per 100,000 population (2007): malignant neoplasms (cancers) 303.6; heart disease 158.4; cerebrovascular disease 114.6; pneumonia 99.4; accidents 34.3; suicide 27.8; renal failure 19.5; diseases of the liver 14.6; pulmonary disease 13.4; diabetes mellitus 12.6.

Social indicators

Educational attainment (2003). Percentage of population ages 25–64 having: no formal schooling through lower-secondary education 16%; upper secondary/higher vocational 47%; university 37%.

Distribution of income (2000)

percentage of average household income by quintile

1	2	3	4	5 (highest)
11.2	15.3	18.7	23.0	31.7

Quality of working life. Average hours worked per month (2007): 154.2. Annual rate of industrial deaths per 100,000 workers (2006): 3.0. Proportion of labour force insured for damages or income loss resulting from injury, permanent disability, and death (2005): 53.1%. Average man-days lost to labour stoppages per 1,000 workdays (2006): 1.8. Average duration of journey to work[7] (2003): 34.2 minutes. Rate per 1,000 workers of discouraged workers (unemployed no longer seeking work: 1997): 89.4.
Access to services (2004). Proportion of households having access to: safe public water supply 96.9%; public sewage system *c.* 65%.
Social participation. Eligible voters participating in last national election (July 2007): 59%. Adult population working as volunteers at least once in the year (2006) 26.2%. Trade union membership in total workforce (2006): 15.1%.

Social deviance (2005). Offense rate per 100,000 population for: homicide 1.0; robbery 3.0; larceny and theft 151.6. Incidence in general population of: alcoholism per 100,000 population, n.a.; drug and substance abuse 0.1. Rate of suicide per 100,000 population (2007): 24.1.

Leisure/use of personal time

Discretionary daily activities (2006)
(Population age 10 years and over)

	weekly average hrs./min.
Total discretionary daily time	6:23
of which	
Hobbies and amusements	0:45
Sports	0:15
Learning (except schoolwork)	0:12
Social activities	0:22
Radio, television, newspapers, and magazines	2:24
Rest and relaxation	1:25
Other activities	1:00

Major leisure activities (2006)
(Population age 10 years and over)

	percentage of participation		
	male	female	total
Sports	70.4	60.5	65.3
Walking or light exercise	30.6	39.0	34.9
Training with gym equipment	11.9	10.7	11.2
Swimming	14.9	12.8	13.8
Bowling	21.0	16.3	18.6
Golf	15.2	3.0	8.9
Hobbies and amusements	85.2	84.6	84.9
Photography	25.7	28.9	27.3
Karaoke	32.4	31.2	31.8
Travel			
Domestic	62.5	62.0	62.2
Foreign	10.0	10.2	10.1

Material well-being (2003–04). Households possessing: automobile 81.6%; air conditioner (2002) 87.2%; personal computer 77.5%; cellular phone 91.1%; Internet connection (2004[4]) 86.8%.

National economy

Gross national income (GNI; 2007): U.S.$4,813,341,000,000 (U.S.$37,670 per capita); purchasing power parity GNI (U.S.$34,600 per capita).

Structure of gross domestic product and labour force

	2006		2008[8]	
	in value ¥'000,000,000	% of total value	labour force	% of labour force
Agriculture, fishing	7,437.7	1.5	2,900,000	4.4
Mining	504.5	0.1	30,000	0.1
Manufacturing	108,602.8	21.3	11,450,000	17.2
Construction	32,148.0	6.3	5,430,000	8.1
Public utilities	11,433.2	2.2	300,000	0.4
Transportation and communications	33,419.3	6.6	5,290,000	7.9
Trade, hotels	68,722.0	13.5	14,310,000	21.5
Finance, real estate	95,678.4	18.8	2,520,000	3.8
Pub. admin., defense	47,169.9	9.3	2,310,000	3.5
Services	119,454.4	23.5	18,810,000	28.2
Other	–15,645.1[9]	–3.1[9]	3,270,000[10]	4.9[10]
TOTAL	508,925.1	100.0	66,620,000	100.0

Budget (2007–08)[11]. Revenue: ¥83,000,000,000,000 (government bonds 30.5%; corporation tax 20.1%; income tax 19.6%; VAT 12.8%). Expenditures: ¥83,000,000,000,000 (social security 26.2%; debt service 24.3%; public works 8.1%; education and science 6.4%; national defense 5.8%).
Public debt (July 2008): U.S.$7,699,508,000,000.

Financial aggregates

	2001	2002	2003	2004	2005	2006	2007
Exchange rate[4], ¥ per.							
U.S. dollar	131.80	119.90	107.10	104.12	117.97	118.95	114.00
£	191.17	193.26	191.14	201.09	203.12	233.49	228.39
SDR	165.64	163.01	159.15	161.70	168.61	178.95	180.15
International reserves (U.S.$)							
Total (excl. gold, '000,000)	395,155	461,186	663,289	833,891	834,275	879,682	952,784
SDRs ('000,000)	2,377	2,524	2,766	2,839	2,584	2,812	3,033
Reserve pos. in IMF ('000,000)	5,051	7,203	7,733	6,789	2,877	1,934	1,395
Foreign exchange ('000,000)	387,727	451,458	652,790	824,264	828,813	874,936	948,356
Gold ('000,000 fine troy oz)	24.60	24.60	24.60	24.60	24.60	24.60	24.60
% world reserves	2.6	2.6	2.7	2.7	2.8	2.8	2.9
Interest and prices							
Central bank discount (%)[4]	0.10	0.10	0.10	0.10	0.10	0.40	0.75
Govt. bond yield (%)	1.33	1.25	1.01	1.50	1.36	1.73	1.65
Industrial share prices (2000 = 100)	77.3	63.3	59.4	72.3	82.1	105.2	107.5
Balance of payments (U.S.$'000,000,000)							
Balance of visible trade	+70.21	+93.83	+106.40	+132.13	+93.96	+81.30	+104.75
Imports, f.o.b.	–313.38	–301.75	–342.72	–406.87	–473.61	–534.51	–573.34
Exports, f.o.b.	383.59	395.58	449.12	539.00	567.57	615.81	678.09
Balance of invisibles	+17.59	+18.62	+29.82	+39.93	+71.82	+89.22	+105.74
Balance of payments, current account	+87.80	+112.45	+136.22	+172.06	+165.78	+170.52	+210.49

Household income and expenditure. Average household size (2007) 2.6; average annual income per household (2004) ¥6,380,280 (U.S.$58,970); sources of income (1994): wages and salaries 59.0%, transfer payments 20.5%, self-employment 12.8%, other 7.3%; expenditure (2007)[12]: food 23.0%, transportation and communications 12.8%, culture and recreation 10.4%, fuel, light, and water charges 7.3%, housing 6.0%, medical care 4.4%, clothing and footwear 4.3%, education 4.3%, furniture and household utensils 3.3%.

Manufacturing and mining enterprises (2002)

	no. of establishments	avg. no. of persons engaged	annual wages as a % of avg. of all mfg. wages	annual value added (¥'000,000,000)
Electrical machinery	42,164	1,829,000	112.1	13,293
Food, beverages, and tobacco	66,507	1,488,000	70.1	7,888
Transport equipment	25,756	1,026,000	125.3	9,174
Chemical products	9,099	495,000	136.6	8,479
Nonelectrical machinery	73,782	1,168,000	112.9	7,176
Fabricated metal products	81,544	856,000	93.3	5,920
Printing and publishing	57,364	697,000	120.9	5,598
Ceramic, stone, and clay	28,148	413,000	104.6	2,702
Plastic products	28,120	472,000	90.7	4,265
Iron and steel	7,662	264,000	117.0	2,297
Paper and paper products	15,271	286,000	103.9	1,930
Apparel products	51,078	487,000	51.5	1,612
Precision instruments	11,793	250,000	103.4	2,426
Nonferrous metal products	5,830	181,000	111.6	1,380
Rubber products	7,798	161,000	85.1	1,560
Textiles	35,611	246,000	85.3	1,303
Furniture and fixtures	33,349	220,000	76.8	1,395
Lumber and wood products	22,055	192,000	82.7	900
Petroleum and coal products	1,379	38,000	161.9	883
Leather products	9,871	65,000	65.2	312
Mining and quarrying	3,764	47,000	101.3	839

Energy production (consumption): electricity (kW-hr; 2007) 1,004,620,000,000 (959,660,000,000); coal (metric tons; 2006) 1,341,000 ([2005] 174,710,000); crude petroleum (barrels; 2007) 5,950,000 ([2005] 1,520,000,000); petroleum products (metric tons; 2005) 178,255,000 (184,128,000); natural gas (cu m; 2007) 3,358,000,000 ([2005] 84,117,000,000). Composition of energy supply by source (2002): crude oil and petroleum products 49.7%, coal 19.5%, natural gas 13.5%, nuclear power 11.6%, hydroelectric power 3.2%, solar power and other new energy supplies 2.4%, geothermal 0.1%. Domestic energy demand by end use (1998): mining and manufacturing 46.3%, residential and commercial 26.3%, transportation 25.2%, other 2.2%.
Population economically active (2008[8]): total 66,620,000; activity rate of total population 52.2% (participation rates: ages 15 and over, 60.3%; female 41.7%; unemployed [August 2007–July 2008] 3.9%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	99.2	98.4	98.1	98.1	97.8	98.1	98.1
Monthly earnings index	99.4	97.7	97.8	97.7	98.3	98.9	101.0

Retail and wholesale trade (2004)

	no. of establishments	avg. no. of employees	annual sales (¥'000,000,000)
Retail trade	1,238,296	7,767,000	133,285
Food and beverages	444,693	3,154,000	41,434
Grocery	38,536	855,000	17,099
Liquors	60,194	177,000	3,330
General merchandise	5,555	541,000	16,897
Department stores	1,982	517,000	16,392
Motor vehicles and bicycles	87,009	542,000	16,189
Furniture and home furnishings	115,135	517,000	11,371
Apparel and accessories	177,881	698,000	11,009
Gasoline service stations	62,557	400,000	10,937
Books and stationery	54,338	636,000	4,745
Wholesale trade	375,378	3,805,000	405,646
Machinery and equipment	89,913	1,018,000	98,795
Motor vehicles and parts	18,078	180,000	15,109
General machinery except electrical	33,075	308,000	24,043
General merchandise	1,245	38,000	49,031
Farm, livestock, and fishery products	39,520	406,000	42,628
Food and beverages	45,069	482,000	43,819
Building materials	84,063	712,000	87,387
Minerals and metals	17,063	185,000	40,962
Chemicals	15,191	151,000	20,940
Textiles, apparel, and accessories	30,322	307,000	18,898
Drugs and toilet goods	18,709	245,000	22,023

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 10,970,000, sugar beets 4,025,000, potatoes 2,650,000, cabbages 2,390,000, sugarcane 1,275,000, dry onions 1,165,000, sweet potatoes 1,000,000, wheat 858,000, tangerines and mandarin oranges 853,000, apples 850,000, carrots 750,000, tomatoes 750,000, cucumbers 634,000, green onions 560,000, lettuce 560,000, eggplant 375,000, pears 325,000, spinach 302,000, persimmons 240,000, pumpkins 237,000, soybeans 235,000, grapes 215,000, yams 205,000, taro 195,000, strawberries 193,000, peaches 150,000, chilies 150,000, cauliflower 132,000, apricots 125,000, tea 95,000, mushrooms 67,000, ginger 42,000, chestnuts 24,000, cherries 22,000; livestock (number of live animals) 9,759,000 pigs, 4,398,000 cattle, 288,511,000 chickens; roundwood (2006) 16,714,185 cu m, of which fuelwood 1%; fisheries production (2005) 4,819,116 (including mackerel 811,728, anchovy 348,647, skipjack tuna 293,087, Yesso scallop 287,486; from aquaculture 15% [including Pacific oyster 218,896, Yesso scallop 203,352]); aquatic plants 612,635 (from aquaculture [mostly seaweed] 83%); 945 whales caught; pearls (2007) 27 metric tons. Mining and quarrying (2006): limestone 166,621,000; silica sand 4,593,000; dolomite 3,695,000; pyrophyllite 350,000; zinc 7,162; lead 777; silver 11,463 kg; gold 8,904 kg. Manufacturing (value added in U.S.$'000,000; 2004): machinery and apparatus 250,137, of which nonelectrical machinery 108,196, electronics, televisions, and radios 104,767, electrical machinery 37,174; transportation equipment 127,800; chemicals and chemical products 103,999; food and food products 83,185; fabricated

metal products 70,485; rubber products and plastic products 52,461, of which plastic products 40,150; iron and steel 38,052; printing 32,332; beverages and tobacco 25,491; cement, bricks, and ceramics 25,205; paper and paper products 25,057; professional and scientific equipment and watches 23,569; textiles, wearing apparel, and footwear 21,776.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 8,470; remittances (2007) 1,577; foreign direct investment (FDI; 2004–06 avg.) 1,362. Disbursements for (U.S.$'000,000): tourism (2006) 26,876; remittances (2007) 4,037; FDI (2004–06 avg.) 42,333.

Land use as % of total land area (2003): in temporary crops 12.1%, in permanent crops 0.9%, in pasture, n.a.; overall forest area (2005) 68.2%.

Foreign trade[13]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
¥'000,000,000	+9,932	+10,230	+12,023	+8,810	+7,869	+10,530
% of total	10.5%	10.3%	10.9%	7.2%	5.5%	6.7%

Imports (2006): ¥67,345,000,000,000 (mineral fuels 27.9%, of which petroleum 20.1%, natural gas 5.3%, coal 2.5%; machinery and apparatus 21.1%, of which heavy machinery 4.8%, office machines/computers 4.6%, electronic integrated circuits and micro-assemblies 3.7%; food 7.4%, of which marine products 2.3%; chemicals and chemical products 7.1%; metal ores and metal scrap 4.2%; apparel and clothing accessories 4.1%; nonferrous base metals [particularly aluminum and platinum-group] 3.1%; professional/scientific equipment 2.7%; road vehicles 2.4%). *Major import sources:* China 20.5%; U.S. 12.0%; Saudi Arabia 6.4%; U.A.E. 5.5%; Australia 4.8%; South Korea 4.7%; Indonesia 4.2%; unspecified Asia (probably Taiwan) 3.5%; Germany 3.2%; Thailand 2.9%.

Exports (2006): ¥75,214,000,000,000 (machinery and apparatus 39.5%, of which microcircuits and transistors 6.5%, machinery specialized for particular industries 5.9%, general industrial machinery 5.4%, telecommunications equipment 5.2%, office machines/computers 3.7%, power-generating machinery 3.7%; road vehicles 21.6%, of which passenger cars 14.6%, parts for road vehicles 4.1%; chemicals and chemical products 8.9%; iron and steel 4.6%). *Major export destinations:* U.S. 22.8%; China 14.3%; South Korea 7.8%; unspecified Asia (probably Taiwan) 6.8%; Hong Kong 5.6%; Thailand 3.5%; Germany 3.2%; Singapore 3.0%; U.K. 2.4%; The Netherlands 2.3%.

Trade by commodity group (2004)

SITC group	imports U.S.$'000,000	imports %	exports U.S.$'000,000	exports %
00 Food and live animals 01 Beverages and tobacco	49,008	10.8	2,616	0.5
02 Crude materials, excluding fuels	28,458[14]	6.3[14]	5,849[14]	1.0[14]
03 Mineral fuels, lubricants, and related materials	98,628	21.7	2,151	0.4
04 Animal and vegetable oils, fats, and waxes	[14]	[14]	[14]	[14]
05 Chemicals and related products, n.e.s.	35,273	7.7	48,260	8.5
06 Basic manufactures	44,944	9.9	60,419	10.7
07 Machinery and transport equipment	128,917	28.3	379,773	67.2
08 Miscellaneous manufactured articles 09 Goods not classified by kind	69,681	15.3	66,326	11.7
TOTAL	454,909	100.0	565,394	100.0

Direction of trade (2004)

	imports U.S.$'000,000	imports %	exports U.S.$'000,000	exports %
Africa	8,698	1.9	7,653	1.3
Asia	268,454	59.0	288,779	51.1
South America	9,844	2.2	5,453	1.0
North America and Central America	74,896	16.5	150,772	26.7
United States	62,510	13.8	126,916	22.5
other North and Central America	12,386	2.7	23,856	4 2
Europe	70,302	15.4	97,883	17.3
EU	57,454	12.6	87,587	15.5
Russia	5,703	1.2	3,115	0.5
other Europe	7,145	1.6	7,181	1.3
Oceania	22,710	5.0	14,817	2.6
TOTAL	454,909[2]	100.0	565,394[2]	100.0

Transport and communications

Transport. Railroads (2006): length (2004) 14,650 mi, 23,577 km; passengers carried 22,243,000; passenger-mi (2007) 246,005,000,000, passenger-km (2007) 395,908,000,000; short ton-mi cargo 15,885,000,000, metric ton-km cargo 23,191,000,000. Roads (2004): total length 738,200 mi, 1,188,000 km (paved 80%). Vehicles (2008[3]): passenger cars 57,617,000; trucks and buses 16,490,000. Air transport (2007): passengers carried 112,543,000; passenger-mi 101,255,000,000, passenger-km 162,954,000,000; short ton-mi cargo 6,472,600,000, metric ton-km cargo 9,449,850,000.

Distribution of traffic (2006)

	cargo carried ('000,000 tons)	% of national total	passengers carried ('000,000)	% of national total
Road	4,961	91.4	65,944	74.8
Rail (intercity)	52	1.0	22,243	25.2
Inland water	414	7.6	...	...
Air	2	0.0	114	0.1
TOTAL	5,429	100.0	88,188[2]	100.0[2]

Urban transport (2000)[15]: passengers carried 57,719,000, of which by rail 34,020,000, by road 19,466,000, by subway 4,233,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	107,527	842	PCs	2005	86,389	675
Telephones				Dailies	2006	52,310[16]	410[16]
Cellular	2007	107,339[17]	839[17]	Internet users	2007	88,110	689
Landline	2007	51,232	400	Broadband	2007	28,750[17]	225[17]

Radio and television broadcasting (2003): total radio stations 1,612, of which commercial 723; total television stations 15,021, of which commercial 8,276. Commercial broadcasting hours (by percentage of programs): reports—radio 12.3%, television 19.8%; education—radio 2.4%, television 12.3%; culture—radio 13.3%, television 25.1%; entertainment—radio 69.3%, television 37.5%. Advertisements (daily average): radio 149, television 445.

Other communications media (2005–06)

	titles		titles
Print		**Cinema (2005)**	
Books (new)	77,074	Feature films	731
of which		Domestic	356
Social sciences	16,652	Foreign	375
Fiction	12,309		
Arts	10,974		traffic ('000)
Engineering	8,164		
Natural sciences	6,303	**Post (2006–07)**	
History	5,040	Postal offices	24,574
Philosophy	3,688	Mail	22,558,800
Magazines/journals	4,540	Domestic	22,284,200
Weekly	132	International	274,600
Monthly	2,671	Parcels	2,320,700
		Domestic	2,317,400
		International	3,300

Education and health

Literacy: total population age 15 and over literate, virtually 100%.

Education (2007)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	22,693	418,000	7,133,000	17.1
Secondary (age 12–17)	16,300	495,000	7,036,000	14.2
Voc., teacher tr.	3,499	46,000	763,000	16.6
Higher	1,190	179,000	3,016,000	16.8

Health (2006): physicians 275,127 (1 per 464 persons); dentists 95,944 (1 per 1,332 persons); nurses and assistant nurses 1,194,129 (1 per 107 persons); pharmacists 234,429 (1 per 545 persons); midwives (2004) 25,257 (1 per 5,059 persons); hospital beds 1,626,589 (1 per 79 persons); infant mortality rate per 1,000 live births (2007) 2.6; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 240,400 (army 61.7%, navy 18.5%, air force 19.1%, central staff 0.7%). U.S. troops (March 2008) 33,122[18]. *Military expenditure as percentage of GDP* (2005): 1.0%[19]; per capita expenditure U.S.$345.

[1]Region areas do not sum to total given because of particular excluded inland water areas; total area per 2005 survey equals 145,914 sq mi (377,915 sq km). [2]Detail does not add to total given because of rounding. [3]As of May 1. [4]End of period. [5]As of September 1. [6]Many Japanese practice both Shintōism and Buddhism. [7]Main wage earner in household only. [8]As of August 1. [9]Statistical discrepancy and taxes on imports less imputed bank service charges. [10]Includes 710,000 not adequately defined and 2,560,000 unemployed. [11]Budgeted funds for General Account. [12]Households with two or more persons. [13]Imports c.i.f.; exports f.o.b. [14]Crude materials includes Animal and vegetable oils, fats, and waxes. [15]Tokyo, Nagoya, and Ōsaka metropolis traffic range only. [16]Circulation of daily newspapers. [17]Subscribers. [18]Includes 2,100 troops deployed in Afghanistan and Iraq. [19]Excludes military pensions.

Internet resources for further information:

- **Bank of Japan http://www.boj.or.jp/en/index.htm**
- **Statistics Bureau and Statistical Research and Training Institute http://www.stat.go.jp/english/index.htm**
- **Web Japan http://web-japan.org**

Jersey

Official name: Bailiwick of Jersey.
Political status: crown dependency (United Kingdom) with one legislative house (Assembly of the States of Jersey [58][1]).
Chief of state: British Monarch represented by Lieutenant Governor.
Head of government: Chief Minister[2] assisted by the Council of Ministers.
Capital: Saint Helier.
Official language: English[3].
Official religion: none.
Monetary unit: Jersey pound (£J); valuation (Sept. 8, 2008) 1 Jersey pound = U.S.$1.77; at par with the British pound.

Area and population

Parishes	area sq mi	area sq km	population 2001 census
Grouville	3.0	7.8	4,702
St. Brelade	4.9	12.8	10,134
St. Clement	1.6	4.2	8,196
St. Helier	4.1	10.6	28,310
St. John	3.4	8.7	2,618
St. Lawrence	3.7	9.5	4,702
St. Martin	3.8	9.9	3,628
St. Mary	2.5	6.5	1,591
St. Ouen	5.8	15.0	3,803
St. Peter	4.5	11.6	4,293
St. Saviour	3.6	9.3	12,491
Trinity	4.7	12.3	2,718
TOTAL	45.6	118.2	87,186

Demography

Population (2008): 91,200.
Density (2008): persons per sq mi 2,000.0, persons per sq km 771.6.
Urban-rural (2001)[4]: urban 28.9%, rural 71.1%.
Sex distribution (2005): male 49.22%; female 50.78%.
Age breakdown (2005): under 15, 17.5%; 15–29, 15.1%; 30–44, 25.1%; 45–59, 21.6%; 60–74, 13.7%; 75–84, 5.0%; 85 and over, 2.0%.
Population projection: (2010) 93,000; (2020) 97,000.
Population by place of birth (2001): Jersey 52.6%; United Kingdom, Guernsey, or Isle of Man 35.8%; Portugal 5.9%; France 1.2%; other 4.5%.
Religious affiliation (2000)[4]: Christian 86.0%, of which Anglican 44.1%, Roman Catholic 14.6%, other Protestant 6.9%, unaffiliated Christian 20.1%; nonreligious/atheist 13.4%; other 0.6%.
Major cities (2001)[5]: St. Helier 28,310; St. Saviour 12,491; St. Brelade 10,134.

Vital statistics

Birth rate per 1,000 population (2007): 11.3 (world avg. 20.3).
Death rate per 1,000 population (2007): 7.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 3.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.57.
Marriage/divorce rates per 1,000 population (2001): 7.6/3.2.
Life expectancy at birth (2005): male 76.8 years; female 81.9 years.
Major causes of death per 100,000 population (2002–05 avg.): diseases of the circulatory system *c.* 312, malignant neoplasms (cancers) *c.* 232, diseases of the respiratory system *c.* 136, diseases of the digestive system *c.* 44, accidents and violence *c.* 36.

National economy

Budget (2005). Revenue: £J 446,000,000 (income tax 81.4%, import duties 11.2%, stamp duties 3.4%, other 4.0%). Expenditures: £J 466,000,000 (current expenditure 90.8%, of which health 27.4%, education 19.5%, social security 17.7%, public services 5.8%; capital expenditure 9.2%).
Production. Agriculture, forestry, fishing (value of export crops in £J '000; 2006): potatoes 23,800, tomatoes 4,400, other fruits and vegetables 2,900, flowers (2004) 900; livestock (number of live animals; 2002) 3,970 mature dairy cattle; roundwood, none; fisheries production (metric tons) 2,493 (including whelks 621, brown crabs 349, scallops 304, lobsters 131; from aquaculture 31% [including oysters 651]). Mining and quarrying: n.a. Manufacturing: light industry, mainly electrical goods, textiles, and clothing. Energy production (consumption): electricity (kW-hr; 2001) 153,000,000 ([2007] 621,000,000); crude petroleum, none (n.a.); petroleum products (metric tons; 2007) n.a. (103,800); natural gas, none (n.a.).
Gross national income (2005): *c.* U.S.$5,800,000,000 (*c.* U.S.$66,000 per capita).

Structure of gross value added[6] and labour force

	2005 in value £J '000,000	2005 % of total value	2006 labour force[7]	2006 % of labour force[7]
Agriculture, fishing	47	1.4	1,810	3.4
Mining	..	....	...	...
Construction	178	5.3	5,220	9.7
Manufacturing	57	1.7	1,620	3.0
Public utilities	38	1.1	500	0.9
Transp. and commun.	146	4.3	2,680	5.0
Trade, hotels, restaurants	342	10.1	14,630	27.3
Finance, real estate[8]	2,339	69.0	12,170	22.7
Pub. admin., defense	243	7.2	6,480	12.1
Services	..	....	8,450	15.8
TOTAL	3,388[6,9]	100.0[9]	53,560	100.0[9]

Household income and expenditure. Average household size (2007) 2.3; median annual household income (2004–05) £J 34,000 (U.S.$62,100); sources of income: n.a.; expenditure (2004–05): housing 29.2%, recreation 14.2%, transportation 11.6%, food 9.8%, restaurants and hotels 5.8%, household furnishings 5.5%.
Population economically active (2001): total 48,105; activity rate of total population 55.2% (participation rates: ages 15–64 [male], 15–59 [female] 81.7%; female 44.1%; unemployed [2006] 2.3%).

Price index (2000 = 100)[10]

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	108.4	113.4	117.3	120.2	123.9	126.7	134.0

Public debt: none.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 422; remittances, n.a.; foreign direct investment (FDI), n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.; FDI, n.a.
Land use as % of total land area (1997): in temporary and permanent crops *c.* 29%, in pasture *c.* 22%; overall forest area (2005) 4.1%[4].

Foreign trade

Imports: [11]. *Major import sources* (2001): mostly the United Kingdom.
Exports: [11]; agricultural and marine exports (2001): £J 40,626,000 (potatoes 67.4%, greenhouse tomatoes 19.1%, flowers 3.3%, zucchini 3.0%, crustaceans 2.0%, mollusks 2.0%). *Major export destinations:* mostly the United Kingdom.

Transport and communications

Transport. Railroads: none. Roads (1995): total length 346 mi, 557 km (paved 100%). Vehicles (2002): passenger cars 74,007; trucks and buses 12,957. Air transport, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2006[12]	...	...	PCs	2006[13]	...	...
Telephones				Dailies	2005	22[14]	250[14]
Cellular	2006	102[15]	1,148[15]	Internet users	2004	27	308
Landline	2006	72	804	Broadband	2005	...	...

Education and health

Educational attainment (2001). Percentage of male population (16–64), female population (16–59) having: no formal degree 34.1%; primary education, n.a.; secondary, n.a.; undergraduate 7.1%; graduate (advanced degree) 4.1%. *Literacy* (2002): 100.0%.

Education (2005)

	schools	teachers	students	student/ teacher ratio
Primary (age 5–10)	21[16]	...	7,028	...
Secondary (age 11–16)	10[16]	...	6,231	...
Voc., teacher tr.	...	...	...	...
Higher[17]	1	...	582	...

Health: physicians (2001) 174 (1 per 500 persons); hospital beds (2000) 651 (1 per 133 persons); infant mortality rate per 1,000 live births (2006) 4.2; undernourished population, n.a.

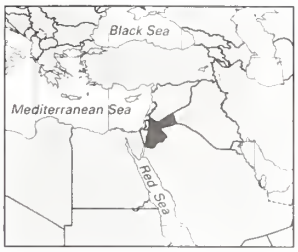
Military

Total active duty personnel (November 2007): none; defense is the responsibility of the United Kingdom.

[1]Includes 53 elected officials and 5 ex officio members (4 of the 5 ex officio members have no voting rights). [2]The first chief minister of Jersey was elected in December 2005. [3]Until the 1960s French was an official language of Jersey and is still used by the court and legal professions; Jerriais, a Norman-French dialect, is spoken by a small number of residents. [4]Includes Guernsey. [5]Population of parishes. [6]GDP for 2005 equals £J 2,800,000,000; gross value added total includes net interest income from bank profits, which are excluded from GDP calculations. [7]Employed only. [8]In 2005 Jersey was an international finance centre with 49 banks and 906 administered investment funds; more than U.S.$317,000,000,000 was deposited in the banks. [9]Detail does not add to total given because of rounding. [10]June. [11]Customs ceased recording imports and exports as of 1980. [12]In 2006 98% of households had a television. [13]In 2006 76% of households had a computer. [14]Circulation of daily newspapers. [15]Subscribers. [16]2002. [17]2001; Highlands College.

Internet resource for further information:
- **States of Jersey: Statistics**
  http://www.gov.je/statistics

Jordan



Official name: Al-Mamlakah al-Urdunnīyah al-Hāshimīyah (Al-Urdun) (Hashemite Kingdom of Jordan).
Form of government: constitutional monarchy with two legislative houses (Senate [55[1]]; House of Representatives [110]).
Head of state and government: King assisted by Prime Minister.
Capital: Amman.
Official language: Arabic.
Official religion: Islam.
Monetary unit: Jordanian dinar (JD); valuation (Sept. 8, 2008) JD 1.00 = U.S.$1.41 = £0.80.

Area and population

Governorates	Capitals	area sq mi	area sq km	population 2004 census
'Ajlūn	'Ajlūn	162	420	118,725
'Amman	Amman	2,926	7,579	1,942,066
Al-'Aqabah	Al-'Aqabah	2,664	6,900	102,097
Al-Balqā'	As-Salt	432	1,119	346,354
Irbid	Irbid	607	1,572	928,292
Jarash	Jarash	158	410	153,602
Al-Karak	Al-Karak	1,349	3,495	204,185
Ma'ān	Ma'ān	12,677	32,832	94,253
Mādabā	Mādabā	363	940	129,960
Al-Mafraq	Al-Mafraq	10,248	26,541	244,188
At-Tafilah	At-Tafilah	853	2,209	75,267
Az-Zarqā'	Az-Zarqā	1,838	4,761	764,650
TOTAL		34,277	88,778	5,103,639

Demography

Population (2008): 5,844,000[2, 3].
Density (2008): persons per sq mi 170.5, persons per sq km 65.8.
Urban-rural (2004): urban 78.3%; rural 21.7%.
Sex distribution (2006): male 51.55%; female 48.45%.
Age breakdown (2005): under 15, 37.2%; 15–29, 28.9%; 30–44, 20.7%; 45–59, 8.2%; 60–74, 4.2%; 75–84, 0.7%; 85 and over, 0.1%.
Population projection: (2010) 6,095,000; (2020) 7,055,000.
Doubling time: 28 years.
Ethnic composition (2000): Arab 97.8%, of which Jordanian 32.4%, Palestinian 32.2%, Iraqi 14.0%, Bedouin 12.8%; Circassian 1.2%; other 1.0%.
Religious affiliation (2005): Sunnī Muslim *c.* 95%; Christian *c.* 3%; other (mostly Shī'ī Muslim and Druze) *c.* 2%.
Major cities (2004): Amman 1,036,330; Az-Zarqā' 395,227; Irbid 250,645; Ar-Rusayfah 227,735; Al-Quwaysimah 135,500; Wādī as-Sīr 122,032.

Vital statistics

Birth rate per 1,000 population (2006): 29.1 (world avg. 20.3).
Death rate per 1,000 population (2006): 3.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 25.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.71.
Marriage/divorce rates per 1,000 population (2006): 10.6/2.0.
Life expectancy at birth (2003): male 70.6 years; female 72.4 years.
Major causes of death per 100,000 population: n.a.

National economy

Budget (2004). Revenue: JD 2,949,800,000 (tax revenue 48.4%, of which sales tax 28.0%, customs duties 8.8%, income and profits taxes 7.4%; foreign grants 27.5%; nontax revenue 22.0%, of which licenses and fees 12.4%; repayments 2.1%). Expenditures: JD 3,102,100,000 (current expenditure 75.0%, of which defense 21.1%, wages 15.0%, social security and pensions 12.9%, oil subsidies 8.4%, interest payments 7.4%; capital expenditure 25.0%).
Public debt (external, outstanding; 2006): U.S.$7,143,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): tomatoes 550,000, potatoes 170,000, cucumbers 140,000, olives 115,000, eggplants 95,000, watermelons 92,000, cauliflower 63,000, tangerines and mandarin oranges 48,000, apples 46,500, peppers 38,000, grapes 32,200; livestock (number of live animals) 2,100,000 sheep, 434,000 goats, 25,000,000 chickens; roundwood (2006) 273,437 cu m, of which fuelwood 99%; fisheries production (2006) 1,045 (from aquaculture 54%). Mining and quarrying (2005): phosphate ore 6,375,000; potash 1,830,000. Manufacturing (value added in U.S.$'000,000; 2004): chemicals and chemical products 347; bricks, cement, and ceramics 287; food products 232; wearing apparel 231; tobacco products 214; iron and steel 114. Energy production (consumption): electricity (kWhr; 2007) 12,564,000,000 ([2005] 10,388,000,000); coal, none (none); crude petroleum (barrels; 2005) 7,200 (33,600,000); petroleum products (metric tons; 2005) 4,197,000 (4,743,000); natural gas (cu m; 2005) 214,000,000 (1,650,000,000).
Land use as % of total land area (2003): in temporary crops 2.0%, in permanent crops 0.9%, in pasture 8.4%; overall forest area (2005) 0.9%.
Population economically active (2003): total 1,293,000; activity rate of total population 23.6% (participation rates: over age 15, 37.9%; female 14.9%; unemployed 14.5%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.8	103.6	105.3	108.9	112.7	119.7	126.2

Gross national income (GNI; 2007): U.S.$16,282,000,000 (U.S.$2,850 per capita); purchasing power parity GNI (U.S.$5,160 per capita).

Structure of gross domestic product and labour force

	2007 in value JD '000,000	2007 % of total value	2003 labour force	2003 % of labour force
Agriculture	312	2.8	39,000	3.0
Mining	312	2.8	14,000	1.1
Manufacturing	1,890	16.8	137,000	10.6
Construction	478	4.3	71,000	5.5
Public utilities	208	1.9	18,000	1.4
Transp. and commun.	1,510	13.5	110,000	8.5
Trade, hotels	1,016	9.1	224,000	17.3
Pub. admin., defense	1,673	14.9	184,000	14.2
Finance, real estate	2,198	19.6	59,000	4.5
Services	578	5.1	246,000	19.1
Other	1,050[4]	9.4[4]	191,000[5]	14.8[5]
TOTAL	11,225	100.0[6]	1,293,000	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,642; remittances (2006) 2,934; foreign direct investment (FDI; 2004–06 avg.) 1,768; official development assistance (2006) 580. Disbursements for (U.S.$'000,000): tourism (2006) 625; remittances (2006) 402; FDI (2004–06 avg.), none.
Household income and expenditure. Average household size (2006) 5.7; income per household (2006) JD 6,220 (U.S.$8,770); sources of income (2006): wages and salaries 45.3%, transfer payments 21.7%, rent and property income 18.4%, self-employment 14.6%; expenditure (2006): food and beverages 33.0%, housing and energy 26.8%, transp. and commun. 15.8%, education 7.0%, clothing and footwear 5.0%, alcohol and tobacco 3.6%.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
JD '000,000	−1,635	−1,887	−2,982	−4,399	−4,453	−5,538
% of total	29.4%	30.2%	34.9%	41.5%	37.8%	40.7%

Imports (2006): JD 8,116,000,000 (crude petroleum 17.7%, machinery and apparatus 14.8%, food 12.9%, road vehicles 8.8%, chemicals and chemical products 8.7%). *Major import sources:* Saudi Arabia 25.6%; China 10.4%; Germany 7.8%; United States 4.7%; Egypt 4.2%.
Exports (2006): JD 3,663,000,000 (apparel/garments 24.3%, machinery and apparatus 9.2%, crude fertilizers [potash] 8.0%, medicine 5.9%, gold 5.4%, vegetables 4.2%, inorganic chemicals 4.1%, precious jewelry 3.8%). *Major export destinations:* United States 25.1%; Iraq 12.3%; India 7.7%; free zones 7.6%; Saudi Arabia 7.1%; U.A.E. 5.6%.

Transport and communications

Transport. Railroads (2003): length 788 km; passenger-km 2,100,000; metric ton-km cargo 348,000,000. Roads (2005): total length 7,601 km (paved 100%). Vehicles (2005): passenger cars 429,306; trucks and buses 201,127. Air transport (2006)[8]: passenger-km 5,521,000,000; metric ton-km cargo 210,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,065	198	PCs	2005	355	62
Telephones				Dailies	2005	265[9]	49[9]
Cellular	2007	4,771[10]	805[10]	Internet users	2007	1,127	190
Landline	2007	586	99	Broadband	2007	92[10]	16[10]

Education and health

Educational attainment (2004). Percentage of population age 25 and over having: no formal schooling: illiterate 14.0%, literate 4.8%; primary/lower secondary education 36.6%; upper secondary 19.4%; some higher 25.1%, of which advanced degree 2.1%; unknown 0.1%. *Literacy* (2005): percentage of population age 15 and over literate 91.1%; males 95.2%; females 87.0%.

Education (2004–05)

	schools[11]	teachers	students	student/teacher ratio
Primary (age 6–14)	2,708	62,700	1,268,200	20.2
Secondary (age 15–17)	912	16,100	184,100	11.4
Voc., teacher tr.[11]	214	3,026	43,861	14.5
Higher[11]	22	6,036	153,965	25.5

Health: physicians (2005) 17,569 (1 per 316 persons); hospital beds (2006) 11,049 (1 per 507 persons); infant mortality rate (2005) 24.0; undernourished population (2002–04) 300,000 (6% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2007): 100,500 (army 84.6%, navy 0.5%, air force 14.9%). *Military expenditure as percentage of GDP* (2005): 5.3%[12]; per capita expenditure U.S.$130[12].

[1]Appointed by king. [2]Includes *c.* 1.9 million registered Palestinian refugees. [3]Excludes roughly 600,000 Iraqi refugees. [4]Net taxes on products less imputed bank service charges. [5]Including 4,000 not adequately defined and 187,000 unemployed. [6]Detail does not add to total given because of rounding. [7]Imports c.i.f.; exports f.o.b. [8]Royal Jordanian airlines only. [9]Circulation of daily newspapers. [10]Subscribers. [11]2001. [12]Includes security expenditures.

Internet resources for further information:
- **Dept. of Statistics http://www.dos.gov.jo**
- **Central Bank of Jordan http://www.cbj.gov.jo**

Kazakhstan

Official name: Qazaqstan Respūblikasy (Republic of Kazakhstan).
Form of government: unitary republic[1] with a Parliament consisting of two chambers (Senate [47[2]] and House of Representatives [107]).
Head of state and government: President assisted by Prime Minister.
Capital: Astana.
Official language: Kazakh[3].
Official religion: none.
Monetary unit: tenge (T); valuation (Sept. 8, 2008) 1 U.S.$ = T 119.61; 1 £ = T 211.31.

Area and population

Provinces	area sq km	population 2008[4] estimate	Provinces	area sq km	population 2008[4] estimate
Almaty	224,000	1,643,278	Qostanay	196,000	894,192
Aqmola	146,200	747,447	Qyzylorda[5]	226,000	632,234
Aqtöbe	300,600	703,660	Shyghys Qazaqstan (Eastern Kazakhstan)	283,200	1,417,384
Atyraū	118,600	490,369	Soltüstik Qazaqstan (Northern Kazakhstan)	98,000	653,921
Batys Qazaqstan (Western Kazakhstan)	151,300	615,310	Zhambyl	144,300	1,018,845
Mangghystaū	165,600	407,403	**Cities**		
Ongtüstik Qazaqstan (Southern Kazakhstan)	117,300	2,331,505	Almaty	300	1,324,739
Pavlodar	124,800	746,454	Astana	700	602,684
Qaraghandy	428,000	1,342,081	TOTAL	2,724,900	15,571,506

Demography

Population (2008): 15,655,000.
Density (2008): persons per sq mi 14.9, persons per sq km 5.7.
Urban-rural (2007[4]): urban 57.4%; rural 42.6%.
Sex distribution (2005): male 48.30%; female 51.70%.
Age breakdown (2005): under 15, 23.7%; 15–29, 28.7%; 30–44, 20.7%; 45–59, 16.4%; 60–74, 7.9%; 75–84, 2.3%; 85 and over, 0.3%.
Population projection: (2010) 15,997,000; (2020) 16,976,000.
Ethnic composition (2004[4]): Kazakh 57.2%; Russian 27.2%; Ukrainian 3.1%; Uzbek 2.7%; German 1.6%; Tatar 1.6%; Uighur 1.5%; other 5.1%.
Religious affiliation (2000): Muslim (mostly Sunnī) 42.7%; nonreligious 29.3%; Christian 16.7%, of which Orthodox 8.6%; atheist 10.9%; other 0.4%.
Major cities (2006[4]): Almaty 1,247,896; Astana 550,438; Shymkent (Chimkent) 526,140; Qaraghandy (Karaganda) 446,139; Taraz 336,057.

Vital statistics

Birth rate per 1,000 population (2006): 19.7 (world avg. 20.3); (2000) legitimate 76.1%, illegitimate 23.9%.
Death rate per 1,000 population (2006): 10.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 9.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.90.
Marriage/divorce rates per 1,000 population (2006): 9.0/2.3.
Life expectancy at birth (2007[4]): male 60.6 years; female 72.0 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 867.9; malignant neoplasms (cancers) 179.8; accidents, poisoning, and violence 165.2; diseases of the respiratory system 98.7.

National economy

Budget (2004). Revenue: T 1,441,000,000,000 (tax revenue 90.7%, of which corporate taxes 33.8%, VAT 16.9%, social security 11.7%, petroleum taxes 10.0%; nontax revenue 9.3%). Expenditures: T 1,289,300,000,000 (social security 21.1%; education 14.8%; health 10.2%; public order 9.2%).
Public debt (external, outstanding; 2006): U.S.$2,136,000,000.
Population economically active (2006): total 8,028,900; activity rate of total population 52.4% (participation rates: ages 15–64 [2004] 76.6%; female [2004] 49.0%; unemployed 7.8%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	108.4	114.7	122.1	130.5	140.4	152.4	168.8
Monthly earnings index	120.4	141.6	161.7	197.1	235.7	284.7	...

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 16,500,000, barley 2,600,000, potatoes 2,414,800, watermelons 653,000, corn (maize) 600,000, tomatoes 523,500, onions 349,000; livestock (number of live animals) 13,046,800 sheep, 5,660,400 cattle, 2,303,500 goats, 28,100,000 chickens; roundwood (2006) 852,000 cu m, of which fuelwood 25%; fisheries production (2006) 35,676 (from aquaculture 1%). Mining and quarrying (2005): iron ore 16,469,900; bauxite 4,800,000; chromite 3,579,000; copper (metal content) 402,000; zinc (metal content) 400,000; silver 832,000 kg; gold 18,062 kg. Manufacturing (value of production in T '000,000; 2004): base metals 600,000; food and food products 356,000; coke, refined petroleum products, and nuclear fuel 134,000; machinery and apparatus 124,000; cement, bricks, and ceramics 71,000. Energy production (consumption): electricity (kW-hr; 2007) 76,145,000,000 (76,283,000,000); hard coal (metric tons; 2005) 86,600,000 (61,900,000); lignite (metric tons; 2005) 4,500,000 (4,240,000); crude petroleum (barrels; 2007) 496,600,000 (92,000,000); petroleum products (metric tons; 2005) 11,841,000 (7,625,000); natural gas (cu m; 2006) 25,655,000,000 (31,007,000,000).

Gross national income (GNI; 2007): U.S.$78,281,000,000 (U.S.$5,060 per capita); purchasing power parity GNI (U.S.$9,700 per capita).

Structure of gross domestic product and labour force

	2006 in value T '000,000	2006 % of total value	2004 labour force	2004 % of labour force
Agriculture	541,200	6.0	2,406,000	30.7
Mining			186,000	2.4
Manufacturing	2,998,300	33.4	519,800	6.6
Public utilities			163,800	2.1
Construction	985,700	11.0	380,700	4.9
Transp. and commun.	1,143,500	12.7	519,700	6.6
Trade, hotels	1,188,300	13.2	1,140,700	14.5
Finance, real estate			294,300	3.7
Pub. admin., defense	3,282,500	36.6	334,700	4.3
Services			1,236,100	15.8
Other	−1,170,300[6]	−13.0[6]	658,800	8.4
TOTAL	8,969,200	100.0[7]	7,840,600	100.0

Household income and expenditure (2001). Average household size (2004) 3.8; sources of income: salaries and wages 72.1%, social benefits 9.2%; expenditure: food and beverages 56.0%, housing 11.7%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 838; remittances (2007) 223; foreign direct investment (2004–06 avg.) 4,092; official development assistance (2006) 172. Disbursements for (U.S.$'000,000): tourism (2006) 821; remittances (2007) 4,297.
Land use as % of total land area (2003): in temporary crops 8.4%, in permanent crops 0.05%, in pasture 68.6%; overall forest area (2005) 1.2%.

Foreign trade[8]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+2,193	+3,086	+4,518	+7,312	+10,497	+14,581
% of total	14.5%	19.0%	21.2%	22.2%	23.2%	23.6%

Imports (2006): U.S.$23,663,000,000 (machinery and apparatus 27.7%, road vehicles 10.9%, petroleum 10.1%, chemicals and chemical products 8.6%, iron and steel 8.3%). *Major import sources:* Russia 38.3%; China 8.1%; Germany 7.6%; Italy 6.0%; U.S. 4.7%.
Exports (2006): U.S.$38,244,000,000 (crude petroleum 61.7%; nonferrous metals 10.4%, of which refined copper 6.2%; iron and steel 5.5%; metal ore and metal scrap 5.0%). *Major export destinations:* Italy 18.0%; Switzerland 17.6%; Russia 9.8%; China 9.4%; France 8.8%.

Transport and communications

Transport. Railroads (2006): route length (2004) 13,700 km; passenger-km 12,705,000,000; metric ton-km cargo 191,000,000,000. Roads (2004): total length 90,018 km (paved 93%). Vehicles (2005): passenger cars 1,405,325; trucks and buses 347,236. Air transport (2006): passenger-km 3,716,000,000; metric ton-km cargo (2003) 94,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	5,106	338	PCs	2005	...	...
Telephones				Dailies	2005	...	...
Cellular	2007	12,588[9]	816[9]	Internet users	2007	1,901	128
Landline	2007	3,237	210	Broadband	2007	381[9]	25[9]

Education and health

Educational attainment (1999). Population age 25 and over having: no formal schooling/some primary education 9.1%; primary education 23.1%; secondary/some postsecondary 57.8%; higher 10.0%. *Literacy* (2003): percentage of total population age 15 and over literate 99.5%; males 99.8%; females 99.3%.

Education (2004–05)

	schools[10]	teachers	students	student/teacher ratio
Primary (age 7–13)	8,221	60,509[11]	1,120,005[11]	18.5[11]
Secondary (age 14–17)		170,190[11]	1,976,390[11]	11.6[11]
Voc., teacher tr.[10]	385	30,869	438,500	14.2
Higher[10]	181	42,300	747,100	17.7

Health (2006): physicians 57,500 (1 per 266 persons); hospital beds 119,000 (1 per 129 persons); infant mortality rate per 1,000 live births 13.9; undernourished population (2002–04) 900,000 (6% of total population based on the consumption of a minimum daily requirement of 1,950 calories).

Military

Total active duty personnel (November 2007): 49,000[12] (army 61.2%, navy 6.1%, air force 24.5%, Ministry of Defense staff 8.2%). *Military expenditure as percentage of GDP* (2005): 1.1%; per capita expenditure U.S.$39.

[1]No election since independence in 1991 has been deemed free and fair by international standards. [2]Includes 15 nonelective seats. [3]Russian has equal status with Kazakh at state-owned organizations and bodies of local government. [4]January 1. [5]Includes an area of 6,700 sq km (2,600 sq mi) enclosing the Bayqongyr (Baykonur) space launch facilities and the city of Bayqongyr (formerly Leninsk) leased to Russia in 1995 until 2050. The estimated 70,000 residents of Bayqongyr are excluded from the Qyzylorda population total. [6]Net factor income from abroad. [7]Detail does not add to total given because of rounding. [8]Imports c.i.f.; exports f.o.b. [9]Subscribers. [10]Public schools only. [11]2002–03. [12]31,500 paramilitary (primarily state border protection forces and internal security troops) are excluded.

Internet resources for further information:
- **National Bank of Kazakhstan http://www.nationalbank.kz**
- **Agency of Statistics of Kazakhstan http://www.stat.kz**

Kenya

Official name: Jamhuri ya Kenya (Swahili); Republic of Kenya (English).
Form of government: unitary multiparty republic with one legislative house (National Assembly [224[1]]).
Head of state and government: President assisted by the Prime Minister[2].
Capital: Nairobi.
Official languages: Swahili; English.
Official religion: none.
Monetary unit: Kenyan shilling (K Sh); valuation (Sept. 8, 2008) 1 U.S.$ = K Sh 70.20; 1 £ = K Sh 124.01.

Area and population

Provinces	Provincial headquarters	area sq mi	area sq km	population 2006 estimate[3]
Central	Nyeri	5,087	13,176	3,923,900
Coast	Mombasa	32,279	83,603	2,975,400
Eastern	Embu	61,734	159,891	5,322,400
North Eastern	Garissa	48,997	126,902	1,326,000
Nyanza	Kisumu	6,240	16,162	4,984,900
Rift Valley	Nakuru	67,131	173,868	8,418,100
Western	Kakamega	3,228	8,360	4,151,000
Special area				
Nairobi	—	264	684	2,845,400
TOTAL		224,961[4,5]	582,646[5]	33,947,100

Demography

Population (2008): 37,954,000.
Density (2008): persons per sq mi 168.7, persons per sq km 65.1.
Urban-rural (2005): urban 20.7%; rural 79.3%.
Sex distribution (2006): male 48.90%; female 51.10%.
Age breakdown (2006): under 15, 43.1%; 15–29, 30.2%; 30–44, 15.2%; 45–59, 7.0%; 60–74, 3.5%; 75 and over, 1.0%.
Population projection: (2010) 40,047,000; (2020) 48,319,000.
Doubling time: 28 years.
Ethnic composition (2004): Kikuyu *c.* 21%; Luhya *c.* 14%; Luo *c.* 13%; Kalenjin *c.* 11%; Kamba *c.* 11%; Gusii *c.* 6%; Meru *c.* 5%; other *c.* 19%.
Religious affiliation (2006)[6]: Protestant/independent Christian *c.* 66%; Roman Catholic *c.* 23%; Muslim *c.* 8%; nonreligious *c.* 2%; traditional beliefs *c.* 1%.
Major cities (2006): Nairobi 2,864,700; Mombasa 823,500; Nakuru 266,500; Eldoret 227,800; Kisumu 220,000; Ruiru 120,900; Thika 102,300.

Vital statistics

Birth rate per 1,000 population (2005): 40.1 (world avg. 20.3).
Death rate per 1,000 population (2005): 14.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 25.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 4.96.
Life expectancy at birth (2006): male 54.3 years; female 59.1 years.
Adult population (ages 15–49) *living with HIV* (2007): 7.1–8.5% (world avg. 0.8%).

National economy

Budget (2004–05). Revenue: K Sh 304,705,000,000 (tax revenue 79.7%, of which income and profit taxes 32.6%, value-added tax 24.9%, excise tax 14.5%; nontax revenue 15.4%; grants 4.9%). Expenditures: K Sh 303,705,000,000 (recurrent expenditure 85.0%, of which wages and salaries 34.3%, interest payments 10.0%; development expenditure 15.0%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 4,950,000, cow's milk 3,500,000, corn (maize) 3,240,000, cassava 850,000, sweet potatoes 800,000, potatoes 800,000, pineapples 605,000, plantains 605,000, bananas 580,000, cabbages and other brassicas 550,000, dry beans 535,000, cattle meat 390,000, tomatoes 330,000, tea 315,000, wheat 265,000, pigeon peas 105,000, coffee 37,500, largest supplier of cut flowers to EU (25% of total market); livestock (number of live animals) 12,500,000 cattle, 9,300,000 sheep; roundwood (2006) 22,541,000 cu m, of which fuelwood 92%; fisheries production (2006) 159,696 (from aquaculture, negligible). Mining and quarrying (2004): soda ash 355,380; fluorite 108,000; salt 22,000. Manufacturing (value added in U.S.$'000,000; 2002): food and food products 400; textiles and wearing apparel 245; chemicals and chemical products 142; beverages and tobacco products 132; fabricated metal products 102. Energy production (consumption): electricity (kW-hr; 2005) 6,003,000,000 (5,994,000,000); coal (metric tons; 2005) none (108,000); crude petroleum (barrels; 2005) none (13,003,000); petroleum products (metric tons; 2005) 1,586,000 (3,013,000); natural gas, none (none).
Household income and expenditure. Average household size (2004) 4.5; average annual income per household: n.a.; sources of income: n.a.; expenditure (2005): food and beverages *c.* 44%, transportation *c.* 9%, housing and energy *c.* 8%, cafés and hotels *c.* 5%, clothing and footwear *c.* 3%, unspecified *c.* 22%.
Population economically active (2001): total 12,952,000; activity rate of total population 42.1% (participation rates [1998–99]: ages 15–64, 73.6%; female [1997] 46.1%; unemployed 14.6%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.7	107.8	118.4	132.2	145.8	166.9	183.1

Gross national income (GNI; 2007): U.S.$25,559,000,000 (U.S.$680 per capita); purchasing power parity GNI (U.S.$1,540 per capita).

Structure of gross domestic product and labour force

	2006 in value K Sh '000,000	% of total value	labour force	% of labour force
Agriculture	394,483	24.0	334,600[7]	3.9[7]
Mining	8,075	0.5	6,000[7]	0.1[7]
Manufacturing	166,957	10.2	253,800[7]	2.9[7]
Construction	71,216	4.3	79,900[7]	0.9[7]
Public utilities	27,839	1.7	19,500[7]	0.2[7]
Transp. and commun.	159,481	9.7	132,900[7]	1.5[7]
Trade	210,899	12.9	185,900[7]	2.2[7]
Finance	142,744	8.7	90,400[7]	1.0[7]
Pub. admin., defense	224,197	13.7	755,400[7]	8.7[7]
Services	64,816	3.9		
Other	171,699[8]	10.4[8]	6,814,900[9]	78.6[9]
TOTAL	1,642,405[4]	100.0	8,673,300	100.0

Public debt (external, outstanding; 2006): U.S.$5,807,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 688; remittances (2007) 1,300; foreign direct investment (2004–06 avg.) 39; official development assistance (2007) 943. Disbursements for (U.S.$'000,000): tourism (2006) 178; remittances (2007) 25.
Land use as % of total land area (2000): in temporary crops 7.9%, in permanent crops 1.0%, in pasture 37.4%; overall forest area 30.0%.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
K Sh '000,000	−85,819	−98,703	−148,209	−215,566	−258,969	−330,525
% of total	20.0%	21.2%	25.8%	30.2%	32.6%	37.6%

Imports (2006): K Sh 526,870,000,000 (machinery and transport equipment 30.7%; petroleum and petroleum products 23.9%; chemicals and chemical products 13.7%; food and live animals 5.2%). *Major import sources* (2006): U.A.E. 14.7%; India 7.1%; U.K. 6.5%; South Africa 6.4%; Japan 5.6%.
Exports (2006): K Sh 267,900,000,000 (soda ash 35.6%; food 22.4%, of which tea 17.3%, coffee 3.6%; cut flowers 15.7%; petroleum products 2.7%). *Major export destinations* (2006): Uganda 10.4%; U.K. 10.1%; The Netherlands 7.3%; Tanzania 6.8%; U.S. 6.6%.

Transport and communications

Transport. Railroads (2000): route length 1,678 mi, 2,700 km; passenger-mi 187,600,000, passenger-km 302,000,000; short ton-mi cargo 967,000,000, metric ton-km cargo 1,557,000,000. Roads (2000): total length 39,730 mi, 63,942 km (paved 12%). Vehicles (2000): passenger cars 244,836; trucks and buses 96,726. Air transport (2004)[11]: passenger-mi 3,283,000,000, passenger-km 5,283,000,000; short ton-mi cargo 122,700,000, metric ton-km cargo 193,430,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	758	25	PCs	2004	330	9.5
Telephones				Dailies	2005	310[12]	8.8[12]
Cellular	2007	11,440[13]	301[13]	Internet users	2007	3,000	79
Landline	2007	265	7.0	Broadband	2006	18[13]	0.5[13]

Education and health

Educational attainment (1998–99). Percentage of population age 6 and over having: no formal schooling 16.4%; primary education 59.0%; secondary 19.7%; university 1.1%; other/unknown 3.8%. *Literacy* (2002): total population over age 15 literate 84.3%; males literate 90.0%; females literate 78.5%.

Education (2007)

	schools	teachers	students	student/teacher ratio
Primary (age 5–11)	26,104	186,000[14]	8,229,300	44.2
Secondary (age 12–17)	6,485	50,700[14]	1,180,300	23.3
Higher[15]	23[16]	...	118,200	..

Health: physicians (2007) 6,271 (1 per 5,886 persons); hospital beds (2004) 65,971 (1 per 485 persons); infant mortality rate (2005) 61.5; undernourished population (2002–04) 9,900,000 (31% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

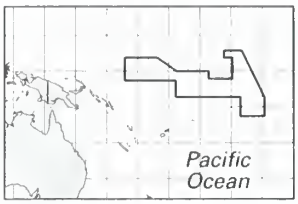
Military

Total active duty personnel (November 2007): 24,120 (army 82.9%, navy 6.7%, air force 10.4%). *Military expenditure as percentage of GDP* (2005): 1.6%; per capita expenditure U.S.$9.

[1]Includes 14 nonelective seats. [2]The post of Prime Minister was created per two bills approved by the National Assembly in March 2008. [3]Official projection based on 1999 census. [4]Detail does not add to total given because of rounding. [5]Includes water area of 4,336 sq mi (11,230 sq km). [6]Based on 2006 survey that excludes the mostly Muslim North Eastern province. [7]Formally employed only. [8]Indirect taxes less subsidies and less imputed bank service charges. [9]Includes informally employed, small-scale farmers and pastoralists, unemployed, self-employed, and unpaid family workers. [10]Imports c.i.f.; exports f.o.b. [11]Kenya Airways only. [12]Circulation of daily newspapers. [13]Subscribers. [14]Approximate figure based on the published student/teacher ratio. [15]Universities only. [16]2003.

Internet resources for further information:
- **Central Bank of Kenya http://www.centralbank.go.ke**
- **Central Bureau of Statistics http://www.cbs.go.ke**

Kiribati



Official name: Republic of Kiribati.
Form of government: unitary republic with a unicameral legislature (House of Assembly [46[1]]).
Head of state and government: President.
Seats of government: islet villages of Bairiki (executive), Ambo (legislative), Betio (judicial) on South Tarawa.
Official language: English.
Official religion: none.
Monetary unit: Australian dollar ($A); valuation (Sept. 8, 2008) 1 U.S.$ = $A 1.24; 1 £ = $A 2.19.

Area and population

Island/Atoll Groups Islands/Atolls[3]	area[2] sq km	population 2005 preliminary census
Gilbert Group (Kiribati)	285.5[4]	83,683
Abaiang	17.5	5,502
Abemama	27.4	3,404
Aranuka	11.6	1,158
Arorae	9.5	1,256
Banaba[5]	6.3	301
Beru	17.7	2,169
Butaritari	13.5	3,280
Kuria	15.5	1,082
Maiana	16.7	1,908
Makin	7.9	2,385
Marakei	14.1	2,741
Nikunau	19.1	1,912
Nonouti	19.9	3,179
Onotoa	15.6	1,644
Tabiteuea, North	25.8	3,600
Tabiteuea, South	11.9	1,298
Tamana	4.7	875
Tarawa, North	15.3	5,678
Tarawa, South	15.8	40,311
Line and Phoenix Group	525.0[4]	8,850
Northern Line	431.7	8,809
Kiritimati (Christmas)	388.4	5,115
Tabuaeran (Fanning)	33.7	2,539
Teraina (Washington)	9.6	1,155
Southern Line[6] and Phoenix Group[7]	93.4	41
Kanton (Canton) in Phoenix Group	9.2	41
TOTAL	810.5	92,533

Demography

Population (2008): 97,200.
Density (2008)[8]: persons per sq mi 347.1, persons per sq km 133.9.
Urban-rural (2005): urban 47.5%; rural 52.5%.
Sex distribution (2007): male 49.64%; female 50.36%.
Age breakdown (2007): under 15, 38.2%; 15–29, 27.7%; 30–44, 18.0%; 45–59, 10.7%; 60–74, 4.5%; 75 and over, 0.9%.
Population projection: (2010) 101,000; (2020) 120,000.
Ethnic composition (2000): Micronesian 98.8%; Polynesian 0.7%; European 0.2%; other 0.3%.
Religious affiliation (2005): Roman Catholic 55.3%; Kiribati Protestant (Congregational) 35.7%; Mormon 3.1%; Bahā'ī 2.2%; other/nonreligious 3.7%.
Major villages (2005): Betio 12,509; Bikenibeu 6,170; Teaoraereke 3,939; Bairiki 2,766.

Vital statistics

Birth rate per 1,000 population (2007): 30.5 (world avg. 20.3).
Death rate per 1,000 population (2007): 8.1 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 22.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 4.12.
Marriage/divorce rates per 1,000 population (1988): 5.2/n.a.
Life expectancy at birth (2007): male 59.4 years; female 65.7 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 88.1; infectious and parasitic diseases 73.5; diseases of the respiratory system 65.1; diseases of the digestive system 57.7; endocrine and metabolic disorders 51.4.

National economy

Budget (2005). Revenue: $A 182,369,000 (nontax revenue 35.7%; tax revenue 16.7%; grants 47.6%). Expenditures: $A 78,560,000 (education 25.3%; health 16.7%; economic services 15.6%; defense 7.3%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 110,000, roots and tubers 8,200 (of which taro 2,200), bananas 5,800; livestock (number of live animals) 12,600 pigs, 480,000 chickens; roundwood, n.a.; fisheries production (2006) 31,010 (from aquaculture, negligible); aquatic plants (all seaweed) production 3,900 (from aquaculture 100%). Mining and quarrying: none. Manufacturing: copra (6,194 metric tons produced in 2005), processed fish, clothing, and handicrafts. Energy production (consumption): electricity (kW-hr; 2005) 10,000,000 (10,000,000); petroleum products (metric tons; 2005) none (8,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2001) 3.2; remittances (2007) 7; foreign direct investment (2004–06 avg.) 11; official development assistance (2006) –45. Disbursements for (U.S.$'000,000): tourism (1999) 2.0; remittances, n.a.
Land use as % of total land area (2003): in temporary crops *c.* 3%, in permanent crops *c.* 48%, in pasture, none; overall forest area (2005) *c.* 30%.
Population economically active (2005): total 36,969; activity rate of total population 38.8% (participation rates: over age 15, 63.4%; female 45.9%; unemployed 6.1%).

Price index (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	106.0	109.2	111.0	110.1	109.7	108.2

Gross national income (GNI; 2007): U.S.$120,000,000 (U.S.$1,170 per capita); purchasing power parity GNI (U.S.$2,140[9] per capita).

Structure of gross domestic product and labour force

	2006 in value $A '000	2006 % of total value	2005 labour force	2005 % of labour force
Agriculture, fishing	5,396	6.3	22,518[10]	60.9[10]
Mining	—	—	—	—
Manufacturing	646	0.8	305	0.8
Construction	3,980	4.6	511	1.4
Public utilities	370	0.4	293	0.8
Transp. and commun.	4,961	5.8	1,473	4.0
Trade, hotels	10,988	12.8	1,873	5.1
Finance, real estate	10,096	11.8	356	1.0
Pub. admin., defense Services	40,815	47.6	6,953 433	18.8 1.2
Other	8,419[11]	9.8[11]	2,254[12]	6.1[12]
TOTAL	85,671	100.0[4]	36,969	100.0[4]

Public debt (external, outstanding; 2002): U.S.$3,900,000.
Household income and expenditure (2006)[13]. Average household size 6.3; average annual household income U.S.$8,745; sources of income: wages 35.4%, rent 13.9%, agriculture 10.9%, remittances 9.6%; expenditure: food 46.8%, housing 16.7%, household operations 15.1%, transportation 6.6%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
$A '000,000	–68.5	–85.3	–75.0	–77.4	–92.1	–75.8
% of total	84.1%	87.1%	89.4%	92.0%	90.7%	81.9%

Imports (2005): $A 96,900,000 (food 29.6%, of which rice 10.7%, meat 6.4%; refined petroleum 16.8%; machinery and apparatus 14.6%, of which starting equipment/generators 6.2%; road vehicles 5.7%). *Major import sources:* Australia 35.5%; Fiji 20.9%; Japan 17.0%; New Zealand 5.4%; other Asia (probably Taiwan) 5.0%.
Exports (2003): $A 4,470,000 (domestic exports 82.2%, of which copra 47.3%, shark fins 10.5%, seaweed 8.6%, aquarium fish 7.2%, trepang 5.7%; reexports 17.8%). *Major export destinations* (2005): free zones *c.* 34%; Australia *c.* 22%; Fiji *c.* 17%; other Asia (probably Taiwan) *c.* 14%; Hong Kong *c.* 8%.

Transport and communications

Transport. Roads (1999): total length 416 mi, 670 km (paved [1996] 5%). Vehicles (2004)[14]: passenger cars 610; trucks and buses 808. Air transport (1998)[15]: passenger-km 11,000,000; metric ton-km cargo 2,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	4	44	PCs	2005	1	11
Telephones				Dailies	2006	0	0
Cellular	2007	0.7[16]	7.5[16]	Internet users	2007	2.0	21
Landline	2006	4	43	Broadband	2007	...	...

Education and health

Educational attainment (2005). Percentage of population age 5 and over having: no schooling/unknown 9.2%; primary education 40.3%; secondary 47.6%; higher 2.9%. *Literacy* (2001): population age 15 and over literate 94.0%; males literate 93.0%; females literate 95.0%.

Education (2005)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–13)	91	654	16,132	24.7
Secondary (age 14–18)	36	665	11,331	17.0
Voc., teacher tr.[17]	2	39	1,501	38.5
Higher[18]	—	—	—	—

Health: physicians (2006) 30 (1 per 3,120 persons); hospital beds (2005) 140 (1 per 681 persons); infant mortality rate per 1,000 live births (2007) 45.9; undernourished population (2002–04) 5,000 (7% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2007): none; defense assistance is provided by Australia and New Zealand.

[1]Includes two nonelective members. [2]Includes uninhabited islands in Southern Line and Phoenix Group. [3]Administratively Kiribati has seven district councils for outlying islands (including four for the Gilberts and one each for Banaba, the Line Islands, and Phoenix Group), a district council for North Tarawa, and an urban council and town council for South Tarawa. [4]Detail does not add to total given because of rounding. [5]Banaba is actually an isolated island to the west of the Gilbert Group. [6]Includes Caroline (Millennium), Malden, Starbuck, Vostok, and Flint islands. Total area is *c.* 64 sq km. [7]Includes Birnie, Enderbury, McKean, Manra, Nikumaroro, Orona, Rawaki (Phoenix), and Kanton (Canton) islands. Total area is *c.* 29 sq km. [8]Based on inhabited island areas (726 sq km [280 sq mi]) only. [9]Estimate is based on regression. [10]Includes 21,582 persons engaged in "village work" (subsistence agriculture or fishing). [11]Indirect taxes less imputed bank service charges and subsidies. [12]Unemployed. [13]Based on the 2006 Household Income and Expenditure Survey, comprising 1,161 households. [14]Registered vehicles in South Tarawa only. [15]Air Kiribati international service ended in 2004. [16]Subscribers. [17]2001. [18]129 students overseas in 2001.

Internet resources for further information:
- **Key Indicators for the Pacific http://www.adb.org/Documents/Books/Key_Indicators/2008**
- **Kiribati Statistics Office http://www.spc.int/prism/Country/KI/Stats**

Korea, North

Official name: Chosŏn Minjujuŭi In'min Konghwaguk (Democratic People's Republic of Korea).
Form of government: unitary single-party republic with one legislative house (Supreme People's Assembly [687]).
Head of state and government: Chairman of the National Defense Commission[1].
Capital: P'yŏngyang.
Official language: Korean.
Official religion: none.
Monetary unit: (North Korean) won (W); valuation (Sept. 8, 2008) 1 U.S.$ = 142.45 won; 1 £ = 248.10 won[2].

Area and population

Provinces	Capitals	area sq mi	area sq km	population 1993 census
Chagang-do	Kanggye	6,551	16,968	1,152,733
Kangwŏn-do	Wŏnsan	4,306[3]	11,152[3]	1,304,481[3]
North Hamgyŏng (Hamgyŏng-pukto)	Ch'ŏngjin	6,784[4]	17,570[4]	2,060,725[4]
North Hwanghae (Hwanghae-pukto)	Sariwŏn	3,576	9,262	1,846,493
North P'yŏngan (P'yŏngan-pukto)	Sinŭiju	4,707	12,191	2,437,442
South Hamgyŏng (Hamgyŏng-namdo)	Hamhŭng	7,324	18,970	2,732,232
South Hwanghae (Hwanghae-namdo)	Haeju	3,090	8,002	2,010,953
South P'yŏngan (P'yŏngan-namdo)	P'yŏngsan	4,761	12,330	3,597,557
Yanggang-do	Hyesan	5,528	14,317	638,474
Special administrative regions				
Kaesŏng (industrial region)[5]	.	3	3	3
Kŭmgang-san (tourist region)	.	3	3	3
Special cities				
Najin Sŏnbong	—	[4]	[4]	[4]
P'yŏngyang	—	772	2,000	2,741,260
TOTAL		47,399	122,762	20,522,350

Demography

Population (2008): 23,867,000.
Density (2008): persons per sq mi 503.5, persons per sq km 194.4.
Urban-rural (2005): urban 61.6%; rural 38.4%.
Sex distribution (2005): male 48.49%; female 51.51%.
Age breakdown (2005): under 15, 24.2%; 15–29, 22.8%; 30–44, 25.5%; 45–59, 15.0%; 60–74, 10.5%; 75 and over, 2.0%.
Population projection: (2010) 24,015,000; (2020) 24,838,000.
Doubling time: 77 years.
Ethnic composition (1999): Korean 99.8%; Chinese 0.2%.
Religious affiliation (2005): mostly nonreligious/atheist; autonomous religious activities almost nonexistent.
Major cities (2005): P'yŏngyang 3,351,000[6]; Namp'o 1,102,000[6]; Hamhŭng 804,000[6]; Ch'ŏngjin (1993) 582,480; Kaesŏng (1993) 334,433; Sinŭiju (1993) 326,011.

Vital statistics

Birth rate per 1,000 population (2005): 16.1 (world avg. 20.3).
Death rate per 1,000 population (2005): 7.1 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 9.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.15.
Marriage/divorce rates per 1,000 population (1987): 9.3/0.2.
Life expectancy at birth (2005): male 68.7 years; female 74.2 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 288; malignant neoplasms (cancers) 90; diseases of the respiratory system 62; injuries, violence, and accidents 62.

National economy

Budget (1999). Revenue: 19,801,000,000 won (turnover tax and profits from state enterprises). Expenditures: 20,018,200,000 won (1994; national economy 67.8%, social and cultural affairs 19.0%, defense 11.6%).
Population economically active (2003)[7]: total 10,708,000; activity rate of total population 48.1% (participation rates: ages 15–64, 67.4%; female 39.4%; unemployed [2000] 24.1%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 2,165,000, potatoes 1,900,000, corn (maize) 1,645,000, cabbages 700,000, apples 635,000, soybeans 350,000, sweet potatoes 290,000, dry beans 265,000, wheat 200,000, pears 125,000, peaches and nectarines 120,000, green onions 98,000, garlic 95,000, pumpkins, squash, and gourds 80,000, barley 80,000, cucumbers and gherkins 66,000, tomatoes 65,000, tobacco leaves 63,000, rye 52,000; livestock (number of live animals) 3,300,000 pigs, 2,760,000 goats, 576,000 cattle, 173,000 sheep; roundwood (2006) 7,334,996 cu m, of which fuelwood 80%; fisheries production (2006) 268,700 (from aquaculture 24%). Mining and quarrying (2007): iron ore (metal content) 1,400,000; magnesite 1,000,000; phosphate rock 300,000; zinc (metal content) 70,000; sulfur 42,000; lead (metal content) 13,000; copper (metal content) 12,000; silver 20; gold 2,000 kg. Manufacturing (2006): cement 6,155,000; steel semimanufactures (1994) 2,700,000; coke 2,000,000; crude steel 1,181,000; pig iron (2005) 900,000; fertilizers 454,000; textile fabrics (2004) 100,000,000 sq m. Energy production (consumption): electricity (kW-hr; 2005) 22,913,000,000 (22,913,000,000); hard coal (metric tons; 2005) 24,060,000 (23,935,000); lignite (metric tons; 2005) 7,746,000 (7,746,000); crude petroleum (barrels; 2005) none (3,500,000); petroleum products (metric tons; 2005) 459,000 (916,000); natural gas, none (none).

Household income and expenditure. Average household size (1999) 4.6.
Public debt (external, outstanding; 2000): U.S.$12,500,000,000.
Gross national income (2007): U.S.$26,700,000,000 (U.S.$1,152 per capita).

Structure of gross domestic product and labour force

	2004 in value '000,000,000 won	% of total value	labour force	% of labour force
Agriculture	5,961	27.2	3,202,000	27.2
Mining	1,820	8.3		
Manufacturing	4,042	18.5		
Construction	1,896	8.7		
Public utilities	995	4.5		
Transp. and commun.	...	...	8,549,000	72.8
Trade	...			
Finance	...	...		
Pub. admin., defense	5,017	22.9		
Services	2,156	9.9		
Other	...	...		
TOTAL	21,887	100.0	11,751,000	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism, n.a.; remittances, n.a.; foreign direct investment (2004–06 avg.) 127; official development assistance (2006) 55. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.
Land use as % of total land area (2003): in temporary crops 22.4%, in permanent crops 1.7%, in pasture 0.4%; overall forest area (2005) 51.4%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−790	−837	−817	−1,380	−1,102	−1,104
% of total	34.9%	35.0%	28.6%	34.0%	36.8%	37.5%

Imports (2005): U.S.$2,718,472,000 ([2002] [8]food, beverages, and other agricultural products 19.3%, mineral fuels and lubricants 15.5%, machinery and apparatus 15.4%, textiles and clothing 10.4%). *Major import sources:* China 39.8%; South Korea 26.3%; Russia 8.2%; Thailand 7.6%; Singapore 2.7%.
Exports (2005): U.S.$1,338,281,000 ([2002] [8]live animals and agricultural products 39.3%, textiles and wearing apparel 16.7%, machinery and apparatus 11.6%, mineral fuels and lubricants 9.5%). *Major export destinations:* China 37.3%; South Korea 25.4%; Japan 9.8%; Thailand 9.3%; Russia 0.6%.

Transport and communications

Transport. Railroads (2007): length 5,242 km. Roads (2007): total length 15,920 mi, 25,621 km (paved [2004] 12%). Vehicles (1990): passenger cars 248,000. Air transport (2004): passenger-km (2002) 35,000,000; metric ton-km cargo 2,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,563	160	PCs	2005	.	.
Telephones				Dailies	2005	. .	
Cellular	2005[9]	...	...	Internet users	2006	.	
Landline	2004	980	44	Broadband	2006	.	

Education and health

Educational attainment (1987–88). Percentage of population age 16 and over having attended or graduated from postsecondary-level school: 13.7%.
Literacy (1997): 95%.

Education (2000)

	schools	teachers	students	student/teacher ratio
Primary (age 6–9)	4,886	...	1,609,865	...
Secondary (age 10–15)	4,772	..	2,181,524	.
Voc., teacher tr.	..	..		...
Higher	300	...		.

Health: physicians (2003) 74,597 (1 per 299 persons); hospital beds (2002) 292,340 (1 per 76 persons); infant mortality rate per 1,000 live births (2005) 24.0; undernourished population (2002–04) 7,600,000 (33% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

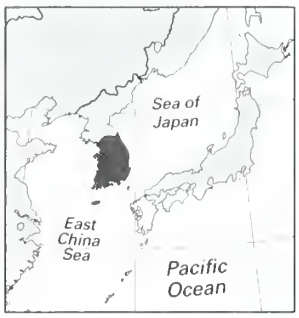
Military

Total active duty personnel (November 2007): 1,106,000 (army 85.9%, navy 4.2%, air force 9.9%). *Military expenditure as percentage of GNP* (2004): 8.1%; per capita expenditure U.S.$80.

[1]Position in effect from Sept. 5, 1998, is the declared "highest office of state." It is defined as an enhanced military post with revised constitutional powers. [2]The approximate value of the won on the black market at midyear 2008 was about 1 U.S.$ = 3,010 won; 1 £ = 6,000 won. [3]Kangwŏn-do includes Kaesŏng and Kŭmgang-san special administrative regions. [4]North Hamgyŏng includes Najin Sŏnbong. [5]Opened in 2003. [6]Urban agglomeration. [7]Estimates of the ILO Employment Trends Unit. [8]Data for commodities (imports U.S.$1,525,400,000; exports U.S.$735,000,000) exclude trade with South Korea. [9]The ban on cellular phones, which began in 2004, was lifted in 2008, and service was scheduled to begin in December 2008; in 2005 an estimated 20,000 North Koreans had access to black market Chinese cellular phones.

Internet resource for further information:
- **Ministry of Unification**
  http://www.unikorea.go.kr/index.jsp

Korea, South



Official name: Taehan Min'guk (Republic of Korea).
Form of government: unitary multiparty republic with one legislative house (National Assembly [299]).
Head of state and government: President, assisted by Prime Minister.
Capital: Seoul.
Official language: Korean.
Official religion: none.
Monetary unit: (South Korean) won (W); valuation (Sept. 8, 2008) 1 U.S.$ = W 1,118; 1 £ = W 1,975.

Area and population

Provinces	area sq km	population 2008 estimate[1]	Metropolitan cities	area sq km	population 2008 estimate[1]
Cheju	1,849	563,388	Inch'ŏn	1,002	2,710,040
Kangwŏn	16,613	1,515,800	Kwangju	501	1,423,460
Kyŏnggi	10,132	11,340,241	Pusan	765	3,615,101
North Chŏlla	8,055	1,878,428	Sŏul (Seoul; special city)	605	10,421,782
North Ch'ungch'ŏng	7,432	1,527,339	Taegu	884	2,512,670
North Kyŏngsang	19,026	2,715,085	Taejŏn	540	1,487,836
South Chŏlla	12,095	1,944,962	Ulsan	1,057	1,112,799
South Ch'ungch'ŏng	8,600	2,026,084	TOTAL	99,678	50,034,357
South Kyŏngsang	10,522	3,239,342			

Demography

Population (2008): 50,187,000.
Density (2008): persons per sq mi 1,304.2, persons per sq km 503.5.
Urban-rural (2005): urban 81.5%; rural 18.5%.
Sex distribution (2005): male 49.97%; female 50.03%.
Age breakdown (2005): under 15, 18.6%; 15–29, 22.5%; 30–44, 26.0%; 45–59, 19.2%; 60–74, 10.7%; 75–84, 2.5%; 85 and over, 0.5%.
Population projection: (2010) 50,572,000; (2020) 51,327,000.
Ethnic composition (2000): Korean 97.7%; Japanese 2.0%; U.S. white 0.1%; Han Chinese 0.1%; other 0.1%.
Religious affiliation (2005): Christian *c.* 43%, of which Protestant *c.* 17%, independent Christian *c.* 16%, Roman Catholic *c.* 9%; traditional beliefs *c.* 15%; Buddhist *c.* 14%; New Religionist *c.* 14%; Confucianist *c.* 10%; other *c.* 4%.
Major cities (2008[1]): Seoul 10,421,782; Pusan 3,615,101; Inch'ŏn 2,710,540; Taegu 2,512,670; Taejŏn 1,487,836.

Vital statistics

Birth rate per 1,000 population (2007): 10.1 (world avg. 20.3).
Death rate per 1,000 population (2007): 5.0 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 1.26.
Marriage/divorce rates per 1,000 population (2007): 7.0/2.5.
Life expectancy at birth (2005): male 75.1 years; female 81.9 years.
Major causes of death per 100,000 population (2004): malignant neoplasms (cancers) 133.8; diseases of the circulatory system 120.4; accidents, poisoning, and violence 63.0; diseases of the respiratory system 29.4.

National economy

Budget (2005). Revenue: W 191,447,000,000,000 (current revenue 99.3%, of which tax revenue 79.6%, nontax revenue 19.7%; capital revenue 0.7%). Expenditures: W 184,922,000,000,000 (current expenditure 86.7%; capital expenditure 13.3%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 5,959,500, cabbages 3,000,000, tangerines, mandarins, satsumas 615,000, green onions 535,000, pears 425,000, chilies and peppers 345,000, persimmons 345,000, garlic 325,000, strawberries 200,000; livestock (number of live animals) 9,850,000 pigs, 2,580,000 cattle, 121,000,000 chickens; roundwood (2006) 4,912,872 cu m, of which fuelwood 50%; fisheries production (2006) 2,263,497 (from aquaculture 23%); aquatic plants production (2006) 779,349 (from aquaculture 98%). Mining and quarrying (2006): feldspar 427,378, iron ore (metal content) 155,000. Manufacturing (value added in U.S.$'000,000; 2005): electrical machinery and apparatus 79,423, of which televisions, radios, telecommunications equipment, and electronic parts 57,865; transportation equipment 42,071, of which automobiles 18,026, automobile parts 12,962, ship and boat construction 9,191; chemicals and chemical products 25,157; nonelectrical machinery 23,009; iron and steel 19,714; fabricated metal products 15,427; food and food products 14,570; textiles and wearing apparel 14,396; refined petroleum products 10,726. Energy production (consumption): electricity (kW-hr; 2007) 403,129,000,000 ([2005] 389,390,000,000); hard coal (metric tons; 2007) 2,915,000 ([2005] 79,410,000); lignite (metric tons; 2005) none (2,862,000); crude petroleum (barrels; 2005) 396,000 (842,000,000); petroleum products (metric tons; 2005) 93,880,000 (59,802,000); natural gas (cu m; 2006) 453,000,000 (32,281,000,000).
Household income and expenditure (2007). Average household size (2005) 2.9; annual income per household (2007) W 38,697,600 (U.S.$41,640); sources of income: wages 63.2%, self-employment 20.5%, transfers 7.9%, other 8.4%; expenditure: food and beverages 25.1%, transportation and communications 17.4%, education 11.6%.
Land use as % of total land area (2003): in temporary crops 16.7%, in permanent crops 2.0%, in pasture 0.6%; overall forest area (2005) 63.5%.
Gross national income (GNI; 2007): U.S.$955,802,000,000 (U.S.$19,690 per capita); purchasing power parity GNI (U.S.$24,750 per capita).

Structure of gross domestic product and labour force

	2006 in value W '000,000,000	2006 % of total value	2005 labour force	2005 % of labour force
Agriculture	24,473	2.9	1,815,000	7.6
Mining	2,668	0.3	17,000	0.1
Manufacturing	209,835	24.7	4,234,000	17.8
Construction	68,434	8.1	1,814,000	7.6
Public utilities	17,559	2.1	71,000	0.3
Transp. and commun.	54,194	6.4	1,429,000	6.0
Trade	70,946	8.4	5,806,000	24.5
Finance	160,125	18.9	2,783,000	11.7
Pub. admin., defense	49,018	5.8	791,000	3.3
Services	96,549	11.4	4,095,000	17.2
Other	94,075[2]	11.1[2]	887,000[3]	3.7[3]
TOTAL	847,876	100.0[4]	23,743,000[4]	100.0[4]

Public debt (2005): *c.* U.S.$240,000,000,000.
Population economically active (2005): total 23,743,000; activity rate 49.3% (participation rates: ages 15–64, 66.4%; female 41.5%; unemployed [July 2007] 3.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.1	106.9	110.7	114.7	117.8	120.4	123.5
Monthly earnings index	105.8	118.5	128.7	140.9	152.3	160.9	171.5

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 5,322; remittances (2007) 1,128; foreign direct investment (FDI; 2004–06 avg.) 6,993. Disbursements for (U.S.$'000,000): tourism (2006) 18,241; remittances (2007) 4,070; FDI (2004–06 avg.) 5,362.

Foreign trade[5]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+10,345	+14,990	+29,382	+23,181	+16,078	+14,906
% of total	3.3%	4.0%	6.1%	4.2%	2.5%	2.0%

Imports (2006): U.S.$309,379,000,000 (mineral fuels 28.0%, of which crude petroleum 18.1%; machinery and apparatus 27.1%, of which heavy machinery 8.6%, electronic microcircuits 7.0%; chemicals and chemical products 8.9%). *Major import sources:* Japan 16.8%; China 15.7%; U.S. 10.9%; Saudi Arabia 6.6%; U.A.E. 4.2%.
Exports (2006): U.S.$325,457,000,000 (road vehicles 13.0%, telecommunications equipment 10.4%, electronic microcircuits 7.8%, organic chemicals/plastics 7.5%, heavy machinery 7.3%, ships/tankers 6.6%). *Major export destinations:* China 21.3%; U.S. 13.3%; Japan 8.2%; Hong Kong 5.8%; Germany 3.1%.

Transport and communications

Transport. Railroads (2005): length (2001) 6,819 km; passenger-km 31,004,200,000; metric ton-km cargo 9,336,000,000. Roads (2005): total length 102,293 km (paved 77%). Vehicles (2005): passenger cars 11,122,199; trucks and buses 4,274,513. Air transport (2006): passenger-km 74,184,000,000; metric ton-km cargo 9,486,060,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	22,915	477	PCs	2005	25,685	532
Telephones				Dailies	2000	18,500[6]	393[6]
Cellular	2007	43,498[7]	902[7]	Internet users	2007	35,590	738
Landline	2007	23,905	496	Broadband	2007	14,198[7]	293[7]

Education and health

Educational attainment (2002). Percentage of population ages 25–64 having: no formal schooling through lower secondary 29%; upper secondary/higher vocational 45%; university 26%. *Literacy* (2001): total population age 15 and over literate 97.9%; males 99.2%; females 96.6%.

Education (2006)

	schools[8]	teachers	students	student/teacher ratio
Primary (age 6–13)	13,739	163,645	3,925,043	24.0
Secondary (age 14–19)	4,739	188,102	3,356,819	17.8
Voc., teacher tr.	169	37,607	520,230	13.8
Higher	162[9]	63,716	2,706,430	42.5

Health (2005): physicians 85,369 (1 per 564 persons); hospital beds (2004) 353,289 (1 per 136 persons); infant mortality rate (2007) 3.5; undernourished population (2002–04) less than 2.5% of total population.

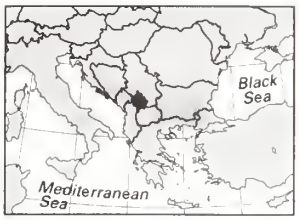
Military

Total active duty personnel (November 2007): 687,000 (army 81.5%, navy 9.2%, air force 9.3%); U.S. military forces (March 2008) 26,339. *Military expenditure as percentage of GDP* (2005): 2.6%; per capita expenditure U.S.$430.

[1]January 1; unofficial source, registered population. [2]Taxes less subsidies on products. [3]Unemployed. [4]Detail does not add to total given because of rounding. [5]Imports c.i.f.; exports f.o.b. [6]Circulation of daily newspapers. [7]Subscribers. [8]2001. [9]Excludes graduate schools.

Internet resource for further information:
- **National Statistical Office http://www.nso.go.kr**

Kosovo



Official name:[1] Republika e Kosovës (Albanian); Republika Kosovo (Serbian) (Republic of Kosovo)[1].
Form of government/Political status: multiparty transitional republic[2] with one legislative body (Assembly of the Republic [120[3]]).
International authority: UN Interim Administrator[4].
Chief of state: President.
Head of government: Prime Minister.
Capital: Priština (Prishtinë).
Official languages: Albanian; Serbian.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.[5]

Area and population

Regions[6]	area sq km	population 1991 census	Regions[6]	area sq km	population 1991 census
Ferizaj	1,022	187,896	Pejë	1,367	237,323
Gjakovë	1,237	223,974	Prishtinë	2,165	487,477
Gjilan	1,333	213,117	Prizren	1,730	330,505
Mitrovicë	2,053	275,904	TOTAL	10,908[7]	1,956,196

Demography

Population (2008): 2,143,000.
Density (2008): persons per sq mi 508.8, persons per sq km 196.5.
Urban-rural (2006): urban 37%; rural 63%.
Sex distribution (2006): male 50.9%; female 49.1%.
Age breakdown (2003): under 15, 32.2%; 15–59, 58.7%; 60 and over, 9.1%.
Population projection: (2010) 2,202,000; (2020) 2,523,000.
Doubling time: 55 years.
Ethnic composition (2008): Albanian 92.0%; Serb 5.3%; other 2.7%.
Religious affiliation (2006): Muslim (including nominal population) *c.* 91%; Orthodox *c.* 5.5%; Roman Catholic *c.* 3%; Protestant *c.* 0.5%.
Major cities (2004)[8]: Priština 165,844; Prizren 107,614; Ferizaj 71,758; Mitrovicë 68,929; Gjakovë 68,645; Pejë 68,551.

Vital statistics

Birth rate per 1,000 population (2007): 15.6 (world avg. 20.3); within marriage 55.0%; outside of marriage 41.5%; unknown 3.5%.
Death rate per 1,000 population (2007): 3.1 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 12.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2003): 3.0.
Marriage/divorce rates per 1,000 population (2007): 7.9/0.7.
Life expectancy at birth (2004)[9]: male 69.8 years; female 71.4 years.
Major causes of death per 100,000 population: n.a.

National economy

Budget (2007–08). Revenue: €2,148,400,000 (tax revenue 79.7%, of which border taxes [including customs duties and VAT] 59.8%, domestic taxes [mostly income and corporate taxes] 19.9%; nontax revenue 20.3%). Expenditures: €1,523,000,000 (current expenditure 81.1%, of which wages and salaries 32.8%, transfers 27.8%; capital expenditure 18.9%).
Public debt (external, outstanding): n.a.
Production (metric tons except as noted). Agriculture, forestry, fishing (2006): wheat 239,464, hay 184,677, corn (maize) 138,248, potatoes 71,245, peppers 62,925, cabbage 25,012, tomatoes 15,195, plums 11,467, onions 11,376, beans 10,627, apples 9,372, grapes 7,463; livestock (number of live animals) 381,995 cattle, 100,814 sheep, 2,337,086 chickens; roundwood 328,154 cu m, of which fuelwood 95%; fisheries production, n.a. Mining and quarrying (2008): [10]. Manufacturing (2006): cement, bricks, and tiles for reconstruction of housing; food; beverages. Energy production (consumption): electricity (kW-hr; 2007–08) 4,192,650,000 (2,710,462,000); hard coal, none (none); lignite (metric tons; 2007–08) 6,787,305 (n.a.); crude petroleum, none (none); petroleum products, none (n.a.); natural gas, none (none).
Gross national income (at current market prices; 2005): U.S.$3,364,000,000 (U.S.$1,640 per capita).

Origin of gross domestic product (current prices)

	2004		2006[11]	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture	178.4	7.2	81,100	11.9
Mining			5,700	0.8
Manufacturing	313.1	12.7	27,700	4.1
Public utilities			13,600	2.0
Construction	248.6	10.1	30,700	4.5
Trade, hotels	279.6	11.3	72,800	10.7
Transp. and commun.	98.7	4.0	14,000	2.1
Finance, real estate	493.3	19.9	13,300	2.0
Pub. admin., defense				
local	123.1	5.0	24,600	3.6
international (UN)	298.1	12.1	...	...
Services	43.0	1.7	91,300	13.4
Other	396.8[12]	16.0[12]	305,200[13]	44.9[13]
TOTAL	2,472.5[7]	100.0	680,000	100.0

Population economically active (2007): total *c.* 633,000[11]; activity rate of total population *c.* 30% (participation rates: ages 15–64 *c.* 47%[11]; female *c.* 28%[11]; unemployed [June 2008] 15.7%).

Price index (December 2002 = 100)

	2002	2003	2004	2005	2006	2007
Consumer price index[14]	100.0	100.5	96.7	97.4	98.5	109.1

Household income and expenditure. Average household size (2003) *c.* 6.5; average annual income per household, n.a.; sources of income (2005): wages and salaries 58%, remittances 13%, self-employment 9%, pensions 8%, other 12%; expenditure (2002)[15]: food 42.5%, energy 9.5%, clothing and footwear 8.3%, transportation 8.1%, household furnishings 6.0%, tobacco products 5.0%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 32; remittances (2006) 586; foreign direct investment (2004–06 avg.) 505[16]. *Disbursements* for (U.S.$'000,000): tourism (2006) 78; remittances (2006) 126.
Land use as % of total land area (2005): in temporary crops 12.9%, in permanent crops 0.5%, in pasture 11.2%; overall forest area 41.7%.

Foreign trade[17]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	–827.2	–937.6	–1,006.8	–1,101.2	–1,195.1	–1,410.5
% of total	93.7%	92.9%	89.9%	90.7%	83.7%	81.0%

Imports (2007): €1,575,600,000 (food and live animals 24.4%, mineral fuels 20.2%, machinery and apparatus 12.5%, iron and steel [all forms] 9.2%, chemical products 7.5%, transport equipment 5.2%). *Major import sources:* Macedonia 15.0%; Serbia 14.1%; Germany 9.1%; China 6.6%; Turkey 6.4%.
Exports (2007): €165,100,000 (iron and steel [all forms] 44.9%[18], mineral fuels 16.5%, machinery and apparatus 12.9%, food and live animals 10.7%). *Major export destinations:* Albania 11.5%; Serbia 10.2%; Germany 9.4%; Macedonia 9.3%; Switzerland 7.5%.

Transport and communications

Transport. Railroads (2007): route length 267 mi, 430 km. Roads (2007): total length 1,196 mi, 1,924 km (paved 87%). Vehicles (2007): n.a. Air transport (2007–08)[19]: passenger arrivals 542,781; passenger departures 1,061,353.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2005	...	...	PCs	2005	...	..
Telephones				Dailies	2005	...	..
Cellular	2006	540[20]	259[20]	Internet users	2006	50	24
Landline	2006	135	65	Broadband	2005	4.7[20]	2.3[20]

Education and health

Educational attainment (2003). Percentage of population ages 25–49 having: no formal schooling *c.* 3.5%; incomplete/complete primary *c.* 46.0%; incomplete/complete secondary *c.* 45.0%; higher *c.* 5.5%. *Literacy* (2004): total population age 15 and over literate 94.1%; males literate 97.3%; females literate 91.3%.

Education (2006–07)

	schools	teachers	students	student/ teacher ratio
Primary/lower secondary (age 6–15)	970	16,433	322,281	19.6
Upper secondary (age 15–19)	117	1,739	36,901	21.2
Voc., teacher tr		3,118	52,073	16.7
Higher	...	1,059	27,274	25.8

Health (2006): physicians 1,534 (1 per 1,368 persons); hospital beds (2005) 5,308 (1 per 387 persons); infant mortality rate per 1,000 live births (2007) 11.1; undernourished population, n.a.

Military

Total active duty personnel (February 2008): NATO-led Kosovo Force 15,900 troops[21].

[1]Alternate short-form names in Albanian include Kosova and Kosovë. [2]Independence was declared Feb. 17, 2008, and the new constitution became effective on June 15, 2008. [3]20 seats are reserved for minority communities. [4]Assisted by the EU special envoy from Feb. 2008. A 2,000-member EU mission to Kosovo (headed by the special envoy) is expected to eventually replace the UN as international administrative authority. [5]The Serb-populated area of Kosovo uses the Serbian dinar. [6]Statistical/planning regions; actual local government is based on 30 municipalities. [7]Detail does not add to total given because of rounding. [8]January 1; unofficial estimate. [9]Albanian population only. [10]Formerly important minerals include lead, zinc, ferronickel, and magnesite; ferronickel mining resumed in late 2007. [11]Ages 15–64 only. [12]Taxes on products. [13]Unemployed. [14]As of the end of December. [15]Weights of consumer price index components. [16]Transfers of all donors to Kosovo central government including UN interim administration budget. [17]Imports c.i.f.; exports f.o.b. [18]Nearly all scrap metal. [19]Priština airport. [20]Subscribers. [21]Troops providing security and stability from 34 nations including 10 non-NATO nations.

Internet resources for further information:
- **Statistical Office of Kosovo**
  http://www.ks-gov.net/esk/
- **Central Bank of the Republic of Kosovo**
  http://www.bqk-kos.org/

Kuwait

Official name: Dawlat al-Kuwayt (State of Kuwait).
Form of government: constitutional monarchy with one legislative body (National Assembly [50[1]]).
Head of state and government: Emir assisted by the Prime Minister.
Capital: Kuwait (city).
Official language: Arabic.
Official religion: Islam.
Monetary unit: Kuwaiti dinar (KD); valuation (Sept. 8, 2008) 1 KD = U.S.$3.73 = £2.11.

Area and population

Governorates	Capitals	area sq mi	area sq km	population 2005 estimate
Al-Aḥmadī	Al-Aḥmadī	1,977	5,120	494,715
Al-'Āṣimah	Kuwait (city) (Al-Kuwayt)	77	200	458,548
Al-Farwāniyah	Al-Farwāniyah	73	190	764,601
Ḥawallī	Ḥawallī	31	80	607,027
Al-Jahrā'	Al-Jahrā'	4,336	11,230	349,611
Mubārak al-Kabīr		39	100	185,922
Islands[2]	—	347	900	6,464[3]
TOTAL		6,880	17,818[4]	2,866,888[5]

Demography

Population (2008): 3,530,000.
Density (2008): persons per sq mi 513.1, persons per sq km 198.1.
Urban-rural (2005): urban 98.3%; rural 1.7%.
Sex distribution (2005): male 62.69%; female 37.31%.
Age breakdown (2005): under 15, 24.3%; 15–29, 26.8%; 30–44, 34.2%; 45–59, 11.6%; 60–74, 2.7%; 75–84, 0.3%; 85 and over, 0.1%.
Population projection: (2010) 3,852,000; (2020) 4,659,000.
Doubling time: 46 years.
Ethnic composition (2005): Arab 57%, of which Kuwaiti 35%; Bedouin 4%; non-Arab (primarily Asian) 39%.
Religious affiliation (2005)[6]: Muslim 74%, of which Sunnī 59%, Shī'ī 15%; Christian 13%, of which Roman Catholic 9%; Hindu 10%; Buddhist 3%.
Major cities (2005)[7]: Qalīb ash-Shuyūkh 179,264; As-Sālimīyah 145,328; Ḥawallī 106,992; Kuwait (city) 32,403 (urban agglomeration 1,810,000).

Vital statistics

Birth rate per 1,000 population (2006): 17.1 (world avg. 20.3).
Death rate per 1,000 population (2006): 1.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 15.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2004): 3.00.
Marriage/divorce rates per 1,000 population (2004): 5.2/2.1.
Life expectancy at birth (2004): male 75.9 years; female 77.9 years.
Major causes of death per 100,000 population (2004): circulatory diseases 111.4; accidents and violence 47.3; neoplasms (cancers) 37.8; endocrine, nutritional, and metabolic diseases 15.8; respiratory diseases 12.7.

National economy

Budget (2004–05). Revenue: KD 12,346,700,000 (oil revenue 93.8%). Expenditures: KD 6,315,200,000 (defense 20.9%, transfers 18.5%, public utilities 14.0%, education 8.0%, health 5.6%).
Public debt (external, outstanding; 2004): U.S.$668,000,000.
Gross national income (2007): U.S.$122,780,000,000 (U.S.$43,063 per capita).

Structure of gross domestic product and labour force

	2005 in value KD '000,000	2005 % of total value	2004 labour force	2004 % of labour force
Agriculture	78.4	0.4	30,000	1.8
Mining (petroleum sector)	12,852.6[8]	54.5[8]	7,000	0.4
Manufacturing	1,756.7[8]	7.4[8]	92,100	5.6
Construction	455.2	1.9	115,200	7.1
Public utilities	316.6	1.3	10,200	0.6
Transp. and commun.	1,294.0	5.5	48,200	3.0
Trade, hotels	1,155.3	4.9	237,400	14.5
Finance and business services	3,255.7	13.8	69,400	4.3
Pub. admin., defense; Services	3,085.9	13.1	841,500	51.5
Other	−662.4[9]	−2.8[9]	183,300[10]	11.2[10]
TOTAL	23,588.0	100.0	1,634,315[4]	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): tomatoes 55,500, cucumbers and gherkins 35,000, potatoes 23,500, eggplants 15,500, dates 14,500, chilies and peppers 8,000, cauliflower 7,300; livestock (number of live animals) 900,000 sheep, 160,000 goats, 28,000 cattle, 5,000 camels; roundwood, n.a.; fisheries production (2006) 6,203 (from aquaculture 9%). Mining and quarrying (2006): sulfur 650,000; lime 50,000. Manufacturing (value added in U.S.$'000,000; 2004): refined petroleum products 2,701; chemicals and chemical products 533; fabricated metal products 319; food products 288; cement, bricks, and tiles 204; textiles and wearing apparel 173. Energy production (consumption): electricity (kW-hr; 2005) 43,734,000,000 (43,734,000,000); coal, none (none); crude petroleum (barrels; 2007) 899,400,000 ([2005] 330,000,000); petroleum products (metric tons; 2005) 36,930,000 (14,060,000); natural gas (cu m; 2005) 13,298,000,000 (13,298,000,000).

Population economically active (2004): total 1,634,315, of which Kuwaiti 18.3%, non-Kuwaiti 81.7%; activity rate of total population 59.4% (participation rates: ages 15 and over, 76.4%; female [2002] 25.7%; unemployed 2.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.3	102.2	103.2	104.5	108.8	112.1	118.3
Earnings index	...	...	...	...	...	...	...

Household income and expenditure. Average Kuwaiti household size (2004) 4.8; average non-Kuwaiti household size (2004) 5.0; sources of income (1986): wages and salaries 53.8%, self-employment 20.8%, other 25.4%; expenditure (2000)[11]: housing and energy 26.8%, food 18.3%, transportation and communications 16.1%, household furnishings 14.7%, clothing and footwear 8.9%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 205; remittances, n.a.; foreign direct investment (FDI; 2004–06 avg.) 128. Disbursements for (U.S.$'000,000): tourism (2006) 5,253; remittances (2007) 3,021; FDI (2004–06 avg.) 5,187.
Land use as % of total land area (2003): in temporary crops 0.8%, in permanent crops 0.2%, in pasture 7.6%; overall forest area (2005) 0.3%.

Foreign trade[12]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
KD '000,000	+3,996	+2,203	+3,551	+5,430	+9,558	+12,851
% of total	50.2%	30.9%	37.6%	44.1%	53.5%	60.7%

Imports (2006): KD 4,629,000,000 (industrial requirements 31.0%, capital goods [both machinery and transport equipment] 24.2%, durable consumer goods 11.1%, food and beverages 10.0%). *Major import sources:* U.S. 11.9%; Germany 11.2%; Saudi Arabia 8.0%; Japan 7.6%; China 7.0%.
Exports (2006): KD 17,015,000,000 (crude petroleum 67.3%, refined petroleum 23.2%, liquefied petroleum gas 4.5%, ethylene products 2.0%). *Major export destinations* (2005): Japan *c.* 20%; South Korea *c.* 15%; U.S. *c.* 12%; Taiwan *c.* 11%; Singapore *c.* 10%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 3,554 mi, 5,720 km (paved [1999] 81%). Vehicles (2004): passenger cars 848,590; trucks and buses 172,219. Air transport (2006): passenger-km 6,948,000,000; metric ton-km cargo 260,052,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,040	392	PCs	2005	600	223
Telephones				Dailies	2005	482[13]	168[13]
Cellular	2007	2,774[14]	973[14]	Internet users	2007	900	316
Landline	2005	510	190	Broadband	2005	25[14]	8.1[14]

Education and health

Educational attainment (2005). Percentage of population age 10 and over having: no formal schooling: illiterate 6.2%, literate 37.9%; primary education 12.7%; lower secondary 20.8%; upper secondary 11.7%; some higher 4.1%; completed undergraduate 6.6%. *Literacy* (2005): total population age 15 and over literate 84.4%; males literate 85.7%; females literate 82.8%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–9)[15]	627	32,782	343,729	10.5
Secondary (age 10–17)	212	11,486	90,676	7.9
Voc., teacher tr.	46	1,359	4,324	3.2
Higher[16]	..	1,643	42,076	25.6

Health (2006): physicians 4,775 (1 per 646 persons); hospital beds 5,760 (1 per 535 persons); infant mortality rate per 1,000 live births 8.6; undernourished population (2002–04) 120,000 (5% of total population based on the consumption of a minimum daily requirement of 1,980 calories).

Military

Total active duty personnel (November 2007): 15,500[17] (army 71.0%, navy 12.9%, air force 16.1%); U.S. troops for Iraqi support (April 2007) 10,000–20,000. *Military expenditure as percentage of GDP* (2005): 4.8%; per capita expenditure U.S.$1,370.

[1]Excludes 15 cabinet ministers not elected to National Assembly serving ex officio. [2]Includes Būbiyān Island 333 sq mi (863 sq km) and Warbah Island 14 sq mi (37 sq km). [3]Figure represents remainder (probably the combined populations of Būbiyān and Warbah islands). [4]Detail does not add to total given because of rounding. [5]Of which 973,286 Kuwaitis and 1,893,602 non-Kuwaitis; more narrowly defined April 2005 census total excluding Kuwaitis residing abroad equals 2,213,403 (Kuwaitis equal 880,774, non-Kuwaitis 1,332,629). [6]Includes noncitizens. [7]Preliminary, unadjusted census figures. [8]Manufacturing includes petroleum products; Mining (petroleum sector) excludes petroleum products. [9]Import duties less imputed bank service charges. [10]Unclassified. [11]Weights of consumer price index components. [12]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [13]Circulation of daily newspapers. [14]Subscribers. [15]Includes intermediate. [16]2004. [17]Up to 3,700 personnel (all army) are foreign.

Internet resources for further information:
- **Central Bank of Kuwait http://www.cbk.gov.kw**
- **Central Statistical Office http://mopweb4.mop.gov.kw**

Kyrgyzstan

Official name: Kyrgyz Respublikasy (Kyrgyz); Respublika Kirgizstan (Russian) (Kyrgyz Republic).
Form of government: unitary multiparty republic with one legislative house (Supreme Council [90]).
Head of state and government: President assisted by Prime Minister.
Capital: Bishkek.
Official languages: Kyrgyz; Russian.
Official religion: none.
Monetary unit: Kyrgyzstan som (KGS); valuation (Sept. 8, 2008) 1 U.S.$ = KGS 34.88; 1 £ = KGS 61.62.

Area and population

Provinces	Capitals	area[1] sq mi	area[1] sq km	population January 1 2008 estimate
Batken	Batken	6,564	17,000	423,700
Chüy	Bishkek[2]	7,799	20,200	761,400
Jalal-Abad	Jalal-Abad	13,012	33,700	980,700
Naryn	Naryn	17,452	45,200	269,400
Osh	Osh	11,274[3]	29,200[3]	1,070,700
Talas	Talas	4,401	11,400	218,000
Ysyk-Köl	Ysyk-Köl	16,641	43,100	434,900
City Districts				
Bishkek[2]	—	39	100	839,600
Osh		[3]	[3]	253,600
TOTAL		77,182	199,900	5,252,000

Demography

Population (2008): 5,281,000.
Density (2008): persons per sq mi 68.4, persons per sq km 26.4.
Urban-rural (2007): urban 34.7%; rural 65.3%.
Sex distribution (2005): male 49.03%; female 50.97%.
Age breakdown (2005): under 15, 31.5%; 15–29, 29.8%; 30–44, 18.8%; 45–59, 12.0%; 60–74, 5.7%; 75–84, 1.9%; 85 and over, 0.3%.
Population projection: (2010) 5,400,000; (2020) 5,917,000.
Doubling time: 43 years.
Ethnic composition (2005): Kyrgyz 67.4%; Uzbek 14.2%; Russian 10.3%; Hui 1.1%; Uighur 1.0%; other 6.0%.
Religious affiliation (2000): Muslim (mostly Sunnī) 60.8%; Christian 10.4%, of which Russian Orthodox 7.7%; nonreligious 21.6%; atheist 6.3%; other 0.9%.
Major cities (1999): Bishkek 750,327; Osh 208,520; Jalal-Abad 70,401; Karakol 64,322; Tokmok 59,409.

Vital statistics

Birth rate per 1,000 population (2007): 23.5 (world avg. 20.3); (1994) within marriage 83.2%; outside of marriage 16.8%.
Death rate per 1,000 population (2007): 7.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 16.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.69.
Marriage/divorce rates per 1,000 population (2004): 6.8/1.0.
Life expectancy at birth (2007): male 63.6 years; female 72.2 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 417; communicable, maternal, perinatal, and nutritional conditions 155; malignant neoplasms 76; diseases of the respiratory system 63.

National economy

Budget (2005). Revenue: KGS 20,368,100,000 (tax revenue 80.3%, of which VAT 34.8%, income tax 8.6%, profit tax 6.3%; nontax revenue 17.7%; grants 2.0%). Expenditures: KGS 20,143,700,000 (administration, defense, and police 30.5%; education 24.4%; social security 14.2%; health 11.3%).
Public debt (external, outstanding; 2006): U.S.$1,860,000,000.
Population economically active (2005): total 2,260,600; activity rate of total population 43.4% (participation rates: ages 15–64 [2002] 68.7%; female 42.9%; unemployed 8.1%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	106.9	109.2	112.4	117.1	122.2	129.0	142.1
Average earnings index	118.2	136.9	161.6	186.6	217.4	258.8	337.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 1,373,800, wheat 708,900, corn (maize) 460,700, tomatoes 183,000, apples 125,700, tobacco leaves 14,400; livestock (number of live animals) 3,198,000 sheep, 1,117,000 cattle, 350,600 horses; roundwood (2006) 27,300 cu m, of which fuelwood 66%; fisheries production (2006) 27 (from aquaculture 74%). Mining and quarrying (2005): mercury 200; antimony 10; gold 16,700 kg. Manufacturing (value of production in KGS '000,000; 2004): base metals and fabricated metal products 24,330; food and tobacco products 6,811; cement, bricks, and ceramics 3,574; electrical machinery and optical equipment 1,402. Energy production (consumption): electricity (kW-hr; 2005) 16,415,000,000 (13,731,000,000); hard coal (metric tons; 2005) 49,000 (887,000); lignite (metric tons; 2005) 286,000 (452,000); crude petroleum (barrels; 2005) 542,000 (579,000); petroleum products (metric tons; 2005) 76,000 (561,000); natural gas (cu m; 2005) 25,000,000 (736,000,000).
Household income and expenditure. Average household size (2004) 4.3; income per capita of household (2003) KGS 9,270 (U.S.$212); sources of income (1999): wages and salaries 29.2%, self-employment 25.6%, other 45.2%; expenditure (1990): food and clothing 48.0%, health care 13.1%, housing 5.9%.
Gross national income (GNI; 2007): U.S.$3,099,000,000 (U.S.$590 per capita); purchasing power parity GNI (U.S.$1,950 per capita).

Structure of gross domestic product and labour force

	2006 in value KGS '000,000	2006 % of total value	2005 labour force	2005 % of labour force
Agriculture	32,761.5	28.9	799,600	35.4
Mining	606.7	0.5	12,400	0.5
Manufacturing	12,787.9	11.3	163,900	7.3
Public utilities	3,465.2	3.1	35,200	1.6
Construction	3,105.8	2.7	153,700	6.8
Transp. and commun.	7,036.8	6.2	115,700	5.1
Trade	23,565.1	20.8	350,500	15.5
Finance	3,671.4	3.2	42,300	1.9
Public admin., defense	4,651.2	4.1	102,300	4.5
Services	7,661.7	6.8	301,500	13.3
Other	13,862.3[4]	12.2[4]	183,500[5]	8.1[5]
TOTAL	113,175.6	100.0[6]	2,260,600	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 167; remittances (2007) 715; foreign direct investment (FDI; 2004–06 avg.) 113; official development assistance (2006) 311. Disbursements for (U.S.$'000,000): tourism (2006) 92; remittances (2007) 218; FDI (2004–06 avg.) 15.
Land use as % of total land area (2003): in temporary crops 7.0%, in permanent crops 0.3%, in pasture 49.2%; overall forest area (2005) 4.5%.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−101.2	−135.3	−222.2	−435.8	−924.1	−1,370.0
% of total	9.4%	10.4%	13.4%	24.5%	36.8%	38.3%

Imports (2006): U.S.$1,718,200,000 (refined petroleum 25.1%, machinery and apparatus 16.2%, chemicals and chemical products 10.4%, road vehicles 6.0%). *Major import sources* (2006): Russia 38.0%; China 14.4%; Kazakhstan 11.6%; United States 5.7%; Uzbekistan 3.8%.
Exports (2006): U.S.$794,100,000 (gold 25.9%, refined petroleum 15.2%, machinery and apparatus 6.4%, fruit and vegetables 4.6%, cotton 4.6%, glass 3.5%, electricity 3.2%). *Major export destinations* (2006): Switzerland 26.2%; Kazakhstan 20.5%; Russia 19.4%; Afghanistan 9.4%; China 4.8%.

Transport and communications

Transport. Railroads (2004): length (2000) 424 km; passenger-km 45,300,000; metric ton-km cargo 714,900,000. Roads (2000): total length 18,500 km (paved 91%). Vehicles (2005): passenger cars 201,430; trucks and buses, n.a. Air transport (2007): passenger-km 456,000,000; metric ton-km cargo 1,200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	955	185	PCs	2005	100	19
Telephones				Dailies	2005	68[8]	13[8]
Cellular	2007	2,152[9]	405[9]	Internet users	2007	750	141
Landline	2007	482	91	Broadband	2007	2.9[9]	0.5[9]

Education and health

Educational attainment (1999). Percentage of population age 15 and over having: primary education 6.3%; some secondary 18.3%; completed secondary 50.0%; some postsecondary 14.9%; higher 10.5%. *Literacy* (2003): total population age 15 and over literate 98.7%; males 99.3%; females 98.1%.

Education (1999–2000)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13)	1,985	19,200	466,200	24.3
Secondary (age 14–17)	1,474[10]	36,600	633,900	17.3
Voc., teacher tr.	53[10]	5,100	52,200	10.2
Higher	23	8,400	159,200	19.0

Health: physicians (2004) 13,996 (1 per 363 persons); hospital beds (2004) 26,040 (1 per 195 persons); infant mortality rate per 1,000 live births (2007) 30.6; undernourished population (2002–04) 200,000 (4% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

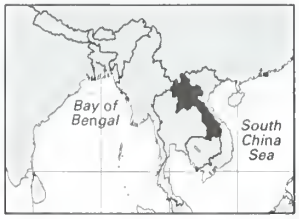
Military

Total active duty personnel (November 2007): 10,900 (army 78.0%, air force 22.0%)[11]. *Military expenditure as percentage of GDP* (2005): 3.1%; per capita expenditure U.S.$15.

[1]Rounded areas in sq km are converted to precise areas in sq mi. [2]Bishkek is the capital of Chüy province, even though it is not part of the province. [3]Osh province includes Osh city district. [4]Taxes on products. [5]Unemployed. [6]Detail does not add to total given because of rounding. [7]Imports c.i.f.; exports f.o.b. [8]Circulation of daily newspapers. [9]Subscribers. [10]1993–94. [11]Russian troops (November 2007) 500.

Internet resource for further information:
- **National Bank of Kyrgyz Republic**
  http://www.nbkr.kg

Laos



Official name: Sathalanalat Paxathipatai Paxaxôn Lao (Lao People's Democratic Republic).
Form of government: unitary single-party people's republic with one legislative house (National Assembly [115]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Vientiane (Viangchan).
Official language: Lao.
Official religion: none.
Monetary unit: kip (KN); valuation (Sept. 8, 2008) 1 U.S.$ = KN 8,689; 1 £ = KN 15,350.

Area and population

Provinces	area sq km	population 2005 census[1]	Provinces	area sq km	population 2005 census[1]
Attapu	10,320	112,120	Viangchan	15,927	388,895
Bokèo	6,196	145,263	Xaignabouli	16,389	338,669
Bolikhamxai	14,863	225,301	Xékong	7,665	84,995
Champasak	15,415	607,370	Xiangkhoang	15,880	229,596
Houaphan	16,500	280,938	**Municipality**		
Khammouan	16,315	337,390	Vientiane (Viangchan)	3,920	698,318
Louangnamtha	9,325	145,310	**Special zone**		
Louangphrabang	16,875	407,039	Xaisomboun	7,105	39,423
Oudomxay	15,370	265,179	TOTAL	236,800	5,621,982
Phôngsali	16,270	165,947			
Salavan	10,691	324,327			
Savannakhét	21,774	825,902			

Demography

Population (2008): 5,963,000.
Density (2008): persons per sq mi 65.2, persons per sq km 25.2.
Urban-rural (2005): urban 27.1%; rural 72.9%.
Sex distribution (2005): male 49.81%; female 50.19%.
Age breakdown (2005): under 15, 39.4%; 15–29, 28.3%; 30–44, 17.0%; 45–59, 9.5%; 60–74, 4.4%; 75 and over, 1.4%.
Population projection: (2010) 6,173,000; (2020) 7,223,000.
Ethnic composition (2005): Lao 54.6%; Khmou 10.9%[2]; Hmong 8.0%; Tai 3.8%[3]; Phu Tai (Phouthay) 3.3%[3]; Lue 2.2%[3]; Katang 2.1%[2]; Makong 2.1%[2]; other 13.0%.
Religious affiliation (2005): traditional beliefs *c.* 49%; Buddhist *c.* 43%; Christian *c.* 2%; nonreligious/other *c.* 6%.
Major cities (2003): Vientiane 194,200 (urban agglomeration [2005] 702,000); Savannakhét 58,200; Pakxé 50,100; Xam Nua 40,700; Muang Khammouan 27,300; Louangphrabang 26,400.

Vital statistics

Birth rate per 1,000 population (2005): 34.7 (world avg. 20.3).
Death rate per 1,000 population (2005): 9.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 24.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 4.77.
Life expectancy at birth (2005): male 53.1 years; female 57.2 years.
Major causes of death per 100,000 population (2002): communicable diseases 673; cardiovascular diseases 210; injuries, accidents, and violence 112; malignant neoplasms (cancers) 73; chronic respiratory diseases 58.

National economy

Budget (2005–06). Revenue: KN 4,962,000,000,000 (tax revenue 73.4%, of which sales tax 17.9%, excise tax 16.1%; grants 14.0%; nontax revenue 12.6%). Expenditures: KN 6,205,000,000,000 (current expenditure 50.3%; capital expenditure 49.7%, of which foreign-financed 26.9%).
Public debt (external, outstanding; 2006): U.S.$2,191,000,000.
Population economically active (2005): total 2,778,000; activity rate of total population 66.6% (participation rates: ages 15–64, 81.3%; female 50.2%; unofficially unemployed [2004] 7.0%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	107.8	119.3	137.7	152.2	163.1	174.2	182.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 2,870,000, corn (maize) 450,000, sugarcane 220,000, cassava 175,000, sweet potatoes 120,000, bananas 48,000, pineapples 37,000, potatoes 36,000, peanuts (groundnuts) 30,000, oranges 28,000, coffee 28,000, tobacco 25,000, natural rubber (hectares; 2006) 11,778; livestock (number of live animals) 2,260,000 pigs, 1,337,000 cattle, 1,120,000 water buffalo, 21,900,000 chickens; roundwood (2006) 6,137,016 cu m, of which fuelwood 97%; fisheries production (2006) 107,800 (from aquaculture 72%). Mining and quarrying (2007): gypsum 775,000; limestone 750,000; copper (metal content) 99,040; tin (metal content) 450; gold 4,161 kg. Manufacturing (value added in U.S.$'000,000; 1999): food and food products 22; wearing apparel 14; tobacco products 8; glass and glass products 5. Energy production (consumption): electricity (kW-hr; 2005) 3,513,000,000 (733,000,000); hard coal (metric tons; 2005) 300,000 (300,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (126,000); natural gas, none (none).
Gross national income (GNI; 2007): U.S.$3,413,000,000 (U.S.$580 per capita); purchasing power parity GNI (U.S.$1,950 per capita).

Structure of gross domestic product and labour force

	2004 in value KN '000,000	2004 % of total value	2003 labour force[4]	2003 % of labour force[4]
Agriculture	12,378,000	46.6	2,150,000	78.5
Manufacturing	5,373,000	20.2		
Mining	397,000	1.5		
Construction	700,000	2.6		
Public utilities	720,000	2.7		
Transp. and commun.	1,703,000	6.4		
Trade, hotels	3,292,000	12.4	589,000	21.5
Finance, real estate	84,000	0.3		
Pub. admin., defense	957,000	3.6		
Services	748,000	2.8		
Other	237,000[5]	0.9[5]		
TOTAL	26,590,000[6]	100.0	2,739,000	100.0

Household income and expenditure. Average household size (2005) 5.9; average annual income per household (1995) KN 3,710 (U.S.$371); sources of income: n.a.; expenditure (1990)[7]: food and nonalcoholic beverages 46.2%, transportation and communications 17.9%, household furnishings 8.1%, alcoholic beverages and tobacco 6.4%, clothing and footwear 4.9%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 173; remittances (2007) 1.0; foreign direct investment (2004–06 avg.) 77; official development assistance (2006) 364. Disbursements for (U.S.$'000,000): tourism (2001) 0.1; remittances (2007) 1.0.
Land use as % of total land area (2003): in temporary crops 4.2%, in permanent crops 0.4%, in pasture 3.8%; overall forest area (2005) 69.9%.

Foreign trade[8]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	–289	–263	–244	–478	–559	–388
% of total	28.5%	26.2%	21.3%	32.3%	30.2%	16.3%

Imports (2006): U.S.$1,384,000,000 (capital goods 52.6%, petroleum 14.5%, materials for garment assembly 7.1%). *Major import sources* (2005): Thailand *c.* 67%; China *c.* 9%; Vietnam *c.* 6%; Singapore *c.* 3%; Japan *c.* 2%.
Exports (2006): U.S.$996,000,000 (copper 41.1%, timber 15.9%, garments 13.3%, gold 11.7%, electricity 10.8%, coffee 3.0%). *Major export destinations* (2005): Thailand *c.* 29%; Vietnam *c.* 12%; France *c.* 6%; Germany *c.* 5%; China *c.* 3%; unspecified *c.* 27%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 14,900 mi, 24,000 km (paved 16%). Vehicles (1996): passenger cars 16,320; trucks and buses 4,200. Air transport (2004): passenger-km 216,300,000; metric ton-km cargo 2,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	321	59	PCs	2005	100	17
Telephones				Dailies	2005	33[9]	5.8[9]
Cellular	2007	1,478[10]	252[10]	Internet users	2007	100	17
Landline	2007	95	16	Broadband	2007	3.6[10]	0.6[10]

Education and health

Educational attainment (2005). Percentage of population age 25 and over having: no formal schooling 32.8%; incomplete primary education 21.6%; complete primary 18.2%; lower secondary 11.4%; upper secondary 6.2%; higher 9.8%. *Literacy* (2005): total population age 15 and over literate 72.7%; males literate 82.5%; females literate 63.2%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	8,428	28,000	905,000	32.3
Secondary (age 11–16)	648	14,000	413,000	29.5
Voc., teacher tr.	61	1,800	43,000	23.9
Higher	28	2,000	39,000	19.5

Health (2005): physicians 5,000 (1 per 1,129 persons); hospital beds 6,736 (1 per 838 persons); infant mortality rate per 1,000 live births 85.2; undernourished population (2002–04) 1,100,000 (19% of total population based on the consumption of a minimum daily requirement of 1,730 calories).

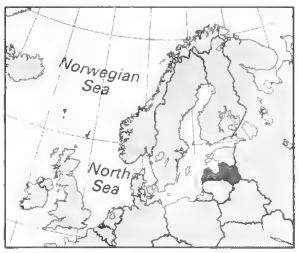
Military

Total active duty personnel (November 2007): 29,100 (army 88.0%, air force 12.0%). *Military expenditure as percentage of GDP* (2004): 0.4%; per capita expenditure U.S.$2.

[1]Final figures. [2]A principal ethnic group of the Lao-Theung (Mon-Khmer) peoples. [3]A principal ethnic group of the Lao-Tai (tribal Tai) peoples. [4]Excludes registered unemployed. [5]Import duties. [6]Detail does not add to total given because of rounding. [7]Weights of consumer price index components. [8]Imports c.i.f.; exports f.o.b. [9]Circulation of daily newspapers. [10]Subscribers.

Internet resources for further information:
- **National Statistics Centre http://www.nsc.gov.la**
- **Bank of the Lao PDR http://www.bol.gov.la**

Latvia



Official name: Latvijas Republika (Republic of Latvia).
Form of government: unitary multiparty republic with a single legislative body (Parliament, or Saeima [100]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Riga.
Official language: Latvian.
Official religion: none.
Monetary unit: lats (Ls; plural lati); valuation (Sept. 8, 2008) 1 Ls = U.S.$2.02 = £1.15.

Area and population

Cities	area sq km	population 2008[1] estimate	Districts	area sq km	population 2008[1] estimate
Daugavpils	73	105,958	Jelgava	1,605	37,278
Jelgava	60	65,635	Krāslava	2,288	32,699
Jūrmala	100	55,580	Kuldīga	2,500	35,541
Liepāja	60	85,050	Liepāja	3,593	43,306
Rēzekne	18	35,883	Limbaži	2,602	37,429
Riga	307	717,371	Ludza	2,412	30,807
Ventspils	55	43,299	Madona	3,349	42,263
			Ogre	1,843	64,811
Districts			Preiļi	2,042	37,743
Aizkraukle	2,567	39,971	Rēzekne	2,809	39,784
Alūksne	2,245	24,159	Rīga (Riga)	3,132	167,774
Balvi	2,381	26,823	Saldus	2,182	36,324
Bauska	1,881	50,811	Talsi	2,748	46,280
Cēsis	2,973	56,265	Tukums	2,457	54,753
Daugavpils	2,526	38,574	Valka	2,441	31,314
Dobele	1,632	37,713	Valmiera	2,373	57,938
Gulbene	1,876	25,864	Ventspils	2,462	13,818
Jēkabpils	2,997	52,076	TOTAL	64,589	2,270,894

Demography

Population (2008): 2,266,000.
Density (2008): persons per sq mi 90.9, persons per sq km 35.1.
Urban-rural (2008[1]): urban 67.9%; rural 32.1%.
Sex distribution (2008[1]): male 46.10%; female 53.90%.
Age breakdown (2008[1]): under 15, 13.7%; 15–29, 22.8%; 30–44, 20.9%; 45–59, 20.5%; 60–74, 15.0%; 75–89, 6.8%; 90 and over, 0.3%.
Population projection: (2010) 2,245,000; (2020) 2,136,000.
Ethnic composition (2008[1]): Latvian 59.2%; Russian 28.0%; Belarusian 3.7%; Ukrainian 2.5%; Polish 2.4%; Lithuanian 1.3%; other 2.9%.
Religious affiliation (2005): Orthodox *c.* 29%, of which Russian *c.* 16%; Roman Catholic *c.* 19%; Lutheran *c.* 14%; nonreligious *c.* 26%; atheist/other *c.* 12%.
Major cities (2008[1]): Riga 717,371; Daugavpils 105,958; Liepāja 85,050; Jelgava 65,635; Jūrmala 55,580.

Vital statistics

Birth rate per 1,000 population (2007): 10.2 (world avg. 20.3); within marriage 57.0%; outside of marriage 43.0%.
Death rate per 1,000 population (2007): 14.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): –3.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.41.
Marriage/divorce rates per 1,000 population (2007): 6.8/3.3.
Life expectancy at birth (2007): male 65.8 years; female 76.5 years.
Major causes of death per 100,000 population (2007): diseases of the circulatory system 792.8; malignant neoplasms (cancers) 263.5; accidents, poisoning, and violence 125.0; diseases of the digestive system 56.8.

National economy

Budget (2006). Revenue: Ls 4,213,000,000 (tax revenue 56.4%, of which VAT 22.3%, income taxes 16.0%, corporate taxes 6.0%; nontax revenue 43.6%, of which social security contributions 23.2%). Expenditures: Ls 4,237,100,000 (social security and welfare 25.9%, education 14.6%, health 10.3%, police 6.7%, defense 4.2%).
Public debt (external, outstanding; March 2007): U.S.$1,224,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 807,300, potatoes 642,000, barley 363,200, rapeseed 211,700, rye 181,100, oats 130,200, cabbages 56,600; livestock (number of live animals) 416,800 pigs, 377,100 cattle; roundwood (2006) 12,844,600 cu m, of which fuelwood 8%; fisheries production 153,800 (from aquaculture, negligible). Mining and quarrying (2006): peat 1,000,000; limestone 468,100. Manufacturing (value added in Ls '000,000; 2006): food products 262.4; wood products (excluding furniture) 231.6; printing and publishing 85.3; cement, bricks, and ceramics 80.4. Energy production (consumption): electricity (kW-hr; 2007–08) 4,803,000,000 (7,658,000,000); coal (metric tons; 2007–08) none (174,000); crude petroleum[2], none (none); petroleum products[2] (metric tons; 2007–08) none (1,531,000); natural gas (cu m; 2007–08) none (1,652,000,000).
Household income and expenditure (2005). Average household size (2008) 2.5; annual disposable income per household Ls 3,855 (U.S.$6,823); sources of income: wages and salaries 71.7%, pensions and transfers 22.0%, self-employment 5.4%; expenditure (2007): food, beverages, and tobacco 28.5%, transportation and communications 20.7%, housing and energy 10.2%, clothing and footwear 8.6%.
Land use as % of total land area (2003): in temporary crops 15.4%, in permanent crops 0.2%, in pasture 9.8%; overall forest area (2005) 47.4%.
Gross national income (GNI; 2007): U.S.$22,595,000,000 (U.S.$9,930 per capita); purchasing power parity GNI (U.S.$16,890 per capita).

Structure of gross domestic product and labour force

	2007 in value Ls '000,000	% of total value	labour force	% of labour force
Agriculture, forestry	402.6	2.9	110,300	9.3
Mining and quarrying	45.1	0.3	6,600	0.6
Manufacturing	1,331.0	9.5	164,800	13.8
Public utilities	297.8	2.1	20,700	1.7
Construction	1,035.5	7.4	125,600	10.5
Transp. and commun.	1,330.7	9.5	104,000	8.7
Trade, restaurants	2,725.7	19.5	215,800	18.1
Finance, real estate	2,882.8	20.7	96,000	8.1
Pub. admin., defense	828.7	5.9	83,900	7.0
Services	1,408.5	10.1	188,900	15.9
Other	1,669.2[3]	12.0[3]	74,500[4]	6.3[4]
TOTAL	13,957.4[5]	100.0[5]	1,191,100	100.0

Population economically active (2007): total 1,191,100; activity rate of total population 52.2% (participation rates: ages 15–64, 72.9%; female 48.5%; unemployed [April 2007–March 2008] 5.9%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.5	104.5	107.5	114.2	121.9	129.9	143.0
Annual earnings index	104.9	111.5	121.6	133.0	154.8	187.9	245.1

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 480; remittances (2007) 552; foreign direct investment (FDI; 2004–06 avg.) 998. Disbursements for (U.S.$'000,000): tourism (2006) 704; remittances (2007) 45; FDI (2004–06 avg.) 125.

Foreign trade[6]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
Ls '000,000	–1,088	–1,338	–1,655	–1,979	–3,100	–3,742
% of total	27.9%	28.8%	27.8%	25.5%	32.0%	31.7%

Imports (2007): Ls 7,782,131,000 (machinery and apparatus 20.8%, transport equipment 14.6%, mineral fuels 11.5%, iron and steel [all forms] 9.6%, food products 9.1%, chemical products 8.1%). *Major import sources:* Germany 15.2%; Lithuania 13.9%; Russia 8.4%; Estonia 8.1%; Poland 7.0%.
Exports (2007): Ls 3,299,000,000 (wood products 22.5%, iron and steel [all forms] 14.6%, food products 14.1%, machinery and apparatus 11.0%, chemical products 7.4%, textiles and wearing apparel 6.7%). *Major export destinations:* Lithuania 15.8%; Estonia 14.4%; Russia 9.6%; Germany 8.7%; Sweden 7.7%.

Transport and communications

Transport. Railroads (2007): length (2008[1]) 2,265 km; passenger-km 983,000,000; metric ton-km cargo 18,313,000,000. Roads (2008[1]): total length 51,600 km (paved 39%). Vehicles (2008[1]): passenger cars 904,900; trucks and buses 140,200. Air transport (2007): passenger-km 2,766,000,000; metric ton-km cargo 13,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,992	857	PCs	2005	566	245
Telephones				Dailies	2006	224[7]	98[7]
Cellular	2007	2,217[8]	974[8]	Internet users	2007	1,177	517
Landline	2007	644	283	Broadband	2007	146[8]	64[8]

Education and health

Educational attainment (2007). Percentage of population age 15–74 having: none/unknown through complete primary education 26.1%; secondary 25.5%; vocational 30.1%; higher 18.3%. *Literacy* (2003): total population age 15 and over literate 99.8%; males literate 99.8%; females literate 99.8%.

Education (2007–08)

	schools	teachers	students	student/teacher ratio
Primary	992	33,605	117,129	13.7[9]
Secondary			147,164	11.2[9]
Vocational	92	3,666[9]	38,876	10.7[9]
Higher	60	5,453	127,760	23.4

Health (2008[1]): physicians 8,014 (1 per 283 persons); hospital beds 17,497 (1 per 130 persons); infant mortality rate per 1,000 live births (2007) 8.7; undernourished population (2002–04) 70,000 (3% of total population based on the consumption of a minimum daily requirement of 1,960 calories).

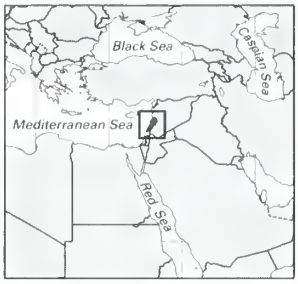
Military

Total active duty personnel (November 2007): 5,696 (army 26.8%, navy 10.6%, air force 8.4%, headquarters/administrative 54.2%). *Military expenditure as percentage of GDP* (2005): 1.7%; per capita expenditure U.S.$119.

[1]January 1. [2]Shipments of Russian crude and refined petroleum through Latvia have declined significantly since 2002. [3]Indirect taxes less subsidies. [4]Includes 72,100 unemployed. [5]Detail does not add to total given because of rounding. [6]Imports c.i.f.; exports f.o.b. [7]Circulation of daily newspapers. [8]Subscribers. [9]2002–03.

Internet resources for further information:
- **Bank of Latvia http://www.bank.lv/eng/main/all**
- **Central Statistical Bureau of Latvia http://www.csb.lv/avidus.cfm?lng=en**

Lebanon



Official name: Al-Jumhūrīyah al-Lubnānīyah (Lebanese Republic).
Form of government: unitary multiparty republic with one legislative house (National Assembly [128][1]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Beirut.
Official language: Arabic[2].
Official religion: none.
Monetary unit: Lebanese pound (LBP); valuation (Sept. 8, 2008) 1 U.S.$ = LBP 1,507[3]; 1 £ = LBP 2,663.

Area and population

Governorates	Capitals	area sq mi	area sq km	population 2004 estimate
Bayrūt	Beirut (Bayrūt)	7	18	389,700
Al-Biqā'	Zahlah	1,653	4,280	471,100
Jabal Lubnān	B'abdā	753	1,950	1,501,300
Al-Janūb	Sidon (Ṣaydā)	364	943	401,100
An-Nabaṭīyah	An-Nabaṭīyah	408	1,058	221,900
Ash-Shamāl	Tripoli (Tarābulus)	765	1,981	768,700
WATER AREA		66	170	—
TOTAL		4,016	10,400	3,753,800

Demography

Population (2008): 4,142,000[4].
Density (2008): persons per sq mi 1,031, persons per sq km 398.3.
Urban-rural (2005): urban 86.6%; rural 13.4%.
Sex distribution (2005): male 48.99%; female 51.01%.
Age breakdown (2005): under 15, 28.6%; 15–29, 26.2%; 30–44, 21.2%; 45–59, 13.7%; 60–74, 7.9%; 75–84, 2.1%; 85 and over, 0.3%.
Population projection: (2010) 4,227,000; (2020) 4,616,000.
Doubling time: 48 years.
Ethnic composition (2000): Arab 84.5%, of which Lebanese 71.2%, Palestinian 12.1%; Armenian 6.8%; Kurd 6.1%; other 2.6%.
Religious affiliation (1995): Muslim 55.3%, of which Shī'ī 34.0%, Sunnī 21.3%; Christian 37.6%, of which Catholic 25.1% (Maronite 19.0%, Greek Catholic or Melchite 4.6%), Orthodox 11.7% (Greek Orthodox 6.0%, Armenian Apostolic 5.2%), Protestant 0.5%; Druze 7.1%.
Major cities (2003): Beirut (urban agglomeration; 2005) 1,777,000; Tripoli 212,900; Sidon 149,000; Tyre (Ṣūr) 117,100; An-Nabaṭīyah 89,400.

Vital statistics

Birth rate per 1,000 population (2007): 19.7 (world avg. 20.3).
Death rate per 1,000 population (2007): 5.1 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 14.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.92.
Marriage/divorce rates per 1,000 population (2007): 8.7/1.5.
Life expectancy at birth (2005): male 70.2 years; female 75.2 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 305; injuries, accidents, and violence 87; malignant neoplasms (cancers) 67; communicable diseases 64; chronic respiratory diseases 33.

National economy

Budget (2005). Revenue: LBP 6,984,200,000,000 (tax revenue 69.7%, of which VAT revenues 24.2%, customs and excise revenues 18.1%; nontax revenue 30.3%). Expenditures: LBP 7,802,200,000,000 (general expenditures 54.7%; interest expenditures 45.3%, of which foreign 25.7%, domestic 19.6%).
Public debt (external, outstanding; July 2008): U.S.$21,495,000,000.
Gross national income (GNI; 2007): U.S.$23,651,000,000 (U.S.$5,770 per capita); purchasing power parity GNI (U.S.$10,050 per capita).

Structure of gross domestic product and labour force

	2002 in value LBP '000,000,000	2002 % of total value	2001 labour force	2001 % of labour force
Agriculture	2,665	9.9	320,000	20.0
Mining	—	—		
Manufacturing	2,607	9.7		
Construction	650	2.4		
Public utilities	1,760	6.6		
Transp. and commun.	827	3.1		
Trade, hotels	8,649	32.2	1,120,000	70.0
Finance	3,675	13.7		
Real estate and business services	1,151	4.3		
Services	2,764	10.3		
Pub. admin., defense	2,090	7.8	160,000	10.0
TOTAL	26,838	100.0	1,600,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 490,000, tomatoes 255,000, oranges 195,000, cucumbers and gherkins 125,000, lemons and limes 110,000, grapes 100,000, apples 98,000, olives 83,000, almonds 27,000, cherries 24,000; livestock (number of live animals) 495,000 goats, 340,000 sheep, 77,000 cattle, 35,000,000 chickens; roundwood (2006) 87,790 cu m, of which fuelwood 92%; fisheries production (2006) 4,614 (from aquaculture 17%). Mining and quarrying (2006): gypsum 30,000; lime 14,000; salt 3,500. Manufacturing (value added in U.S.$'000,000; 1998): food and food products 345; cement, bricks, and ceramics 212; wood and wood products 188, of which furniture (including metal furniture) 135; fabricated metal products 185; textiles, wearing apparel, and footwear 147, of which wearing apparel 91; paints, soaps, and pharmaceuticals 94. Energy production (consumption): electricity (kWhr; 2007) 9,072,000,000 (10,590,000,000); coal (metric tons; 2004) none (200,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (4,797,000); natural gas, none (none).
Population economically active (2004): total 1,170,800; activity rate of total population *c.* 30% (participation rates: ages 15–64 [1997] 49.2%; female 21.2%; unemployed 8.2%).

Price index (2000 = 100)

	1999	2000	2001	2002	2003	2004	2005
Consumer price index	100.1	100.0	99.6	101.4	102.7	101.3	101.6

Household income and expenditure. Average household size (2004) 4.3; sources of income: n.a.; expenditure (2002): food, beverages, and tobacco 28.3%, health and education 17.2%, housing and energy 16.7%, household furnishings 7.4%, transportation and communications 7.0%, clothing 6.5%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 5,015; remittances (2007) 5,769; foreign direct investment (FDI; 2004–06 avg.) 2,513; official development assistance (2006) 707. Disbursements for (U.S.$'000,000): tourism (2006) 3,006; remittances (2007) 2,845; FDI (2004–06 avg.) 135.
Land use as % of total land area (2003): in temporary crops 16.6%, in permanent crops 14.0%, in pasture 1.6%; overall forest area (2005) 13.3%.

Foreign trade[5]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–5,399	–5,647	–7,650	–7,460	–7,117	–8,999
% of total	72.1%	64.9%	68.6%	66.5%	60.9%	61.5%

Imports (2005): U.S.$9,339,900,000 (mineral products 23.8%, electrical equipment 11.4%, food and live animals 10.3%, chemicals and chemical products 8.8%, transportation equipment 8.7%). *Major import sources:* Italy 10.4%; France 8.4%; China 7.9%; Germany 7.0%; U.S. 5.9%.
Exports (2005): U.S.$1,879,800,000 (electrical equipment 16.7%, base metals 14.7%, precious metal jewelry and stones [significantly gold and pearls] 11.9%, food and live animals 10.7%, chemicals and chemical products 8.7%). *Major export destinations:* Syria 10.0%; Iraq 9.5%; U.A.E. 8.2%; Saudi Arabia 7.4%; Switzerland 6.7%.

Transport and communications

Transport. Railroads: [6]. Roads (2004): total length 7,300 km (paved 85%). Vehicles (2001): passenger cars 1,370,897; trucks and buses 102,394. Air transport (2007)[7]: passenger-km 2,225,000,000; metric ton-km cargo 34,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,269	320	PCs	2005	409	102
Telephones				Dailies	2005	634[8]	158[8]
Cellular	2007	1,260[9]	307[9]	Internet users	2006	950	248
Landline	2006	681	178	Broadband	2006	170[9]	44[9]

Education and health

Educational attainment (2004). Percentage of population age 4 and over having: no formal education or unknown 13.7%; incomplete primary education 3.2%; primary 54.2%; secondary/vocational 15.5%; upper vocational 1.7%; higher 11.7%. *Literacy* (2005): total population age 15 and over literate 88.3%; males literate 93.6%; females literate 83.4%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 5–9) Secondary (age 10–16)	2,812	87,757	917,877	10.5
Voc., teacher tr.	439	16,443	99,731	6.1
Higher	38	13,556	157,148	11.6

Health (2004): physicians 10,304 (1 per 364 persons); hospital beds (2006) 9,786 (1 per 414 persons); infant mortality rate per 1,000 live births (2005) 24.5; undernourished population (2002–04) 120,000 (3% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

Military

Total active duty personnel (November 2007): 56,000 (army 96.3%, navy 2.0%, air force 1.7%). UN peacekeeping troops (June 2007) 13,300; Syrian troops ended 29-year presence in April 2005. *Military expenditure as percentage of GDP* (2005): 4.5%; per capita expenditure U.S.$280.

[1]By law one-half of the membership is Christian and one-half Muslim/Druze. [2]A law determines French usage per article 11 of the constitution. In 2004 *c.* 20% of the population spoke French in their daily lives. [3]Rounded pegged rate. [4]Includes about 415,000 registered Palestinian refugees, of which about 220,000 live in refugee camps. [5]Imports are c.i.f. [6]Only short sections of the 250-mi (401-km) network were usable in 2004. [7]For Middle East Airlines only. [8]Circulation of daily newspapers. [9]Subscribers.

Internet resources for further information:
- **Central Administration for Statistics**
  http://www.cas.gov.lb
- **Central Bank of Lebanon**
  http://www.bdl.gov.lb

Lesotho

Official name: Lesotho (Sotho); Kingdom of Lesotho (English).
Form of government: constitutional monarchy with 2 legislative houses (Senate [33 nonelected seats]; National Assembly [120]).
Chief of state: King.
Head of government: Prime Minister.
Capital: Maseru.
Official languages: Sotho; English.
Official religion: Christianity.
Monetary unit: loti (plural maloti [M]); valuation (Sept. 8, 2008) 1 U.S.$ = M 8.03; 1 £ = M 14.19[1].

Area and population

District Councils[2]	Capitals	area sq mi	area sq km	population 2006 census[3]
Berea	Teyateyaneng	858	2,222	248,225
Butha-Buthe	Butha-Buthe	682	1,767	109,139
Leribe	Hlotse	1,092	2,828	296,673
Mafeteng	Mafeteng	818	2,119	192,795
Maseru	Maseru	1,652[4]	4,279[4]	436,399[4]
Mohale's Hoek	Mohale's Hoek	1,363	3,530	173,706
Mokhotlong	Mokhotlong	1,573	4,075	95,332
Qacha's Nek	Qacha's Nek	907	2,349	71,756
Quthing	Quthing	1,126	2,916	119,811
Thaba-Tseka	Thaba-Tseka	1,649	4,270	128,885
Municipal Council[2]				
Maseru		[4]	[4]	[4]
TOTAL		11,720	30,355	1,872,721

Demography

Population (2008): 2,020,000[5].
Density (2008): persons per sq mi 172.4, persons per sq km 66.5.
Urban-rural (2007): urban 24.8%; rural 75.2%.
Sex distribution (2006)[3]: male 48.69%; female 51.31%.
Age breakdown (2001)[3]: under 15, 35.8%; 15–29, 31.2%; 30–44, 14.7%; 45–59, 10.0%; 60–74, 6.0%; 75 and over, 2.1%; unknown 0.2%.
Population projection[5]: (2010) 2,044,000; (2020) 2,163,000.
Doubling time: over 100 years.
Ethnic composition (2000): Sotho 80.3%; Zulu 14.4%; other 5.3%.
Religious affiliation (2000): Christian 91.0%, of which Roman Catholic 37.5%, unaffiliated Christian 23.9%, Protestant (mostly Reformed and Anglican) 17.7%, independent Christian 11.8%; traditional beliefs 7.7%, other 1.3%.
Major urban centres (2004): Maseru 178,300; Maputsoe 36,200; Mafeteng 36,000; Teyateyaneng 23,700; Hlotse 23,400.

Vital statistics

Birth rate per 1,000 population (2006): 25.1 (world avg. 20.3).
Death rate per 1,000 population (2006): 22.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 2.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 3.28.
Life expectancy at birth (2006): male 40.4 years; female 39.1 years.
Adult population (ages 15–49) *living with HIV* (2007): 23.2%[6] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): HIV/AIDS-related *c.* 1,624; cardiovascular diseases *c.* 205; lower respiratory infections *c.* 89; diarrheal diseases *c.* 84.

National economy

Budget (2006–07). Revenue: M 6,479,200,000 (tax revenue 89.3%, of which customs receipts 60.9%, income and profit tax 15.0%, sales tax 11.0%; non-tax revenue 9.3%; grants 1.4%). Expenditures: M 4,909,100,000 (education and community services 26.8%, health and social security 14.0%, public order 11.9%, defense 5.4%, interest payments 2.0%).
Public debt (external, outstanding; 2006): U.S.$633,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 96,000, corn (maize) 50,800, vegetables 20,000, sorghum 11,200, wheat 10,400, dry beans 5,500; livestock (number of live animals) 1,025,000 sheep, 715,000 goats, 695,000 cattle, 66,000 pigs, 55,000 horses; roundwood 2,060,539 cu m, of which fuelwood 100%; fisheries production (2006) 47 (from aquaculture 4%). Mining and quarrying (2006): diamonds 37,000 carats. Manufacturing (value of manufactured exports; U.S.$'000,000; 2002): apparel or clothing accessories 233.7; footwear 23.9; television receivers 13.8. Energy production (consumption): electricity (kW-hr; 2004) 250,000,000 (244,500,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2003) none (100,000); natural gas, none (none).
Population economically active (2003): total 640,000[7]; activity rate of total population 35.5%[7] (participation rates: ages 15–64, 60.8%[7]; female 45.0%[7]; unemployed [2005] *c.* 50%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	90.4	120.9	129.0	135.5	140.2	148.6	160.6

Household income and expenditure. Average household size (2004) 4.1; average annual income per household: n.a.; sources of income: n.a.; expenditure (2000)[8]: food and nonalcoholic beverages 39.9%, household furnishings 17.0%, clothing and footwear 15.6%, transportation 7.8%, alcohol and tobacco products 6.4%, housing, n.a.

Gross national income (GNI; 2007): U.S.$2,007,000,000 (U.S.$1,000 per capita); purchasing power parity GNI (U.S.$1,890 per capita).

Structure of gross domestic product and labour force

	2005 in value M '000,000	2005 % of total value	1996 labour force	1996 % of labour force
Agriculture	1,439	15.6	105,250	18.4
Mining	209	2.3	102,037[9]	17.8[9]
Manufacturing	1,540	16.7	21,087	3.7
Construction	1,331	14.4	19,202	3.4
Public utilities	402	4.4	2,486	0.4
Transp. and commun.	379	4.1	14,690	2.6
Trade	1,090	11.8	14,891	2.6
Finance, real estate	883	9.6	3,829	0.7
Pub. admin., defense	566	6.1	130,684	22.8
Services	819	8.9		
Other	564[10]	6.1[10]	158,908[11]	27.7[11]
TOTAL	9,223[12]	100.0	573,064[13]	100.0[12, 13]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 28; remittances (2007) 371; foreign direct investment (2004–06 avg.) 56; official development assistance (2006) 72. Disbursements for (U.S.$'000,000): tourism (2006) 19; remittances (2007) 11.
Land use as % of total land area (2003): in temporary crops 10.9%, in permanent crops 0.1%, in pasture 65.9%; overall forest area (2005) 0.3%.

Foreign trade[14]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	–461	–475	–611	–702	–667	–733
% of total	45.0%	39.9%	39.4%	33.5%	33.9%	33.5%

Imports (2006): U.S.$1,278,000,000 (assorted manufactured goods *c.* 40%, food *c.* 24%, chemicals and chemical products *c.* 13%, machinery and transport equipment *c.* 13%). *Major import sources* (2004): other Africa *c.* 73%; Asian countries *c.* 24%.
Exports (2004–05): U.S.$633,000,000 (apparel, accessories, and textiles *c.* 69%, of which woven clothing for males *c.* 42%, knitted or crocheted clothing *c.* 9%, footwear *c.* 7%; beverages *c.* 4%; rawhides and skins *c.* 4%). *Major export destinations* (2006): Western Hemisphere (mostly United States) *c.* 61%; other Africa *c.* 25%; Europe *c.* 13%.

Transport and communications

Transport. Railroads (2001): length 1.6 mi, 2.6 km. Roads (2000): total length 3,691 mi, 5,940 km (paved 18%). Vehicles (1996): passenger cars 12,610; trucks and buses 25,000. Air transport (1999): passenger-km, negligible (less than 500,000); metric ton-km cargo, negligible.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	80	41	PCs	2005	1	0.5
Telephones				Dailies	2005	0	0
Cellular	2007	456[15]	227[15]	Internet users	2007	70	35
Landline	2005	48	24	Broadband	2005	0.05[15]	0.02[15]

Education and health

Educational attainment (2001)[16]. Percentage of population age 25 and over having: no formal education 22%; incomplete primary 40%; complete primary 17%; secondary and higher 21%. *Literacy* (2007): total population age 15 and over literate 86.5%; males literate 77.1%; females literate 95.6%.

Education (2002)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	1,333	8,908	418,668	47.0
Secondary (age 13–17)	224	3,384	81,130	24.0
Vocational	8	172	1,859	10.8
Higher[17]	1	171	1,800	10.5

Health (2003): physicians 140 (1 per 16,298 persons); hospital beds 1,025 (1 per 2,226 persons); infant mortality rate per 1,000 live births (2006) 81.3; undernourished population (2002–04) 250,000 (13% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2007): 2,000 (army 100%). *Military expenditure as percentage of GDP* (2005): 2.3%; per capita expenditure U.S.$17.

[1]The loti is pegged to the South African rand at 1 to 1; the rand is accepted as legal tender within Lesotho. [2]New effective local government system introduced in 2005. [3]De jure figure including absentee miners working in South Africa; preliminary. [4]Maseru District Council includes Maseru Municipal Council. [5]Estimate of the *UN World Population Prospects (2006 Revision)*. [6]Statistically derived midpoint of range. [7]Estimate of the ILO Employment Trends Unit. [8]Weights of consumer price index components. [9]Includes 94,190 mine workers in South Africa; the number of mine workers in South Africa in late 2005 equaled 51,900. [10]Indirect taxes less imputed bank service charges. [11]Includes 101,599 not adequately defined and military personnel and 57,309 unemployed, not previously employed. [12]Detail does not add to total given because of rounding. [13]Includes 132,609 workers outside Lesotho (nearly all in South Africa). [14]Imports c.i.f.; exports f.o.b. [15]Subscribers. [16]Based on 2001 Lesotho Demographic Survey of 31,330 people. [17]2003; National University of Lesotho only.

Internet resources for further information:
- **Central Bank of Lesotho http://www.centralbank.org.ls**
- **Lesotho Bureau of Statistics http://www.bos.gov.ls**

Liberia

Official name: Republic of Liberia.
Form of government: multiparty republic with two legislative bodies (Liberian Senate [30]; House of Representatives [64]).
Head of state and government: President.
Capital: Monrovia.
Official language: English.
Official religion: none.
Monetary unit: Liberian dollar (L$); valuation (Sept. 8, 2008) 1 U.S.$ = L$63.05; 1 £ = L$111.39.

Area and population

Counties	Capitals	area sq mi	area sq km	population 2008 census[1]
Bomi	Tubmanburg	750	1,942	82,036
Bong	Gbarnga	3,386	8,769	328,919
Gbarpolu	Bopulu	3,739	9,685	83,758
Grand Bassa	Buchanan	3,063	7,932	224,839
Grand Cape Mount	Robertsport	1,992	5,160	129,055
Grand Gedeh	Zwedru	4,046	10,480	126,146
Grand Kru	Barclayville	1,503	3,894	57,106
Lofa	Voinjama	3,853	9,978	270,114
Margibi	Kakata	1,010	2,615	199,689
Maryland	Harper	886	2,296	136,404
Montserrado	Bensonville	737	1,908	1,144,806
Nimba	Sanniquellie	4,458	11,546	468,088
River Cess	River Cess City	2,159	5,592	65,862
River Gee	Fish Town	1,973	5,110	67,318
Sinoe	Greenville	3,912	10,133	104,932
TOTAL		37,466[2]	97,036[2]	3,489,072

Demography

Population (2008): 3,543,000.
Density (2008): persons per sq mi 93.9, persons per sq km 36.2.
Urban-rural (2006): urban 59.0%; rural 41.0%.
Sex distribution (2007): male 49.75%; female 50.25%.
Age breakdown (2007): under 15, 43.6%; 15–29, 27.7%; 30–44, 15.2%; 45–59, 8.9%; 60–74, 4.0%; 75 and over, 0.6%.
Population projection: (2010) 3,755,000; (2020) 4,595,000.
Doubling time: 32 years.
Ethnic composition (2000): Kpelle 18.9%; Bassa 13.1%; Grebo 10.3%; Gio (Dan) 7.4%; Kru 6.9%; Mano 6.1%; Loma 5.3%; Kissi 3.8%; Krahn 3.7%; Americo-Liberians 2.4%[3]; other 22.1%.
Religious affiliation (2005): traditional beliefs *c.* 40%; Christian (mostly Protestant/independent Christian) *c.* 40%[4]; Muslim *c.* 20%.
Major urban areas (2008): Monrovia 1,010,970; Ganta 41,106; Buchanan 34,270; Gbarnga 34,046; Kakata 33,945.

Vital statistics

Birth rate per 1,000 population (2007): 43.8 (world avg. 20.3).
Death rate per 1,000 population (2007): 22.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 21.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 5.94.
Life expectancy at birth (2007): male 38.9 years; female 41.9 years.

National economy

Budget (2007). Revenue: L$10,222,400,000 (customs and excise duties 44.3%; direct taxes 32.1%; indirect taxes 12.6%; maritime revenue 7.6%; petroleum sales tax 2.4%; other 1.0%). Expenditures: L$9,498,000,000 (general administration 41.5%; social and community services 19.8%; economic services 6.9%; other 31.8%).
Public debt (external, outstanding; 2006): U.S.$1,115,000,000.
Population economically active (2003): total 1,182,000[5]; activity rate 36.7%[5] (participation rates: ages 15–64, 70.0%[5]; female 39.8%[5]; unemployed [2007] *c.* 80%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	112.1	126.3	136.6	140.2	147.1	154.3	162.3

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 550,000, sugarcane 265,000, oil palm fruit 183,000, rice 154,800, bananas 120,000, natural rubber 100,000, plantains 43,000, taro 25,000, yams 19,000, sweet potatoes 19,000, peanuts (groundnuts) 5,300, coffee 3,600, cacao beans 3,000; livestock (number of live animals) 261,600 goats, 230,340 sheep, 173,000 pigs, 5,920,000 chickens; roundwood[6] (2006) 6,333,198 cu m, of which fuelwood 95%; fisheries production (2006) 10,424 (from aquaculture, none). Mining and quarrying (2007): diamonds[6] 21,699 carats; gold 284 kg. Manufacturing (value of sales in L$'000; 2007): cement 1,308,767; beer 1,023,734; carbonated beverages 429,776; mattresses 200,391; paints and varnishes 41,313; candles 32,163. International maritime licensing (registration fees earned; 2007): more than U.S.$12,000,000. Energy production (consumption): electricity (kW-hr; 2005) 335,000,000 (335,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) negligible (148,000); natural gas, none (none).
Household income and expenditure. Average household size (2004) 5.1; income per household: n.a.; sources of income: n.a.; expenditure (2005)[7]: food 45.2%, housing and energy 12.0%, clothing 7.8%, transportation 6.1%, household furnishings 5.3%, restaurants and hotels 4.6%.
Gross national income (GNI; 2007): U.S.$554,000,000 (U.S.$150 per capita); purchasing power parity GNI (U.S.$290 per capita).

Structure of gross domestic product and labour force

	2006 in value U.S.$'000,000[8]	2006 % of total value[8]	2007 labour force[9]	2007 % of labour force[9]
Agriculture	171.8	36.3		
Rubber	38.6	8.2	33,672	23.8
Timber	81.1	17.1		
Mining	0.8	0.2	3,290	2.3
Manufacturing	60.7	12.8	5,813	4.1
Construction	12.4	2.6	987	0.7
Public utilities	3.3	0.7	...	...
Transp. and commun.	33.8	7.1	2,194	1.6
Trade, hotels	31.9	6.7	36,633	25.9
Finance	11.8	2.5	11,517	8.1
Pub. admin., defense	11.4	2.4	31,900	22.5
Services	16.3	3.4	15,575	11.0
TOTAL	473.9	100.0	141,581[10]	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism, n.a.; remittances (2007) 685; foreign direct disinvestment (2004–06 avg.) –108; official development assistance (2006) 269. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances (2006) 639; foreign direct investment (2004–06 avg.) 362.
Land use as % of total land area (2003): in temporary crops 4.0%, in permanent crops 2.3%, in pasture 20.8%; overall forest area (2005) 32.7%.

Foreign trade

Balance of trade (current prices)

	2004	2005	2006	2007
U.S.$'000,000	–233	–179	–309	–315
% of total	52.9%	40.5%	49.5%	46.1%

Imports (2007): U.S.$499,000,000 (petroleum products 25.1%; food 24.4%, of which rice 13.1%; machinery and transport equipment 18.1%; assorted manufactures 12.8%). *Major import sources* (2005): South Korea *c.* 38%; Japan *c.* 21%; Singapore *c.* 14%; Croatia *c.* 5%; China *c.* 3%.
Exports (2007): U.S.$184,000,000 (rubber 92.8%; gold 2.4%; diamonds 1.2%[6]). *Major export destinations* (2005): Belgium *c.* 42%; Spain *c.* 12%; U.S. *c.* 9%; Malaysia *c.* 6%; Thailand *c.* 5%.

Transport and communications

Transport. Railroads (2007)[11]: route length 48 mi, 78 km; short ton-mi cargo, n.a.; metric ton-km cargo, n.a. Roads (2003): total length 6,600 mi, 10,600 km (paved 6%). Vehicles (2002): passenger cars 17,100; trucks and buses 12,800. Air transport: n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	69	25	PCs	2005	...	...
Telephones				Dailies	2004	2.1[12]	0.7[12]
Cellular	2007	563[13]	150[13]	Internet users	2007	20	5.3
Landline	2007	2.0	0.5	Broadband	2007	...	...

Education and health

Educational attainment: n.a. *Literacy* (2007): total population age 15 and over literate 55.5%; males literate 60.2%; females literate 50.9%.

Education (2006)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	2,405[14]	27,945	538,450	19.3
Secondary (age 13–18)	1,162[15]	17,921	130,860	7.3
Voc., teacher tr.[14]	...	603	45,067	74.7
Higher[14]	...	723	44,107	61.0

Health: physicians (2004) 103 (1 per 27,255 persons); hospital beds (2001) 2,751 (1 per 1,003 persons); infant mortality rate per 1,000 live births (2007) 149.7; undernourished population (2002–04) 1,700,000 (50% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

Military

Total active duty personnel (November 2007): 2,400; UN peacekeeping troops (May 2008) 13,934. *Military expenditure as percentage of GDP* (2003): *c.* 11%; per capita expenditure U.S.$16.

[1]Preliminary. [2]Detail does not add to total given because of rounding. [3]Descendants of freed U.S. slaves. [4]Sometimes combined with traditional beliefs. [5]Estimate of the ILO Employment Trends Unit. [6]UN sanctions on timber exports from 2003 ended in June 2006; UN sanctions on exports of rough diamonds from 2001 ended in April 2007. [7]Weights of consumer price index components. [8]At constant prices of 1992. [9]Formal employment only. [10]Excludes informal sector employment equaling 480,000 and an unknown number of unofficially unemployed. [11]Only the Bong (iron ore) Mining Railway was operational in 2007. [12]Circulation of the top three daily newspapers only. [13]Subscribers. [14]2000. [15]2001.

Internet resource for further information:
- **Central Bank of Liberia**
  http://www.cbl.org.lr.

Libya

Official name: Al-Jamāhīrīyah al-ʿArabīyah al-Lībīyah ash-Shaʿbīyah al-Ishtirākīyah al-ʿUẓmā (Socialist People's Libyan Arab Jamahiriya).
Form of government: authoritarian with one policy-making body (General People's Congress [468]).
Chief of state: Muammar al-Qaddafi (de facto)[1]; Secretary of General People's Congress (de jure).
Head of government: Secretary of the General People's Committee (prime minister).
Capital: Tripoli[2].
Official language: Arabic.
Official religion: Islam.
Monetary unit: Libyan dinar (LD); valuation (Sept. 8, 2008) 1 U.S.$ = LD 1.24; 1 £ = LD 2.19.

Area and population

Municipalities	area sq km	population 2006 census	Municipalities	area sq km	population 2006 census
Banghāzī	...	670,797	Marzūq	..	78,621
Al-Buṭnān	...	159,536	Miṣrātah	..	550,938
Darnah	...	163,351	Nālūt	.	93,224
Ghāt	...	23,518	An-Nuqāṭ al-Khams	.	287,662
Al-Jabal al-Akhḍar	...	203,156	Sabhā	.	212,694
Al-Jabal al-Gharbī	...	304,159	Surt	..	193,720
Al-Jifārah	...	453,198	Tripoli (Tarābulus)	...	1,065,405
Al-Kufrah	...	50,104	Wādī al-Hayāt	.	76,858
Al-Marj	...	185,848	Al-Wāḥāt	.	177,047
Al-Marqab	...	432,202	Az-Zāwiyah	..	290,993
			TOTAL	1,759,540	5,673,031[3, 4]

Demography

Population (2008): 5,871,000.
Density (2008): persons per sq mi 8.6, persons per sq km 3.3.
Urban-rural (2005): urban 84.8%; rural 15.2%.
Sex distribution (2006): male 51.93%; female 48.07%.
Age breakdown (2005): under 15, 30.1%; 15–29, 32.2%; 30–44, 19.8%; 45–59, 11.4%; 60–74, 5.3%; 75–84, 1.0%; 85 and over, 0.2%.
Population projection: (2010) 6,050,000; (2020) 7,026,000.
Doubling time: 30 years.
Ethnic composition (2000): Arab 87.1%, of which Libyan 57.2%, Bedouin 13.8%, Egyptian 7.7%, Sudanese 3.5%, Tunisian 2.9%; Amazigh (Berber) 6.8%, of which Arabized 4.2%; other 6.1%.
Religious affiliation (2000): Muslim (nearly all Sunnī) 96.1%; Orthodox 1.9%; Roman Catholic 0.8%; other 1.2%.
Major cities (2005): Tripoli (Ṭarābulus) 911,643 (urban agglom. 2,098,000); Banghāzī 685,367 (urban agglom. 1,114,000); Miṣrātah (2003) 121,669.

Vital statistics

Birth rate per 1,000 population (2005): 26.8 (world avg. 20.3).
Death rate per 1,000 population (2005): 3.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 23.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 3.34.
Marriage/divorce rates per 1,000 population (2002): 6.0/0.3.
Life expectancy at birth (2005): male 74.3 years; female 78.8 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 185, of which ischemic heart disease 98; infectious and parasitic diseases 72; malignant neoplasms (cancers) 44; accidents, injuries, and violence 43; chronic respiratory diseases 16.

National economy

Budget (2007). Revenue: LD 54,114,000,000 (oil revenues 89.9%, other 10.1%). Expenditures: LD 31,018,000,000 (development expenditures 59.7%; current expenditures 40.3%, of which wages and salaries 23.5%).
Public debt (external outstanding; 2005): U.S.$3,900,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): watermelons 268,000, potatoes 196,000, tomatoes 190,000, dry onions 181,000, dates 175,000, olives 165,000, wheat 100,000, almonds 25,000; livestock (number of live animals) 4,500,000 sheep, 1,265,000 goats, 130,000 cattle, 47,000 camels, 25,000,000 chickens; roundwood (2006) 1,017,191 cu m, of which fuelwood 88%; fisheries production (2006) 40,827 (from aquaculture 1%). Mining and quarrying (2006): lime 250,000; gypsum 175,000; salt 40,000. Manufacturing (value of production in LD '000,000; 1996): base metals 212, electrical equipment 208, petrochemicals 175, food products 79, cement and other building materials 68. Energy production (consumption): electricity (kW-hr; 2005) 22,500,000,000 (22,500,000,000); coal (metric tons; 2002) none (4,000); crude petroleum (barrels; 2007) 653,800,000 ([2005] 129,000,000); petroleum products (metric tons; 2007) 16,300,000 (8,607,000); natural gas (cu m; 2005) 11,700,000,000 (6,441,000,000).
Household income and expenditure. Average household size (2006) 5.9; income per household: n.a.; sources of income: n.a.; expenditure: n.a.
Population economically active (2003): total 2,137,000[5]; activity rate of total population 37.9%[5] (participation rates: ages 15 to 64, 56.7%[5]; female 24.7%[5]; unemployed [2004] 30.0%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	91.1	82.1	80.4	78.6	80.2	82.9	88.4

Gross national income (GNI; 2007): U.S.$55,473,000,000 (U.S.$9,010 per capita); purchasing power parity GNI (U.S.$15,070 per capita).

Structure of gross domestic product and labour force

	2007			
	in value LD '000,000[6]	% of total value	labour force	% of labour force
Agriculture	1,905	2.0	135,700	7.6
Petroleum and natural gas[7]	69,275	71.6	32,800	1.8
Other mining			23,700	1.3
Manufacturing[8]	1,162	1.2	141,800	7.9
Construction	4,198	4.3	42,400	2.4
Public utilities	1,019	1.1	56,400	3.1
Transp. and commun.	3,202	3.3	140,800	7.8
Trade, hotels	3,296	3.4	195,100	10.9
Finance, insurance, real estate	6,017	6.2	41,200	2.3
Pub. admin., defense	6,629	6.9	290,400	16.2
Services			694,200	38.7
TOTAL	96,701[9]	100.0	1,794,500	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 190; remittances (2007) 16; foreign direct investment (2004–06 avg.) 1,043; official development assistance (2006) 37. Disbursements for (U.S.$'000,000): tourism (2006) 668; remittances (2007) 945.
Land use as % of total land area (2003): in temporary crops 1.0%, in permanent crops 0.2%, in pasture 7.6%; overall forest area (2005) 0.1%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+2,309	+7,325	+11,832	+19,235	+25,275	+27,122
% of total	13.5%	33.7%	40.3%	46.9%	47.8%	43.8%

Imports (2004): U.S.$8,768,000,000 (machinery and transport equipment 48.0%; food and live animals 14.1%; chemicals and chemical products 4.0%). *Major import sources* (2006): Europe 58.7%, of which Italy 9.9%, Germany 8.5%, U.K. 3.7%; Arab countries 11.3%; Japan 5.7%.
Exports (2004): U.S.$20,600,000,000 (hydrocarbons [mostly crude petroleum] 95.7%; remainder 4.3%). *Major export destinations* (2006): Europe 82.3%, of which Italy 42.5%, Germany 9.8%, Spain 8.5%, France 4.8%; Asian countries 5.4%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 83,200 km (paved 57%). Vehicles (2005): passenger cars 1,356,987; trucks and buses 145,935. Air transport (2003): passenger-km 825,000,000; metric ton-km cargo (2001) 259,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	717	133	PCs	2005	130	21
Telephones				Dailies	2005	..	...
Cellular	2007	4,500[10]	731[10]	Internet users	2005	232	40
Landline	2006	483	81	Broadband	2005	..	..

Education and health

Educational attainment: n.a. *Literacy* (2007): percentage of total population age 15 and over literate 85.4%; males literate 94.1%; females literate 76.0%.

Education (2002–03)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–12)	2,733[11]	122,020[12]	743,997	...
Secondary (age 13–18)	...	17,668[12]	619,940	..
Voc., teacher tr.	480[12]	...	178,052	...
Higher	13[12]	15,711	375,028	23.9

Health: physicians (2004) 7,405 (1 per 775 persons); hospital beds (2002) 21,400 (1 per 256 persons); infant mortality rate per 1,000 live births (2005) 24.6; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 76,000 (army 59.2%, navy 10.5%, air force 30.3%). *Military expenditure as percentage of GDP* (2005): 2.0%; per capita expenditure U.S.$128.

[1]No formal titled office exists. [2]Tripoli was made the capital in the early 1970s. By 2005 most ministries had relocated to Surt (near Qaddafi's place of birth) and other cities as part of a radical decentralization plan. The policy-making body (General People's Congress) meets annually in Surt. [3]Final census results include *c.* 350,000 foreigners. [4]Preliminary 2006 census results equal 5,670,688. [5]Estimate of the ILO Employment Trends Unit. [6]At current factor cost. [7]Includes refined petroleum. [8]Excludes refined petroleum. [9]Detail does not add to total given because of rounding. [10]Subscribers. [11]1994–95. [12]1995–96.

Internet resource for further information:
- **Central Bank of Libya**
  http://www.cbl.gov.ly/en

Liechtenstein

Official name: Fürstentum Liechtenstein (Principality of Liechtenstein).
Form of government: constitutional monarchy with one legislative house (Diet [25]).
Chief of state: Prince[1].
Head of government: Head of the government.
Capital: Vaduz.
Official language: German.
Official religion: none.
Monetary unit: Swiss franc (CHF); valuation (Sept. 8, 2008) 1 U.S.$ = CHF 1.11; 1 £ = CHF 1.96.

Area and population	area		population
Regions Communes	sq mi	sq km	2008[2] estimate
Oberland (Upland)	48.5[3]	125.5[3]	22,977
Balzers	7.6	19.7	4,509
Planken	2.0	5.3	407
Schaan	10.4	26.9	5,690
Triesen	10.2	26.5	4,713
Triesenberg	11.5	29.7	2,549
Vaduz	6.7	17.3	5,109
Unterland (Lowland)	13.5[3]	35.0[3]	12,388
Eschen	4.0	10.4	4,137
Gamprin	2.4	6.2	1,492
Mauren	2.9	7.5	3,798
Ruggell	2.9	7.4	1,932
Schellenberg	1.4	3.6	1,029
TOTAL	62.0	160.5	35,365

Demography

Population (2008): 35,500.
Density (2008): persons per sq mi 572.6, persons per sq km 221.2.
Urban-rural (2005): urban 14.3%; rural 85.7%.
Sex distribution (2007[2]): male 49.31%; female 50.69%.
Age breakdown (2007[2]): under 15, 17.0%; 15–29, 18.7%; 30–44, 24.4%; 45–59, 22.3%; 60–74, 12.5%; 75–84, 3.8%; 85 and over, 1.3%.
Population projection: (2010) 36,000; (2020) 36,000.
Ethnic composition (2007[2]): Liechtensteiner 66.1%; Swiss 10.3%; Austrian 5.8%; Italian 3.4%; German 3.4%; other 11.0%.
Religious affiliation (2002): Christian 83.9%, of which Roman Catholic 76.0%, Protestant 7.0%, Orthodox 0.8%; Muslim 4.1%; nonreligious/other/unknown 12.0%.
Major cities (2008[2]): Schaan 5,690; Vaduz 5,109; Triesen 4,713; Balzers 4,509; Eschen 4,137.

Vital statistics

Birth rate per 1,000 population (2007): 10.0 (world avg. 20.3); within marriage 82.9%; outside of marriage 17.1%.
Death rate per 1,000 population (2007): 6.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 3.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.42.
Marriage/divorce rates per 1,000 population (2007): 5.1/2.8.
Life expectancy at birth (2006): male 78.9 years; female 83.1 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 230.3; malignant neoplasms (cancers) 153.5; diseases of the respiratory system 51.2; accidents, violence, and suicide 22.7; diseases of the digestive system 19.9.

National economy

Budget (2004). Revenue: CHF 1,068,400,000 (current revenue 72.0%, of which taxes and duties 55.4%, investment income 10.9%, charges and fees 3.8%; capital revenue 28.0%). Expenditures: CHF 1,048,500,000 (current expenditure 74.5%, of which financial affairs 21.7%, social welfare 17.3%, education 12.3%, general administration 7.7%, public safety 4.5%, transportation 3.0%; capital expenditure 25.5%).
Public debt: none.
Tourism (2007): 59,603 tourist arrivals; receipts from visitors, n.a.
Selected balance of payments data: n.a.
Population economically active (2006[2]): total 15,667[4]; activity rate of total population 44.8% (participation rates: age 15 and over, 54.3%; female [2004[2]] 41.4%; unemployed [2006] 3.3%).

Price index (2000 = 100)	2001	2002	2003	2004	2005	2006	2007
Consumer price index[5]	101.0	101.6	102.3	103.1	104.3	105.4	106.2

Household income and expenditure. Average household size (2003) 2.5.
Production (metric tons except as noted). Agriculture, forestry, fishing (2006): grapes 200; significantly market gardening, other crops include cereals and apples; livestock (number of live animals) 6,000 cattle, 3,000 pigs, 3,000 sheep; roundwood 22,167 cu m, of which fuelwood 19%; fisheries production, n.a. Mining and quarrying: n.a. Manufacturing (2007): small-scale precision manufacturing includes optical lenses, electron microscopes, electronic equipment, and high-vacuum pumps; metal manufacturing, construction machinery, and ceramics are important; dairy products and wine are also produced. Energy production (consumption): electricity (kW-hr; 2007) 72,273,000 (379,013,000); coal (metric tons; 2004) none ([2003] 13); petroleum products (metric tons; 2004) none (50,000); natural gas, none (none).
Gross national income (GNI; 2007): n.a.; purchasing power parity GNI, n.a.

Structure of gross domestic product and labour force	2006		2007[2]	
	in value U.S.$'000,000	% of total value	labour force	% of labour force
Agriculture, forestry	45	1.3	398	1.3
Mining Public utilities	87	2.4	45 207	0.1 0.7
Manufacturing	672	18.8	10,813	34.8
Construction	198	5.5	2,504	8.0
Transportation and communications	230	6.4	1,123	3.6
Trade, public accommodation	557	15.6	3,216	10.3
Finance, insurance, real estate	1,840	51.4	5,177	16.7
Consulting, trust management			2,390	7.7
Pub. admin., defense			1,479	4.8
Services			3,722	12.0
Other	–49[6]	–1.4[6]	—	—
TOTAL	3,580	100.0	31,074[7]	100.0

Land use as % of total land area (2003): in temporary crops *c.* 25%, in permanent crops, n.a., in pasture *c.* 31%; overall forest area (2005) *c.* 43%.

Foreign trade[8, 9]

Balance of trade (current prices)	2002	2003	2004	2005	2006	2007
CHF '000,000	+1,441	+1,387	+1,323	+1,318	+1,440	+1,766
% of total	34.3%	31.8%	26.0%	25.7%	25.0%	26.8%

Imports (2007): CHF 2,416,000,000 (fabricated metals/iron and steel 36.8%, machinery and electronic goods 31.9%, mineral fuels/chemical products 15.2%, glass/ceramics/textiles 8.5%). *Major import sources:* Germany 40.2%; Austria 36.9%; Italy 5.2%; U.S. 1.8%; France 1.8%.
Exports (2007): CHF 4,182,000,000 (machinery and electronic goods 34.0%, fabricated metals/precision tools 33.2%, transport equipment/parts 8.6%, glass and ceramic products [including lead crystal and specialized dental products]/textiles 7.3%). *Major export destinations:* Germany 20.0%; U.S. 14.3%; Austria 11.5%; France 9.9%; Italy 6.3%.

Transport and communications

Transport. Railroads[10] (2006): length 11.5 mi, 18.5 km; passenger and cargo traffic, n.a. Roads (2007): total length 235 mi, 380 km (paved 100%). Vehicles (2007): passenger cars 24,368; trucks and buses 7,532. Air transport: the nearest scheduled airport service is through Zürich, Switzerland.

Communications								
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	17	510	PCs	2005	...	...
Telephones				Dailies	2007	18[11]	510[11]
Cellular	2006	29[12]	820[12]	Internet users	2006	22	627
Landline	2006	20	575	Broadband	2006	10[12]	285[12]

Education and health

Educational attainment (2000)[13]. Percentage of population age 25 and over having: incomplete compulsory education (schooling to age 16) 3.0%; complete compulsory 22.9%; lower vocational 44.5%; higher vocational, teacher training 13.8%; university 6.6%; unknown 9.2%. *Literacy:* virtually 100%.

Education (2007–08)	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	14[14]	262	2,073	7.9
Secondary (age 13–19)	9[14]	321	1,869	5.8
Vocational	4	16	124	7.8
Higher	...	...	527[15]	...

Health: physicians (2005) 79 (1 per 441 persons); hospital beds (1997) 108 (1 per 288 persons); infant mortality rate per 1,000 live births (2006) 5.5; undernourished population, n.a.

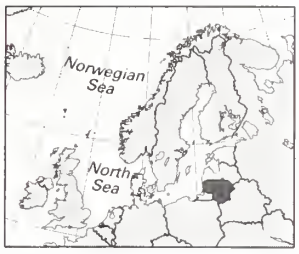
Military

Total active duty personnel: none; Liechtenstein has had no standing army since 1868; defense is the responsibility of Switzerland. *Military expenditure as percentage of GDP:* none.

[1]The son of the prince was appointed the permanent representative of the prince in August 2004. He assumed the official day-to-day duties of the ruling prince but not the title of head of state. [2]January 1. [3]Detail does not add to total given because of rounding. [4]Residents employed within Liechtenstein only (including 9,772 Liechtensteiners resident in Liechtenstein and 5,895 other nationalities resident in Liechtenstein); 14,503 inward commuters are excluded along with 1,205 outward commuters. [5]Figures are derived from statistics for Switzerland. [6]Taxes less imputed bank service charges and subsidies. [7]Residents employed within Liechtenstein only plus inward commuters. [8]Excludes trade with Switzerland and transshipments through Switzerland. [9]Liechtenstein has formed a customs union with Switzerland since 1923. [10]Administered by Austrian Federal Railway. [11]Circulation of two leading daily newspapers only. [12]Subscribers. [13]Based on 14,211 Liechtensteiners and 8,855 foreigners. [14]1998–99. [15]2004–05.

Internet resource for further information:
- **Liechtenstein Office of Economic Affairs**
  http://www.llv.li/llv-avw-statistik

Lithuania



Official name: Lietuvos Respublika (Republic of Lithuania).
Form of government: unitary multi-party republic with single legislative body (Seimas [141]).
Head of state: President.
Head of government: Prime Minister.
Capital: Vilnius.
Official language: Lithuanian.
Official religion: none.
Monetary unit: litas (LTL); valuation (Sept. 8, 2008) 1 U.S.$ = LTL 2.42; 1 £ = LTL 4.28[1].

Area and population

Counties	Capitals	area sq mi	area sq km	population 2008[2] estimate
Alytus	Alytus	2,095	5,425	177,040
Kaunas	Kaunas	3,123	8,089	673,706
Klaipėda	Klaipeda	2,011	5,209	378,843
Marijampolė	Marijampole	1,723	4,463	181,219
Panevėžys	Panevėžys	3,043	7,881	284,235
Šiauliai	Šiauliai	3,297	8,540	349,876
Tauragė	Taurage	1,703	4,411	127,378
Telšiai	Telšiai	1,680	4,350	173,383
Utena	Utena	2,780	7,201	172,580
Vilnius	Vilnius	3,757	9,731	848,097
TOTAL		25,212	65,300	3,366,357

Demography

Population (2008): 3,358,000.
Density (2008): persons per sq mi 133.2, persons per sq km 51.4.
Urban-rural (2007[2]): urban 66.8%; rural 33.2%.
Sex distribution (2007[2]): male 46.59%; female 53.41%.
Age breakdown (2005): under 15, 16.7%; 15–29, 22.1%; 30–44, 22.4%; 45–59, 18.2%; 60–74, 14.2%; 75–84, 5.3%; 85 and over, 1.1%.
Population projection: (2010) 3,324,000; (2020) 3,176,000.
Ethnic composition (2001): Lithuanian 83.5%; Polish 6.7%; Russian 6.3%; Belarusian 1.2%; Ukrainian 0.7%; other 1.6%.
Religious affiliation (2001): Roman Catholic 79.0%; Orthodox 4.8%, of which Old Believers 0.8%; Protestant 1.0%; nonreligious 9.5%; unknown 5.4%; other 0.3%.
Major cities (2008[2]): Vilnius 544,206; Kaunas 355,586; Klaipėda 184,657; Šiauliai 127,059; Panevėžys 113,653; Alytus 68,304; Marijampolė 47,010.

Vital statistics

Birth rate per 1,000 population (2007): 9.5 (world avg. 20.3); within marriage 70.8%; outside of marriage 29.2%.
Death rate per 1,000 population (2007): 13.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): –4.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.31.
Marriage/divorce rates per 1,000 population (2007): 6.8/3.3.
Life expectancy at birth (2006): male 65.3 years; female 77.1 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 697.7; malignant neoplasms (cancers) 235.7; diseases of the respiratory system 162.5; accidents, injuries, and violence 50.8.

National economy

Budget (2004). Revenue: LTL 17,960,900,000 (tax revenue 59.2%, of which VAT 36.4%, income tax 22.2%; social security contributions 32.0%; other [including grants] 8.8%). Expenditures: LTL 17,817,400,000 (social security and welfare 40.4%; wages and salaries 18.3%; grants and subsidies 17.3%; interest on debt 3.4%).
Gross national income (GNI; 2007): U.S.$33,472,000,000 (U.S.$9,920 per capita); purchasing power parity GNI (U.S.$17,180 per capita).

Structure of gross national product and labour force

	2006 in value LTL '000,000	% of total value	labour force	% of labour force
Agriculture, forestry	4,037	4.9	186,600	11.7
Mining	395	0.5	4,300	0.3
Manufacturing	16,196	19.8	264,600	16.7
Construction	6,379	7.8	148,700	9.4
Public utilities	2,819	3.4	27,100	1.7
Transp. and commun.	9,402	11.5	98,900	6.2
Trade, restaurants	13,531	16.5	293,600	18.5
Finance, real estate	9,658	11.8	94,900	6.0
Pub. admin., defense	3,726	4.5	75,700	4.8
Services	7,608	9.3	304,600	19.2
Other	8,241[3]	10.1[3]	89,300[4]	5.6[4]
TOTAL	81,991[5]	100.0[5]	1,588,300	100.0[5]

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 1,390,700, barley 1,013,700, sugar beets 799,900, potatoes 576,100, rapeseed 311,900, triticale 227,600, rye 165,200, oats 119,500, cabbages 92,796, carrots 62,712, apples 40,619, currants 4,392; livestock (number of live animals) 1,127,100 pigs, 838,800 cattle; roundwood (2006) 5,870,000 cu m, of which fuelwood 21%; fisheries production (2006) 156,772 (from aquaculture, negligible). Mining and quarrying (2005): limestone 1,242,200; peat 535,000; sulfur 74,277. Manufacturing (value added in LTL '000,000; 2005): food and beverages 2,569; refined petroleum products 2,077; textiles 1,395; wood and wood products (excluding furniture) 1,167; electrical and optical equipment 954. Energy production (consumption): electricity (kW-hr; 2005) 14,784,000,000 (11,818,000,000); coal (metric tons; 2005) none (284,000); crude petroleum (barrels; 2005) 1,570,000 (68,037,000); petroleum products (metric tons; 2005) 8,870,000 (2,308,000); natural gas (cu m; 2005) none (2,952,000,000).
Public debt (external outstanding; March 2006): U.S.$3,156,000,000.
Population economically active (2007): total 1,603,100; activity rate of total population 47.6% (participation rates: ages 15–64, 67.9%; female 49.3%; registered unemployed 4.3%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.3	101.6	100.4	101.6	104.3	108.3	114.5
Annual earnings index	100.9	102.9	106.5	113.9	133.4	145.2	181.0

Household income and expenditure (2005). Average household size (2004) 2.5; average annual per capita disposable household income (2007): LTL 10,312 (U.S.$4,085); sources of income: wages and salaries 56.6%, transfers 22.6%, self-employment 13.7%; expenditure: food and beverages 39.1%, transportation and communications 13.9%, housing and energy 12.0%, clothing and footwear 8.6%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,038; remittances (2007) 994; foreign direct investment (FDI; 2004–06 avg.) 1,206. Disbursements for (U.S.$'000,000): tourism (2006) 909; remittances (2007) 426; FDI (2004–06 avg.) 294.
Land use as % of total land area (2003): in temporary crops 24.3%, in permanent crops 0.7%, in pasture 15.5%; overall forest area (2005) 33.5%.

Foreign trade[6]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
LTL '000,000	–8,362	–8,175	–8,565	–10,385	–14,457	–17,753
% of total	17.9%	16.1%	14.2%	13.7%	15.7%	17.0%

Imports (2006): LTL 53,357,000,000 (machinery and apparatus 23.4%, crude petroleum 18.3%, road vehicles 11.8%, chemicals and chemical products 11.5%). *Major import sources:* Russia 24.2%; Germany 14.9%; Poland 9.5%; Latvia 4.8%; The Netherlands 3.7%.
Exports (2006): LTL 38,900,000,000 (refined petroleum 21.6%, machinery and apparatus 12.4%, food 11.7%, chemicals and chemical products 9.1%, road vehicles/parts 7.7%, apparel/clothing accessories 5.0%, furniture/parts 4.8%). *Major export destinations:* Russia 12.8%; Latvia 11.1%; Germany 8.6%; Estonia 6.5%; Poland 6.1%.

Transport and communications

Transport. Railroads (2007): length 1,350 mi, 2,180 km; passenger-km 408,710,000; metric ton-km cargo 14,372,677,000. Roads (2007): total length 50,154 mi, 80,715 km (paved 88%). Vehicles (2007): passenger cars 1,587,903; trucks and buses 140,995. Air transport (2007): passenger-km 1,521,700,000; metric ton-km cargo 5,777,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,785	519	PCs	2005	616	180
Telephones				Dailies	2004	371[7]	108[7]
Cellular	2007	4,912[8]	1,449[8]	Internet users	2007	1,333	393
Landline	2007	799	236	Broadband	2007	508[8]	150[8]

Education and health

Educational attainment (2005). Percentage of population age 15 and over having: no schooling through complete primary education 14.7%; lower secondary 18.0%; higher secondary 28.2%; vocational/technical 19.3%; higher 19.8%. *Literacy* (2003): total population age 15 and over literate 99.6%; males literate 99.7%; females literate 99.6%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 7–10)	362	46,642	150,422	12.3
Secondary (age 11–18)	1,272		423,854	
Voc., teacher tr.	73	4,907	46,344	9.4
Higher	59	13,612	198,552	14.6

Health (2007[2]): physicians 13,510 (1 per 251 persons); hospital beds 27,114 (1 per 125 persons); infant mortality rate per 1,000 live births (2007) 5.9; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 13,850[9] (army 90.3%, navy 3.2%, air force 6.5%). *Military expenditure as percentage of GDP* (2005): 1.2%; per capita expenditure U.S.$90.

[1]Pegged to the euro from February 2002, at the rate of 1€ = LTL 3.45. [2]January 1. [3]Taxes less subsidies. [4]Unemployed. [5]Detail does not add to total given because of rounding. [6]Imports c.i.f.; exports f.o.b. [7]Circulation of daily newspapers. [8]Subscribers. [9]Excludes 14,600 in paramilitary.

Internet resources for further information:
- **Lithuanian Department of Statistics http://www.stat.gov.lt**
- **Bank of Lithuania http://www.lb.lt/home/default.asp?lang=e**

Luxembourg

Official name: Grousshérzogtum Lëtzebuerg (Luxembourgian); Grand-Duché de Luxembourg (French); Grossherzogtum Luxemburg (German) (Grand Duchy of Luxembourg).
Form of government: constitutional monarchy with one legislative body[1] (Chamber of Deputies [60]).
Chief of state: Grand Duke.
Head of government: Prime Minister.
Capital: Luxembourg.
Official language: none[2].
Official religion: none.
Monetary unit: € (euro); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Districts	Administrative centre	area sq mi	area sq km	population 2008[3] estimate
Diekirch	Diekirch	447	1,157	74,863
Grevenmacher	Grevenmacher	203	525	58,109
Luxembourg	Luxembourg	349	904	350,827
TOTAL		999	2,586	483,799

Demography

Population (2008): 488,000.
Density (2008): persons per sq mi 488.5, persons per sq km 188.7.
Urban-rural (2005): urban 82.8%; rural 17.2%.
Sex distribution (2008[3]): male 49.52%; female 50.48%.
Age breakdown (2008[3]): under 15, 18.2%; 15–29, 18.6%; 30–44, 24.1%; 45–59, 20.4%; 60–74, 12.1%; 75–84, 5.2%; 85 and over, 1.4%.
Population projection: (2010) 503,000; (2020) 561,000.
Ethnic composition (nationality; 2008[3]): Luxembourger 57.4%; Portuguese 15.8%; French 5.5%; Italian 3.9%; Belgian 3.4%; German 2.4%; other 11.6%.
Religious affiliation (2005): Roman Catholic (including non-practicing) *c.* 90%; Protestant *c.* 3%; Muslim *c.* 2%; Orthodox *c.* 1%; other *c.* 4%.
Major cities (2008[3])[4]: Luxembourg 85,467; Esch-sur-Alzette 29,515; Differdange 20,443; Dudelange 18,052; Pétange 15,151.

Vital statistics

Birth rate per 1,000 population (2007): 11.3 (world avg. 20.3); (2006) within marriage 71.2%; outside of marriage 28.8%.
Death rate per 1,000 population (2007): 8.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 3.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.70.
Marriage/divorce rates per 1,000 population (2007): 4.1/2.3.
Life expectancy at birth (2005): male 76.2 years; female 82.3 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 306.6; malignant neoplasms (cancers) 205.0; diseases of the respiratory system 60.0; accidents and violence 46.2.

National economy

Budget (2004). Revenue: €6,392,568,500 (indirect taxes 48.6%, direct taxes 46.2%, other 5.2%). Expenditures: €6,476,725,500 (current expenditure 89.7%, development expenditure 10.3%).
Public debt (2007): negligible.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 70,400, barley 44,600, triticale 20,600, potatoes 20,200, rapeseed 18,400, grapes 16,900, rye 6,800, oats 5,600, apples 4,000; livestock (number of live animals) 191,500 cattle, 96,920 pigs; roundwood (2006) 267,866 cu m, of which fuelwood 5%; fisheries production, n.a. Mining and quarrying (2006): limited quantities of limestone and slate. Manufacturing (value added in €'000,000; 2007): base metals 589; fabricated metal products 490; cement, bricks, and ceramics 317; rubber and plastic products 260; nonelectrical machinery and apparatus 227; agricultural and food products 219. Energy production (consumption): electricity (kW-hr; 2006) 4,333,500,000 ([2005] 6,140,000,000); coal (metric tons; 2005) none (111,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (2,586,000); natural gas (cu m; 2007) none (1,403,300,000).
Gross national income (GNI; 2007): U.S.$36,420,000,000 (U.S.$75,880 per capita); purchasing power parity GNI (U.S.$63,590 per capita).

Structure of gross domestic product and labour force

	2007 in value €'000,000	2007 % of total value	2006 labour force	2006 % of labour force
Agriculture	137.5	0.4	4,600	1.4
Mining	41.0	0.1	300	0.1
Manufacturing	2,800.0	7.7	33,700	10.2
Construction	1,915.0	5.3	33,600	10.2
Public utilities	355.3	1.0	1,600	0.5
Transp. and commun.	2,837.9	7.8	24,500	7.5
Trade, restaurants	3,833.7	10.6	58,100	17.7
Finance[5], insurance	8,927.0	24.6	36,400	11.1
Real estate	6,522.4	18.0	53,600	16.3
Pub. admin., defense	1,672.6	4.6	17,100	5.2
Services	3,606.1	9.9	55,600	16.9
Other	3,630.1[6]	10.0[6]	9,700[7]	2.9[7]
TOTAL	36,277.7[8]	100.0	328,800[9]	100.0

Population economically active (2007): total 213,200[10]; activity rate of total population 44.8% (participation rates: ages 15–64, 66.1%; female 44.5%; unemployed [September 2007–August 2008] 4.3%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.7	104.8	106.9	109.3	112.0	115.0	117.7
Hourly earnings index	103.3	107.6	109.6	113.2	117.5	117.8	118.8

Household income and expenditure. Average household size (2005) 2.5; income per household (2002) €61,800 (U.S.$55,600); sources of income (1992): wages and salaries 67.1%, transfer payments 28.1%, self-employment 4.8%; expenditure (2006): transportation and communications 21.3%, housing and energy 20.7%, food, beverages, and tobacco 19.7%, household goods and furniture 8.2%, entertainment and culture 7.8%, hotels and restaurants 7.5%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 3,626; remittances (2007) 1,565; foreign direct investment (FDI; 2004–06 avg.) 14,126. Disbursements for (U.S.$'000,000): tourism (2006) 3,136; remittances (2007) 9,279; FDI (2004–06 avg.) 6,130.
Land use as % of total land area (2003): in temporary crops 23.9%, in permanent crops 0.4%, in pasture 25.1%; overall forest area (2005) 33.5%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–2,936	–3,653	–4,604	–4,871	–5,457	–6,023
% of total	14.6%	15.5%	15.9%	16.1%	16.1%	15.8%

Imports (2006): U.S.$19,640,000,000 (machinery and apparatus 15.3%, road vehicles 11.5%, chemicals and chemical products 9.4%, refined petroleum 9.3%, iron and steel 7.1%, food 6.8%). *Major import sources:* Belgium 34.0%; Germany 25.7%; France 11.5%; The Netherlands 5.7%; U.S. 3.1%.
Exports (2006): U.S.$14,183,000,000 (iron and steel 23.3%, machinery and apparatus 17.9%, chemicals and chemical products 6.3%, road vehicles/parts 5.9%, nonferrous metals [particularly aluminum] 5.9%, food 4.5%). *Major export destinations:* Germany 24.6%; France 16.7%; Belgium 12.3%; Italy 5.5%; The Netherlands 5.0%.

Transport and communications

Transport. Railroads (2007): route length 275 km; passenger-km 316,000,000; metric ton-km cargo 293,000,000. Roads (2008[3]): total length 2,894 km (paved 100%). Vehicles (2008[3]): passenger cars 321,520; trucks and buses 28,498. Air transport (2007)[12]: passenger-km 1,211,000,000; metric ton-km cargo, negligible.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	70	156	PCs	2005	290	634
Telephones				Dailies	2004	115[13]	253[13]
Cellular	2007	604[14]	1,295[14]	Internet users	2007	345	740
Landline	2007	248	532	Broadband	2007	113[14]	242[14]

Education and health

Educational attainment (2003). Percentage of population age 25–64 having: no formal schooling through primary education 19%; lower secondary 10%; upper secondary/higher vocational 56%; higher 15%. *Literacy* (2007): virtually 100% literate.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	...	3,218	33,136	10.3
Secondary (age 12–18)	...	3,755	11,693	...
Voc., teacher tr.	...		23,277	...
Higher[15]	1	...	3,180	...

Health: physicians (2005) 1,675 (1 per 273 persons); hospital beds (2004) 3,045 (1 per 149 persons); infant mortality rate per 1,000 live births (2007) 1.8; undernourished population (2002–04) less than 2.5% of total population.

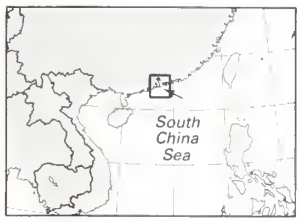
Military

Total active duty personnel (November 2007): 900 (army 100%). *Military expenditure as percentage of GDP* (2005): 0.8%; per capita expenditure U.S.$584.

[1]In addition, the 22-member Council of State (a 21-member body of unelected citizens appointed by the Grand Duke plus the hereditary Grand Duke) serves in an advisory capacity to the government. [2]Luxembourgian is the national language, German is the lingua franca, and French is used for most official purposes. [3]January 1. [4]Populations of communes. [5]In early 2008 total banking assets (at 156 banks) exceeded U.S.$1,479,000,000,000. [6]Taxes less subsidies. [7]Unemployed. [8]Detail does not add to total given. [9]In 2003 included *c.* 111,000 Luxembourgers, *c.* 84,000 resident foreigners, and *c.* 106,000 workers from neighbouring countries. [10]Luxembourgers and resident foreigners only. [11]Imports c.i.f.; exports f.o.b. [12]Luxair only. [13]Circulation of daily newspapers. [14]Subscribers. [15]Centre Universitaire de Luxembourg only.

Internet resources for further information:
- **Central Bank of Luxembourg http://www.bcl.lu/en/index.php**
- **Le Portail des Statistiques du Luxembourg http://www.statistiques.public.lu/fr**

Macau



Official name: Aomen Tebie Xingzhengqu (Chinese); Região Administrativa Especial de Macau (Portuguese) (Macau Special Administrative Region).
Political status: special administrative region (China) with one legislative house (Legislative Assembly [29[1]]).
Chief of state: President of China.
Head of government: Chief Executive.
Capital: Macau.
Official languages: Chinese; Portuguese.
Official religion: none.
Monetary unit: pataca (MOP)[2]; valuation (Sept. 8, 2008) 1 U.S.$ = MOP 8.04; 1 £ = MOP 14.21.

Area and population

Geographic areas	area sq mi	area sq km	population 2006 census
Macau peninsula	3.6	9.3	433,730
islands (formerly separate)	5.5	14.3	66,585
Coloane	2.9	7.6	3,292
Taipa	2.6	6.7	63,293
landfill (Cotai Strip[3])	2.2	5.6	—
marine	—	—	1,798
TOTAL	11.3	29.2	502,113

Demography

Population (2008): 549,000.
Density (2008): persons per sq mi 48,584, persons per sq km 18,801.
Urban-rural (2006): urban, virtually 100%[4].
Sex distribution (2006): male 48.82%; female 51.18%.
Age breakdown (2006): under 15, 15.2%; 15–29, 25.6%; 30–44, 26.3%; 45–59, 23.0%; 60–74, 6.6%; 75–84, 2.6%; 85 and over, 0.7%.
Population projection: (2010) 571,000; (2020) 618,000.
Ethnic composition by place of birth (2006): mainland China 47.1%; Macau 42.5%; Hong Kong 3.7%; Philippines 2.0%; Portugal 0.3%; other 4.4%.
Religious affiliation (1996): nonreligious 60.9%; Buddhist 16.8%; Buddhist/Taoist/Confucianist 13.9%; Roman Catholic 6.7%; Protestant 1.7%.
Major city (2006): Macau 502,133.

Vital statistics

Birth rate per 1,000 population (2007): 8.6 (world avg. 20.3); (2004) within marriage 82.7%; outside of marriage 17.3%.
Death rate per 1,000 population (2007): 2.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 5.7 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.00.
Marriage/divorce rates per 1,000 population (2007): 3.9/1.3.
Life expectancy at birth (2002–05): male 77.6 years; female 82.3 years.
Major causes of death per 100,000 population (2004): malignant neoplasms (cancers) 102.5; diseases of the circulatory system 96.1; diseases of the respiratory system 52.2; accidents, poisoning, and violence 26.0; ill-defined conditions 14.2; diseases of the digestive system 11.2.

National economy

Budget (2004). Revenue: MOP 19,345,000,000 (revenue from gambling tax 78.8%; stamp duties 3.8%; property income tax 3.8%). Expenditures: MOP 17,703,000,000 (current expenditure 52.4%; specific accounts 25.5%; capital expenditure 22.1%).
Land use as % of total land area (2004): "green area" 21.6%.
Gross national income (at current market prices; 2006): U.S.$14,902,000,000 (U.S.$31,207 per capita).

Structure of gross domestic product and labour force

	2005 in value MOP '000,000	2005 % of total value	2006 labour force	2006 % of labour force
Agriculture, fishing	...	...	500	0.2
Mining, quarrying	10	—	—	—
Manufacturing	3,129	3.4	29,500	10.7
Construction	6,301	6.8	31,100	11.3
Public utilities	1,340	1.4	900	0.3
Transportation and communications	3,405	3.7	16,800	6.1
Trade, hotels	8,848	9.6	66,400	24.1
Finance, real estate	16,476	17.8	23,200	8.4
Public administration	36,200	39.1	20,300	7.4
Services			76,200	27.7
Gaming activities			...	...
Other	16,771[5]	18.1[5]	10,600[6]	3.8[6]
TOTAL	92,480	100.0[7]	275,500	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2003): eggs 1,100,000; livestock (number of live animals; 2004) 700,000 chickens; roundwood, n.a.; fisheries production (2006) 1,500 (from aquaculture, none). Quarrying (value added in MOP '000; 2003): 17,139. Manufacturing (value added in U.S.$'000,000; 2004): wearing apparel 240; textiles 56; furniture 35; printing and publishing 16; food products 14. Energy production (consumption): electricity (kW-hr; 2006) 1,668,000,000 ([2005] 2,367,000,000); petroleum products (metric tons; 2005) none (729,000).
Public debt (long-term, external; 2004): U.S.$3,100,000,000.
Population economically active (2006): total 275,500; activity rate of total population 56.6% (participation rates: ages 14–64, 70.8%; female 46.6%; unemployed [June–August 2008] 3.0%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	98.0	95.4	93.9	94.9	99.0	104.1	109.9
Monthly earnings index	96.5	96.9	99.6	107.1	119.6	139.0	161.8

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 9,337; remittances (2007) 511; foreign direct investment (2004–06 avg.) 848. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances (2007) 494; foreign direct disinvestment (2004–06 avg.) –22.
Household income and expenditure (2002–03). Average household size (2006) 3.0; annual income per household MOP 183,648 (U.S.$22,862); sources of income: n.a.; expenditure[8]: food and nonalcoholic beverages 31.4%, housing and energy 29.9%, education, health, and other services 19.2%, transportation and communications 9.8%, clothing and footwear 5.3%, household durable goods 3.2%.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
MOP '000,000	–174	–174	–666	–1,437	–2,679	–2,823
% of total	3.6%	3.3%	10.6%	22.5%	34.4%	35.7%

Imports (2006): U.S.$5,236,000,000 (apparel and clothing accessories 20.2%; machinery and apparatus 18.1%; textile yarn, fabrics, made-up articles 11.8%; refined petroleum 7.5%; food 5.2%). *Major import sources:* China 39.3%; China free trade zone in Macau 11.9%; Hong Kong 8.9%; Japan 7.3%; United States 5.6%.
Exports (2006): U.S.$2,557,000,000 (apparel and clothing accessories 63.0%; textile yarn, fabrics, made-up articles 9.5%; refined petroleum 5.3%). *Major export destinations:* U.S. 44.1%; China 14.8%; Hong Kong 11.2%; Germany 7.3%; U.K. 4.1%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 225 mi, 362 km (paved 100%). Vehicles (2007): passenger cars 76,117; trucks and buses 6,107. Air transport (2007)[10]: passenger-km 3,026,000,000; metric ton-km cargo 185,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	130	292	PCs	2005	160	338
Telephones				Dailies	2005	164[11]	347[11]
Cellular	2007	794[12]	1,651[12]	Internet users	2007	238	495
Landline	2007	178	370	Broadband	2007	111[12]	210[12]

Education and health

Educational attainment (2006). Population age 25 and over having: no formal schooling 6.2%; incomplete primary education 10.7%; completed primary 22.5%; incomplete secondary 24.9%; completed secondary 21.4%; higher technical 1.7%; university 12.6%. *Literacy* (2003): percentage of population age 15 and over literate 94.5%; males literate 97.2%; females literate 92.0%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	76	1,640	32,674	19.9
Secondary (age 12–18)	60	2,373	42,776	18.0
Voc., teacher tr.	5	156	2,212	14.2
Higher	12	1,726	17,462	10.1

Health (2005): physicians 1,032 (1 per 473 persons); hospital beds 984 (1 per 496 persons); infant mortality rate per 1,000 live births (2007) 2.4; undernourished population, n.a.

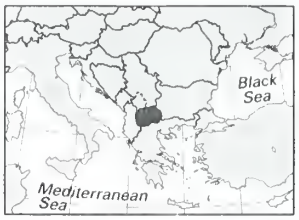
Military

Total active duty personnel (2004): up to 1,000 Chinese troops; Macau residents are prohibited from entering military service. *Military expenditure as percentage of GDP:* n.a.

[1]Includes 12 directly elected seats, 7 seats appointed by the chief executive, and 10 seats appointed by business and special-interest groups. [2]Pegged to Hong Kong dollar at rate 1 HK$ = MOP 1.03. [3]Name of landfilled casino and tourism district linking Coloane and Taipa. [4]About 0.4% of Macau's population live on sampans and other vessels. [5]Taxes less imputed bank service charge. [6]Includes 100 in activities undefined and 10,500 unemployed. [7]Detail does not add to total given because of rounding. [8]Weights of consumer price index components. [9]Imports c.i.f.; exports f.o.b. [10]Air Macau only. [11]Circulation of daily newspapers. [12]Subscribers.

Internet resources for further information:
- **Macau Census and Statistics Service**
  http://www.dsec.gov.mo/e_index.html
- **Monetary Authority of Macao**
  http://www.amcm.gov.mo

Macedonia



Official name[1]: Republika Makedonija (Macedonian); Republika e Maqedonisë (Albanian) (Republic of Macedonia).
Form of government: unitary multiparty republic with a unicameral legislature (Assembly [120]).
Head of state: President.
Head of government: Prime Minister.
Capital: Skopje.
Official languages: Macedonian; Albanian.
Official religion: none.
Monetary unit: denar (MKD); valuation (Sept. 8, 2008) 1 U.S.$ = MKD 43.00; 1 £ = MKD 75.97.

Area and population

Statistical regions[2]	Principal municipalities	area sq mi	area sq km	population 2004 estimate
East	Štip	1,617	4,188	203,212
North-East	Kumanovo	890	2,306	172,787
Pelagonia	Bitola	1,822	4,719	238,136
Polog	Tetovo	957	2,479	305,930
Skopje	[3]	702	1,818	578,144
South-East	Strumica	1,058	2,741	171,416
South-West	Ohrid	1,266	3,280	219,741
Vardar	Veles	1,292	3,346	133,180
"non-statistical areas"	—	323	836	—
TOTAL		9,928[4]	25,713	2,022,546

Demography

Population (2008): 2,039,000.
Density (2008): persons per sq mi 205.4, persons per sq km 79.3.
Urban-rural (2005): urban 68.9%; rural 31.1%.
Sex distribution (2005): male 49.95%; female 50.05%.
Age breakdown (2005): under 15, 20.5%; 15–29, 23.8%; 30–44, 21.8%; 45–59, 18.8%; 60–74, 11.5%; 75–84, 3.2%; 85 and over, 0.4%.
Population projection: (2010) 2,037,000; (2020) 2,024,000.
Ethnic composition (2002): Macedonian 64.2%; Albanian 25.2%; Turkish 3.9%; Rom (Gypsy) 2.7%; Serbian 1.8%; Bosniac 0.8%; other 1.4%.
Religious affiliation (2005): Orthodox *c.* 65%[5]; Sunnī Muslim *c.* 32%[5]; Roman Catholic *c.* 1%; other (mostly Protestant) *c.* 2%.
Major city/municipalities (2002): Skopje (city; 2004) 506,926; Kumanovo 103,025; Bitola 86,408; Prilep 73,351; Tetovo 70,841.

Vital statistics

Birth rate per 1,000 population (2006): 11.2 (world avg. 20.3); within marriage 87.5%; outside of marriage 12.5%.
Death rate per 1,000 population (2006): 9.1 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 2.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.57.
Marriage/divorce rates per 1,000 population (2006): 7.3/0.7.
Life expectancy at birth (2005): male 71.3 years; female 76.4 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 527.7; malignant neoplasms (cancers) 157.6; accidents, violence, and poisoning 35.4; endocrine, nutrition, and immunity disorders 34.2; ill-defined conditions 65.6.

National economy

Budget (2005). Revenue: MKD 92,805,000,000 (tax revenue 90.8%, of which social contributions 30.8%, VAT 29.2%, excise taxes 12.7%, income and profit tax 11.8%, import duties 5.7%; nontax revenue 9.2%). Expenditure: MKD 92,228,000,000 (transfers 55.0%, wages and salaries 24.0%, interest 2.3%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 385,290, grapes 225,000, potatoes 192,500, wheat 157,400, tomatoes 120,000, green chilies and green peppers 108,000, apples 78,000, tobacco leaves 20,600; livestock (number of live animals) 817,500 sheep, 253,800 cattle; roundwood (2006) 902,000 cu m, of which fuelwood 82%; fisheries production 735 (from aquaculture 88%). Mining and quarrying (2006): copper (metal content) 33,591; zinc (metal content) 21,700; lead (metal content) 15,600. Manufacturing (value added in U.S.$'000,000; 2006): food and beverages 297; cement, bricks, and glass products 177; iron and steel (including ferronickel) 103; clothing/accessories 96; cigarettes 61; refined petroleum 53. Energy production (consumption): electricity (kW-hr; 2005) 6,942,000,000 (8,541,000,000); hard coal (metric tons; 2005) none (3,000); lignite (metric tons; 2005) 6,881,000 (7,470,000); crude petroleum (barrels; 2005) none (6,940,000); petroleum products (metric tons; 2005) 921,000 (848,000); natural gas (cu m; 2005) none (77,000,000).
Household income and expenditure. Average household size (2002) 3.6; income per household (2000) U.S.$3,798; sources of income (2000): wages and salaries 54.2%, transfers 22.6%, other 23.2%; expenditure: food 38.4%, transportation and communications 9.7%, fuel 8.2%, beverages and tobacco 7.6%.
Population economically active (2006): total 891,679; activity rate 55.1% (participation rates: ages 15–64, 61.4%; female 39.5%; unemployed 36.0%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.2	107.6	108.8	110.0	110.0	113.7	117.7
Monthly earnings index	103.6	110.7	116.0	120.5	123.6	132.6	143.1

Gross national income (GNI; 2007): U.S.$7,052,000,000 (U.S.$3,460 per capita); purchasing power parity GNI (U.S.$8,510 per capita).

Structure of gross domestic product and labour force

	2006 in value MKD '000,000	2006 % of total value	2007[6] labour force	2007[6] % of labour force
Agriculture	33,320	11.0	95,384	10.6
Mining	1,772	0.6	4,254	0.5
Manufacturing	47,800	15.8	127,980	14.2
Construction	15,079	5.0	39,206	4.3
Public utilities	10,639	3.5	15,535	1.7
Transp. and commun.	25,407	8.4	33,544	3.7
Trade, hotels	46,000	15.2	96,280	10.7
Finance, real estate	17,787	5.9	26,349	2.9
Pub. admin., defense	22,975	7.6	41,531	4.6
Services	26,954	8.9	97,307	10.8
Other	55,574[7]	18.3[7]	325,218[8]	36.0[8]
TOTAL	303,305[4]	100.0[4]	902,588	100.0

Public debt (external, outstanding; 2006): U.S.$1,498,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 129; remittances (2007) 267; foreign direct investment (2004–06 avg.) 203; official development assistance (2006) 200. Disbursements for (U.S.$'000,000): tourism (2006) 71; remittances (2007) 18.
Land use as % of total land area (2003): in temporary crops 22.3%, in permanent crops 1.8%, in pasture 24.8%; overall forest area (2005) 35.8%.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−880	−939	−1,256	−1,187	−1,362	−1,875
% of total	28.3%	25.6%	27.3%	22.5%	22.1%	22.1%

Imports (2006): U.S.$3,763,000,000 (crude petroleum 14.3%, machinery and apparatus 12.2%, iron and steel 9.9%, food 9.8%, chemicals and chemical products 9.7%). *Major import sources:* Russia 15.1%; Germany 9.8%; Greece 8.5%; Serbia 7.5%; Bulgaria 6.6%; Italy 6.0%.
Exports (2006): U.S.$2,401,000,000 (iron and steel 27.8%, of which flat-rolled products 9.1%, ferronickel 8.4%; clothing and accessories 21.2%, of which female outerwear 11.9%; refined petroleum 8.4%; food 8.0%; tobacco [all forms] 4.7%). *Major export destinations:* Serbia 23.2%; Germany 15.6%; Greece 15.0%; Italy 9.9%; Bulgaria 5.4%.

Transport and communications

Transport. Railroads (2005): length (2004) 699 km; passenger-km 94,000,000; metric ton-km cargo 531,000,000. Roads (2000): length 12,522 km (paved 58%). Vehicles (2002): passenger cars 307,581; trucks and buses 33,002. Air transport (2005)[10]: passenger-km 266,000,000; metric ton-km cargo 111,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	507	250	PCs	2005	451	221
Telephones				Dailies	2004	189[11]	93[11]
Cellular	2007	1,518[12]	744[12]	Internet users	2007	685	336
Landline	2007	464	227	Broadband	2007	45[12]	22[12]

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: less than full primary education 18.1%; primary 35.0%; secondary 36.9%; postsecondary and higher 10.0%. *Literacy* (2003): total population age 10 and over literate 96.1%; males literate 98.2%; females literate 94.1%.

Education (2005–06)

	schools	teachers	students	student/ teacher ratio
Primary (age 7–14)	1,084	14,431	225,012	15.6
Secondary (age 15–18)	106	6,041	96,494	16.0
Higher	...	1,668	48,368	29.0

Health: physicians (2001) 4,459 (1 per 452 persons); hospital beds (2002) 9,757 (1 per 207 persons); infant mortality rate per 1,000 live births (2006) 8.9; undernourished population (2002–04) 100,000 (5% of total population based on the consumption of a minimum daily requirement of 1,980 calories).

Military

Total active duty personnel (November 2007): 10,890 (army 89.6%, air force 10.4%). *Military expenditure as percentage of GDP* (2005): 2.2%; per capita expenditure U.S.$62.

[1]Member of the United Nations under the name The Former Yugoslav Republic of Macedonia (FYROM). [2]Actual first-order administration is based on 84 municipalities. [3]Includes the 10 municipalities forming (at least in part) the city of Skopje. [4]Detail does not add to total given because of rounding. [5]Includes nominal practitioners. [6]First quarter. [7]Rent and taxes on production less imputed bank service charges. [8]Includes 323,287 unemployed. [9]Imports c.i.f.; exports f.o.b. [10]Macedonian Airlines. [11]Circulation of daily newspapers. [12]Subscribers.

Internet resources for further information:
- **National Bank of the Republic of Macedonia http://www.nbrm.gov.mk**
- **State Statistical Office http://www.stat.gov.mk/english/glavna_eng.asp**

Madagascar

Official name: [1].
Form of government: multiparty republic with two legislative houses (Senate [33]; National Assembly [127]).
Heads of state and government: President assisted by Prime Minister.
Capital: Antananarivo.
Official languages: French[2], English[3,4]
Official religion: none.
Monetary unit: ariary[5] (MGA); valuation (Sept. 8, 2008) 1 U.S.$ = MGA 1,635; 1 £ = MGA 2,889.

Population (2001 estimate)

Regions[6]	population	Regions[6]	population	Regions[6]	population
Alaotra Mangoro	797,115	Atsinanana	1,014,223	Melaky	160,528
Amoron'i Mania	625,426	Betsiboka	216,201	Menabe	358,622
Analamanga	2,237,429	Boeny	496,835	Sava	741,269
Analanjirofo	781,725	Bongolava	299,044	Sofia	860,353
Androy	437,103	Diana	447,155	Vakinankaratra	1,455,618
Anosy	499,286	Haute Masiatra	990,626	Vatovavy Fitovinany	1,018,675
Atsimo-Andrefana	934,539	Ihorombe	170,867	TOTAL	15,692,033
Atsimo-Atsinanana	560,698	Itasy	588,696		

Demography

Area: 226,662 sq mi, 587,051 sq km.
Population (2008): 20,215,000.
Density (2008): persons per sq mi 89.2, persons per sq km 34.4.
Urban-rural (2006): urban 27.3%; rural 72.7%.
Sex distribution (2005): male 49.72%; female 50.28%.
Age breakdown (2006): under 15, 44.1%; 15–29, 27.1%; 30–44, 15.7%; 45–59, 8.4%; 60–74, 3.7%; 75–84, 0.9%; 85 and over, 0.1%.
Population projection: (2010) 21,299,000; (2020) 27,005,000.
Doubling time: 23 years.
Ethnic composition (2000): Malagasy 95.9%, of which Merina 24.0%, Betsimisaraka 13.4%, Betsileo 11.3%, Tsimihety 7.0%, Sakalava 5.9%; Makua 1.1%; French 0.6%; Comorian 0.5%; Reunionese 0.4%; other 1.5%.
Religious affiliation (2005): traditional beliefs *c.* 42%; Protestant (significantly Lutheran) *c.* 27%; Roman Catholic *c.* 20%; Sunnī Muslim *c.* 2%; other *c.* 9%.
Major cities (2001): Antananarivo 1,403,449; Toamasina 179,045; Antsirabe 160,356; Fianarantsoa 144,225; Mahajanga 135,660.

Vital statistics

Birth rate per 1,000 population (2006): 38.8 (world avg. 20.3).
Death rate per 1,000 population (2006): 8.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 30.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 5.29.
Life expectancy at birth (2006): male 59.9 years; female 63.7 years.

National economy

Budget (2004). Revenue: MGA 1,653,000,000,000 (tax revenue 53.7%, of which import duties 26.9%, VAT 10.5%; grants 40.6%; nontax revenue 5.7%). Expenditures: MGA 2,045,000,000,000 (current expenditure 50.2%; capital expenditure 49.8%).
Public debt (external, outstanding; 2006): U.S.$1,236,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): paddy rice 3,596,000, sugarcane 2,700,000, cassava 2,400,000, sweet potatoes 870,000, corn (maize) 500,000, bananas 290,000, potatoes 225,000, mangoes 210,000, taro 200,000, coffee 62,000, peanuts (groundnuts) 61,500, cloves (whole and stem) 10,000, vanilla 2,600; livestock (number of live animals) 9,600,000 cattle, 1,610,000 pigs, 3,000,000 geese; roundwood (2006) 11,522,257 cu m, of which fuelwood 98%; fisheries production (2006) 145,630 (from aquaculture 8%). Mining and quarrying (2006): chromite ore 100,000; graphite 15,000; sapphires 4,700 kg[7]; rubies 920 kg[7]; gold 5 kg (illegally smuggled, *c.* 2,000 kg). Manufacturing (value in U.S.$'000,000; 2004): beverages 107; wearing apparel 57; fabricated metal products 35; food products 29. Energy production (consumption): electricity (kW-hr; 2005) 1,035,000,000 (1,035,000,000); coal (metric tons; 2005) none (10,000); crude petroleum (barrels; 2005) none[8] (3,504,000); petroleum products (metric tons; 2005) 325,000 (736,000); natural gas, none (none).
Population economically active (2005): total 9,844,100; activity rate of total population 52.8% (participation rates: ages 15–64, 88.1%; female 49.6%; unemployed 2.8%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	106.9	124.0	122.5	139.4	165.2	183.0	201.8

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 237; remittances (2007) 11; foreign direct investment (2004–06 avg.) 137; official development assistance (2006) 754. Disbursements for (U.S.$'000,000): tourism (2006) 86; remittances (2007) 21.
Household income and expenditure. Average household size (2003–04) 4.6; expenditure (2000)[9]: food, beverages, and tobacco 50.1%, housing and energy 18.2%, transportation 8.0%, clothing 7.0%, household furnishings 4.6%.
Gross national income (GNI; 2007): U.S.$6,331,000,000 (U.S.$320 per capita); purchasing power parity GNI (U.S.$920 per capita).

Structure of gross domestic product and labour force

	2004		2005	
	in value FMG '000,000,000	% of total value	labour force	% of labour force
Agriculture	9,857	26.2	7,844,300	79.7
Manufacturing			267,500	2.7
Mining	5,456	14.5	18,800	0.2
Public utilities			27,500	0.3
Construction	794	2.1	13,000	0.1
Transp. and commun.	5,796	15.4	86,300	0.9
Trade, hotels	4,316	11.5	534,400	5.4
Finance	324	0.9	4,100	—
Services	5,644	15.0	572,100	5.8
Pub. admin., defense	2,281	6.0	202,400	2.1
Other	3,184[10]	8.4[10]	273,700[11]	2.8[11]
TOTAL	37,651[12]	100.0	9,844,100	100.0

Land use as % of total land area (2003): in temporary crops 5.1%, in permanent crops 1.0%, in pasture 41.3%; overall forest area (2005) 22.1%.

Foreign trade[13]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+1.8	+65.5	−339.1	−680.7	−850.0	−752.1
% of total	0.1%	5.2%	14.8%	26.0%	33.7%	27.2%

Imports (2006): U.S.$1,760,300,000 (refined petroleum 17.7%; machinery and apparatus 12.8%; food 11.4%, of which cereals 4.3%; fabrics 9.3%; chemicals and chemical products 8.6%; road vehicles 5.0%; wool 4.8%). *Major import sources:* China 17.8%; Bahrain 16.4%; France 13.2%; South Africa 5.7%; U.S. 3.6%.
Exports (2006): U.S.$1,008,200,000 (food/spices 32.4%, of which shrimp 12.0%, vanilla 4.7%, fish 4.4%, cloves 2.7%; apparel/clothing accessories 25.0%; refined petroleum 7.9%; precious/semiprecious stones 2.6%). *Major export destinations:* France 39.5%; U.S. 15.0%; Germany 6.0%; Italy 4.2%; U.K. 3.0%.

Transport and communications

Transport. Railroads: route length (2003) 560 mi, 901 km[14]; (2000) passenger-km 24,471,000; (2000) metric ton-km cargo 27,200,000. Roads (2000): total length 30,968 mi, 49,827 km (paved 12%). Vehicles (1998): passenger cars 64,000; trucks and buses 9,100. Air transport (2007): passenger-km 1,248,000,000; metric ton-km cargo (2006) 18,768,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	410	25	PCs	2005	102	5.5
Telephones				Dailies	2005	141[15]	7.6[15]
Cellular	2007	2,218[16]	113[16]	Internet users	2006	110	5.8
Landline	2007	134	6.8	Broadband	2007	—	—

Education and health

Educational attainment (2003–04)[17]. Percentage of population age 25–59 (male) and 25–49 (female) having: no formal schooling 20.4%; incomplete primary education 33.6%; complete primary 13.2%; incomplete secondary 23.0%; complete secondary 6.4%; higher 3.4%. *Literacy* (2006): percentage of total population age 15 and over literate 70.7%; males 76.5%; females 65.3%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13)	19,961[18]	55,309	2,856,480	51.6
Secondary (age 14–18)	...	19,471	436,211	22.4
Voc., teacher tr	...	...	12,691[19]	...
Higher	6[19]	1,857	32,593	17.6

Health (2004): physicians 1,861 (1 per 9,998 persons); hospital beds 9,303 (1 per 2,000 persons); infant mortality rate (2006) 58.5; undernourished population (2002–04) 6,600,000 (38% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

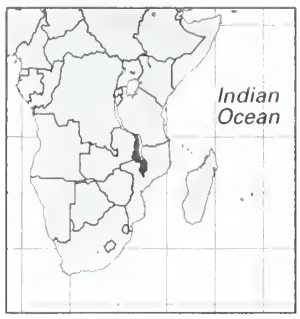
Military

Total active duty personnel (November 2007): 13,500 (army 92.6%, navy 3.7%, air force 3.7%). *Military expenditure as percentage of GDP* (2005): 1.1%; per capita expenditure U.S.$3.

[1]République de Madagascar (French); Republic of Madagascar (English); Repoblikan'i Madagasikara (Malagasy, the national language). [2]Per decision announced in 2000 by High Constitutional Court. [3]Per confirmation of referendum results in April 2007 by the High Constitutional Court. [4]Malagasy is the national language per article 4 of the 1992 constitution. [5]The ariary (MGA), the precolonial currency of Madagascar, officially replaced the Malagasy franc (FMG) in August 2003 at a rate of 1 MGA = FMG 5. [6]The 22 regions are to become the effective first-order subdivisions in late 2009 replacing the 6 provinces (which will be abolished per a constitutional referendum passed in April 2007). [7]Legal export volume. [8]The discovery of offshore and on-land petroleum was announced in September 2005. [9]Weights of consumer price index components. [10]Indirect taxes less subsidies and less imputed bank charges. [11]Unemployed. [12]Detail does not add to total given because of rounding. [13]Imports c.i.f.; exports f.o.b. [14]Railroad infrastructure was either inoperable or in poor condition in June 2003. [15]Circulation of daily newspapers. [16]Subscribers. [17]Based on demographic survey of 6,629 persons (5,029 females, 1,600 males). [18]2003–04. [19]1998–99.

Internet resources for further information:
- **Institut National de la Statistique http://www.cite.mg**
- **Ministere de l'Economie des Finances et du Budget http://www.mefb.gov.mg**

Malawi



Official name: Republic of Malawi.
Form of government: multiparty republic with one legislative house (National Assembly [193]).
Head of state and government: President.
Capital: Lilongwe[1].
Official language: none.
Official religion: none.
Monetary unit: Malawian kwacha (MK); valuation (Sept. 8, 2008) 1 U.S.$ = MK 140.59; 1 £ = MK 248.38.

Area and population

Regions Districts/Cities/ Municipality	area sq km	population 2008 census[2]	Regions Districts/Cities/ Municipality	area sq km	population 2008 census[2]
Central	35,592	5,491,034	Southern	31,753	5,876,784
Dedza	3,624	623,789	Balaka	2,193	316,748
Dowa	3,041	556,678	Blantyre (rural)	2,012	338,047
Kasungu	7,878	616,085	Blantyre (city)		661,444
Lilongwe (rural)	6,159	1,228,146	Chikwawa	4,755	438,895
Lilongwe (city)		669,021	Chiradzulu	767	290,946
Mchinji	3,356	456,558	Machinga	3,771	488,996
Nkhota kota	4,259	301,868	Mangochi	6,273	803,602
Ntcheu	3,424	474,464	Mulanje	2,056	525,429
Ntchisi	1,655	224,098	Mwanza	826	94,476
Salima	2,196	340,327	Neno	1,469	108,897
Northern	26,931	1,698,502	Nsanje	1,942	238,089
Chitipa	4,288	179,072	Phalombe	1,394	313,227
Karonga	3,355	272,789	Thyolo	1,715	587,455
Likoma	18	10,445	Zomba (rural)	2,580	583,167
Mzimba	10,430	724,873	Zomba (municipality)		87,366
Mzuzu (city)		128,432	TOTAL LAND AREA	94,276	
Nkhata Bay	4,071	213,779	INLAND WATER	24,208	
Rumphi	4,769	169,112	TOTAL	118,484	13,066,320

Demography

Population (2008): 13,932,000[3].
Density (2008)[4]: persons per sq mi 382.7, persons per sq km 147.8.
Urban-rural (2007): urban 18.2%; rural 81.8%.
Sex distribution (2008): male 48.72%; female 51.28%.
Age breakdown (2007): under 15, 46.1%; 15–29, 29.3%; 30–44, 13.1%; 45–59, 7.3%; 60–74, 3.5%; 75 and over, 0.7%.
Population projection: (2010) 14,613,000; (2020) 18,313,000.
Doubling time: 29 years.
Ethnic composition (2000): Chewa 34.7%; Maravi 12.2%; Ngoni 9.0%; Yao 7.9%; Tumbuka 7.9%; Lomwe 7.7%; Ngonde 3.5%; other 17.1%.
Religious affiliation (2005): Protestant/independent Christian *c.* 55%; Roman Catholic *c.* 20%; Muslim *c.* 20%; traditional beliefs *c.* 3%; other *c.* 2%.
Major cities (2008): Lilongwe 669,021; Blantyre 661,444; Mzuzu 128,432; Zomba 87,366; Kasungu 42,351.

Vital statistics

Birth rate per 1,000 population (2007): 42.1 (world avg. 20.3).
Death rate per 1,000 population (2007): 18.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 23.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 5.74.
Life expectancy at birth (2007): male 43.4 years; female 42.6 years.
Adult population (ages 15–49) *living with HIV* (2007): 11.9%[5] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): HIV/AIDS-related *c.* 729; lower respiratory infections *c.* 244; cardiovascular diseases *c.* 175; malaria *c.* 169; diarrheal diseases *c.* 164.

National economy

Budget (2005). Revenue: MK 103,298,600,000 (tax revenue 52.9%, of which VAT 16.7%, income tax 11.7%, excises 7.3%, import tax 6.4%; grants 38.7%; nontax revenue 8.4%). Expenditures: MK 110,943,700,000 (current expenditure 76.3%; capital expenditure 21.0%; other 2.7%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 3,444,700, sugarcane 2,500,000, cassava 2,150,000, potatoes 1,900,000, bananas 385,000, plantains 300,000, peanuts (groundnuts) 150,000, tobacco leaves 118,000, rice 91,500, dry beans 85,000, pigeon peas 79,000, sorghum 63,700, onions 50,000, seed cotton 42,000, tea 39,000, coffee 1,600; livestock (number of live animals) 1,900,000 goats, 752,000 cattle, 458,000 pigs; roundwood (2006) 5,709,348 cu m, of which fuelwood 91%; fisheries production (2006) 72,787 (from aquaculture 2%). Mining and quarrying (2006): limestone 34,226; gemstones (including rubies and sapphires) 2,171 kg. Manufacturing (value added in U.S.$'000,000; 2001): food products 62; beverages 28; chemicals and chemical products 11; wearing apparel 7. Energy production (consumption): electricity (kW-hr; 2005) 1,273,000,000 (1,265,000,000); hard coal (metric tons; 2006) 48,000 ([2005] 52,000); petroleum products (metric tons; 2005) none (261,000).
Land use as % of total land area (2003): in temporary crops 26.0%, in permanent crops 1.5%, in pasture 19.7%; overall forest area (2005) 36.2%.
Population economically active (2003): total 5,707,000; activity rate 46.3% (participation rates: ages 15–64, 88.0%; female 49.7%; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	122.7	140.8	154.3	171.9	198.4	226.1	244.1

Household income and expenditure. Average household size (2008) 4.4; average annual household income MK 50,904 (U.S.$467)[6]; expenditure[6]: food 55.6%, housing and energy 20.6%, transportation and communications 6.6%, clothing and footwear 4.3%.
Gross national income (GNI; 2007): U.S.$3,506,000,000 (U.S.$250 per capita); purchasing power parity GNI (U.S.$750 per capita).

Structure of gross domestic product and labour force

	2006		1998	
	in value MK '000,000[7]	% of total value[7]	labour force	% of labour force
Agriculture	92,774	32.4	3,765,827	83.6
Mining	3,816	1.3	2,499	0.1
Manufacturing	29,771	10.4	118,483	2.6
Construction	14,253	5.0	73,402	1.6
Public utilities	5,749	2.0	7,319	0.2
Transp. and commun.	18,309	6.4	32,623	0.7
Trade, hotels	53,210	18.6	257,389	5.7
Finance, real estate	40,868	14.3	13,957	0.3
Public administration	18,725	6.5	101,433	2.2
Services	28,272	9.9	85,996	1.9
Other	–19,614[8]	–6.9[8]	50,362[9]	1.1[9]
TOTAL	286,133	100.0[10]	4,509,290	100.0

Public debt (external, outstanding; March 2008): U.S.$556,920,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 24; remittances (2007) 1.0; foreign direct investment (2004–06 avg.) 26; official development assistance (2006) 669. Disbursements for (U.S.$'000,000): tourism (2006) 65; remittances (2007) 1.0.

Foreign trade[11]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
MK '000,000	–3,232	–13,895	–24,400	–33,889	–45,046	–69,616
% of total	5.0%	18.0%	22.4%	23.7%	27.4%	32.1%

Imports (2006): MK 164,468,000,000 (chemical products 18.6%, of which fertilizers 6.1%; road vehicles 15.7%; machinery and apparatus 13.0%; refined petroleum 10.8%; cereals 5.2%). *Major import sources:* South Africa 35.9%; Mozambique 12.5%; U.A.E. 6.0%; U.K. 5.8%; India 4.1%.
Exports (2006): MK 90,911,000,000 (tobacco 61.4%; tea 7.4%; apparel/clothing accessories 6.1%; raw sugar 5.7%; cotton 2.2%). *Major export destinations:* South Africa 22.2%; U.K. 13.2%; Germany 10.5%; U.S. 8.2%; Egypt 5.1%.

Transport and communications

Transport. Railroads (2004): route length (2006) 495 mi, 797 km; passenger-km 29,523,000; metric ton-km cargo (2007) 18,438,000. Roads (2003): total length 9,600 mi, 15,451 km (paved 45%). Vehicles (2001): passenger cars 22,500; trucks and buses 57,600. Air transport (2005)[12]: passenger-km 201,000,000; metric ton-km cargo 1,364,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	65	5.2	PCs	2006	25	1.9
Telephones				Dailies	2007	55[13]	4.0[13]
Cellular	2007	1,051[14]	76[14]	Internet users	2007	140	10
Landline	2007	175	13	Broadband	2007	1.6[14]	0.1[14]

Education and health

Educational attainment (2004)[15]. Percentage of population age 25 and over having: no formal education/unknown 33.5%; incomplete primary education 24.2%; complete primary 27.9%; secondary and university 14.4%. *Literacy* (2007): total population age 15 and over literate 65.9%; males literate 78.1%; females literate 53.9%.

Education (2005)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–13)	4,643	45,075	3,200,646	71.0
Secondary (age 14–18)	..	8,975	183,860	20.5
Voc., teacher tr.[16]	...	224	2,525	11.3
Higher	6	771	5,810	7.5

Health: physicians (2004) 266 (1 per 46,644 persons); hospital beds (1998) 14,087 (1 per 735 persons); infant mortality (2007) 92.1; undernourished population (2002–04) 4,200,000 (35% of total population based on the consumption of a minimum daily requirement of 1,790 calories).

Military

Total active duty personnel (November 2007): 5,300 (army 100%). *Military expenditure as percentage of GDP* (2005): 0.7%; per capita expenditure U.S.$1.

[1]Judiciary meets in Blantyre. [2]Preliminary results. [3]Estimate of the U.S. Bureau of the Census International Database not adjusted with June 2008 preliminary census results. [4]Based on land area. [5]Statistically derived midpoint of range. [6]Based on the Malawi Integrated Household Survey 2004–05, comprising 10,777 households. [7]At factor cost. [8]Less imputed bank service charges. [9]Unemployed. [10]Detail does not add to total given because of rounding. [11]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [12]Air Malawi only. [13]Circulation of the two leading daily newspapers only. [14]Subscribers. [15]Based on the Malawi Demographic and Household Survey 2004, comprising 13,664 households. [16]1995–96.

Internet resources for further information:
- **National Statistical Office of Malawi http://www.nso.malawi.net**
- **Reserve Bank of Malawi http://www.rbm.mw**

Malaysia

Official name: Malaysia.
Form of government: federal constitutional monarchy with two legislative houses (Senate [70[1]]; House of Representatives [222]).
Chief of state: Paramount Ruler.
Head of government: Prime Minister.
Capital: Kuala Lumpur[2].
Administrative centre: Putrajaya[3].
Official language: Malay.
Official religion: Islam.
Monetary unit: ringgit (RM); valuation (Sept. 8, 2008) 1 U.S.$ = RM 3.46; 1 £ = RM 6.11.

Area and population

Regions / States	Capitals	area sq mi	area sq km	population 2005 estimate
East Malaysia				
Sabah	Kota Kinabalu	28,426	73,622	2,931,700
Sarawak	Kuching	48,050	124,450	2,312,600
West Malaysia (Peninsular Malaysia)				
Johor	Johor Bahru	7,331	18,987	3,101,200
Kedah	Alor Setar	3,639	9,425	1,848,100
Kelantan	Kota Baharu	5,799	15,020	1,505,600
Melaka	Melaka	638	1,652	713,000
Negeri Sembilan	Seremban	2,570	6,657	946,300
Pahang	Kuantan	13,886	35,965	1,427,000
Perak	Ipoh	8,110	21,005	2,256,400
Perlis	Kangar	307	795	224,500
Pulau Pinang	George Town	398	1,030	1,468,800
Selangor	Shah Alam	3,062	7,930	4,736,100[4]
Terengganu	Kuala Terengganu	5,002	12,955	1,016,500
Federal Territories				
Kuala Lumpur	—	94	243	1,556,200
Labuan[5]	—	35	91	83,500
Putrajaya	—	19	49	[4]
TOTAL		127,366	329,876	26,127,700[6]

Demography

Population (2008): 27,027,000.
Density (2008): persons per sq mi 212.2, persons per sq km 81.9.
Urban-rural (2006): urban 68.3%; rural 31.7%.
Sex distribution (2005): male 50.75%; female 49.25%.
Age breakdown (2005): under 15, 32.4%; 15–29, 26.2%; 30–44, 20.6%; 45–59, 13.8%; 60–74, 5.6%; 75–84, 1.2%; 85 and over, 0.2%.
Population projection: (2010) 27,920,000; (2020) 32,020,000.
Ethnic composition (2005): Malay 50.5%; other indigenous 11.0%; Chinese 23.5%; Indian 7.0%; other citizen 1.2%; noncitizen 6.8%.
Religious affiliation (2000): Muslim 60.4%; Buddhist 19.2%; Christian 9.1%; Hindu 6.3%; Chinese folk religionist 2.6%; animist 0.8%; other 1.6%.
Major cities (2000): Kuala Lumpur 1,297,526; Ipoh 566,211; Klang 563,173; Petaling Jaya 438,084; Johor Bahru 384,613; Putrajaya (2006) 55,000.

Vital statistics

Birth rate per 1,000 population (2007): 17.6 (world avg. 20.3).
Death rate per 1,000 population (2007): 4.4 (world avg. 8.6).
Marriage/divorce rates per 1,000 population (2004): 6.3/n.a.
Total fertility rate (avg. births per childbearing woman; 2007): 2.60.
Life expectancy at birth (2007): male 71.9 years; female 76.4 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 149; infectious and parasitic diseases 101; malignant neoplasms (cancers) 83; accidents and violence 43; chronic respiratory diseases 40.

National economy

Budget (2007). Revenue: RM 139,885,000,000 (tax revenue 68.0%, of which corporate taxes 23.0%, taxes on petroleum 14.6%; nontax revenue 32.0%). Expenditures: RM 163,648,000,000 (current expenditure 75.2%; development expenditure 24.8%).
Population economically active (2007): total 10,889,500; activity rate 41.0% (participation rates: ages 15–64 [2000] 65.5%; female 36.1%; unemployed [June 2008] 3.5%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.4	103.2	104.4	105.9	109.1	113.0	115.3

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): oil palm fruit 77,700,000, rice 2,231,000, natural rubber 1,270,000, sugarcane 800,000, coconuts 568,000, bananas 530,000, coffee 40,000, pepper 19,000; livestock (number of live animals) 2,290,000 pigs, 138,000 buffalo; roundwood (2006) 25,518,648 cu m, of which fuelwood 12%; fisheries production (2006) 1,464,652 (from aquaculture 11%). Mining and quarrying (2006): iron ore 667,082; tin[7] 2,398; gold 3,497 kg. Manufacturing (value added in RM '000,000; 2005): electrical machinery/electronics 31,238; petroleum and coal products 16,058; chemical products 15,056; transport equipment 5,166. Energy production (consumption): electricity (kW-hr; 2006) 100,831,000,000 ([2005] 85,068,000,000); coal (metric tons; 2006) 901,801 ([2005] 11,380,000); crude petroleum (barrels; 2007–08) 251,370,000 ([2005] 190,200,000); petroleum products (metric tons; 2005) 20,475,000 (23,937,000); natural gas (cu m; 2007–08) 69,000,000,000 ([2005] 61,780,000,000).
Gross national income (GNI; 2007): U.S.$173,705,000,000 (U.S.$6,540 per capita); purchasing power parity GNI (U.S.$13,570 per capita).

Structure of gross domestic product and labour force

	2007 in value RM '000,000	% of total value	labour force	% of labour force
Agriculture	65,701	10.2	1,558,200	14.3
Mining	92,796	14.5	39,400	0.4
Manufacturing	179,522	28.0	1,977,300	18.2
Construction	17,584	2.7	922,500	8.5
Public utilities	16,373	2.6	60,800	0.5
Transp. and commun.	42,329	6.6	538,200	4.9
Trade, hotels	83,577	13.0	2,472,800	22.7
Finance, real estate	81,719	12.7	840,300	7.7
Pub. admin., defense	44,231	6.9	716,100	6.6
Services	30,910	4.8	1,412,500	13.0
Other	−12,877[8]	−2.0[8]	351,400[9]	3.2[9]
TOTAL	641,864[6]	100.0	10,889,500	100.0

Public debt (external, outstanding; 2006): U.S.$21,899,000,000.
Household income and expenditure. Average household size (2004) 4.6; gross income per household (2002) RM 36,132 (U.S.$9,508); expenditure (2005)[10]: food and nonalcoholic beverages 31.4%, housing and energy 21.4%, transportation 15.9%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 10,427; remittances (2007) 1,700; foreign direct investment (FDI; 2004–06 avg.) 4,883; official development assistance (2006) 240. Disbursements for (U.S.$'000,000): tourism (2006) 4,020; remittances (2007) 6,385; FDI (2004–06 avg.) 3,691.
Land use as % of total land area (2003): in temporary crops 5.5%, in permanent crops 17.6%, in pasture 0.9%; overall forest area (2005) 63.6%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
RM '000,000	+50,905	+66,200	+77,696	+100,176	+108,367	+100,420
% of total	7.7%	9.6%	8.8%	10.4%	10.1%	9.1%

Imports (2006): RM 481,000,000,000 (microcircuits/transistors 23.9%, petroleum 8.3%, office machines/computers/parts 7.8%, chemical products 7.8%, base metals 6.8%). *Major import sources:* Japan 13.2%; U.S. 12.5%; China 12.1%; Singapore 11.7%; Thailand 5.5%; Taiwan 5.5%.
Exports (2006): RM 589,367,000,000 (computers/office machines/parts 17.4%, microcircuits/transistors 15.9%, petroleum 8.9%, telecommunications equipment 5.7%, natural gas 4.8%, palm oil 3.2%). *Major export destinations:* U.S. 18.8%; Singapore 15.4%; Japan 8.9%; China 7.2%; Thailand 5.3%.

Transport and communications

Transport. Railroads (2007): route length (2006) 1,890 km; passenger-km 1,315,900,000; metric ton-km cargo 1,354,900,000. Roads (2004): total length 77,695 km (paved 76%). Vehicles (2005[12]): passenger cars 5,987,421; trucks and buses 827,215. Air transport (2007): passenger-km 40,096,000,000; metric ton-km cargo 2,621,500,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	5,480	222	PCs	2005	5,600	218
Telephones				Dailies	2005	2,435[13]	93[13]
Cellular	2007	23,347[14]	879[14]	Internet users	2007	15,868	597
Landline	2007	4,350	164	Broadband	2007	1,369[14]	52[14]

Education and health

Educational attainment (2002). Percentage of population age 25–64 having: no formal schooling/unknown 8.4%; primary education 28.7%; lower secondary 20.7%; upper secondary 31.1%; higher 11.1%. *Literacy* (2007): total population age 15 and over literate 91.9%; males 94.2%; females 89.6%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	7,596	186,514	3,045,975	16.3
Secondary (age 13–19)	1,928	126,081	2,121,118	16.8
Voc., teacher tr.[15]	151	12,678	127,367	10.0
Higher[15]	38	25,692	396,302	15.4

Health (2006): physicians 21,937 (1 per 1,214 persons); hospital beds 50,262 (1 per 530 persons); infant mortality rate (2007) 6.7; undernourished population (2002–04) 600,000 (3% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

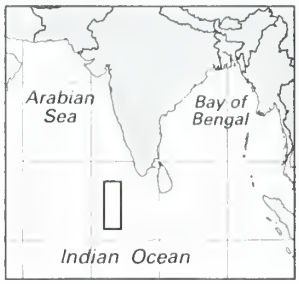
Military

Total active duty personnel (November 2007): 109,000 (army 73.4%, navy 12.8%, air force 13.8%). *Military expenditure as percentage of GDP* (2005): 2.4%; per capita expenditure U.S.$119.

[1]Includes 44 appointees of the Paramount Ruler; the remaining 26 are indirectly elected. [2]Location of the first royal palace and both houses of parliament. [3]Location of the second royal palace, the prime minister's office, and the supreme court. [4]Selangor includes Putrajaya. [5]Geographically within East Malaysia. [6]Detail does not add to total given because of rounding. [7]Metal content. [8]Net of import duties less imputed bank service charges. [9]Unemployed. [10]Weights of consumer price index components. [11]Imports c.i.f.; exports f.o.b. [12]January 1. [13]Circulation of daily newspapers. [14]Subscribers. [15]2004.

Internet resources for further information:
- **Department of Statistics http://www.statistics.gov.my/eng**
- **Central Bank of Malaysia http://www.bnm.gov.my**

Maldives



Official name: Dhivehi Raajjeyge Jumhooriyyaa (Republic of Maldives).
Form of government: multiparty republic[1] with one legislative house (People's Majlis[2] [50[3]]).
Head of state and government: President.
Capital: Male.
Official language: Divehi.
Official religion: Islam.
Monetary unit: rufiyaa (Rf); valuation (Sept. 8, 2008) 1 U.S.$ = Rf 12.80; 1 £ = Rf 22.61.

Area and population[4]

Administrative atolls	area[5] sq km	population 2006 census[6]	Administrative atolls	area[5] sq km	population 2006 census[6]
North Thiladhunmathi	13.48	13,495	North Nilandhe	1.46	3,765
South Thiladhunmathi	16.52	16,237	South Nilandhe	1.61	4,967
North Miladhunmadulu	9.62	11,940	Kolhumadulu	3.69	8,493
South Miladhunmadulu	7.50	10,015	Hadhdhunmathi	14 14	11,990
North Maalhosmadulu	4 99	14,756	North Huvadhu	4.39	8,262
South Maalhosmadulu	3.73	9,578	South Huvadhu	6.02	11,013
Faadhippolhu	1.16	9,190	Gnaviyani	4.20	7,636
Male	4 29	15,441	Addu	9 41	18,026
North Ari	2.86	5,776	**Capital island**		
South Ari	2.59	8,379	Male	2.24	103,693
Felidhu	0.42	1,606	TOTAL	116.81[7]	298,968
Mulakatholhu	2.49	4,710			

Demography

Population (2008): 386,000 (including foreign workers).
Density (2008)[8]: persons per sq mi 8,559, persons per sq km 3,305.
Urban-rural (2006): urban 34.7%; rural 65.3%.
Sex distribution (2006): male 50.66%; female 49.34%.
Age breakdown (2006): under 15, 31.1%; 15–29, 33.2%; 30–44, 18.3%; 45–59, 9.2%; 60–74, 5.2%; 75–84, 1.1%; 85 and over, 0.2%; unknown 1.7%.
Population projection: (2010) 396,000; (2020) 392,000.
Doubling time: 46 years.
Ethnic composition (2000): Maldivian 98.5%; Sinhalese 0.7%; other 0.8%.
Religious affiliation: virtually 100% Sunnī Muslim[9].
Major islets (2006): Male (capital island) 103,693; Hithadhoo 9,465; Fuvammulah 7,636; Kulhudhuffushi 6,998; Thinadhoo 4,442.

Vital statistics

Birth rate per 1,000 population (2006): 19.5 (world avg. 20.3).
Death rate per 1,000 population (2006): 3.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 15.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.72.
Marriage/divorce rates per 1,000 population (2006): 18.6/7.3.
Life expectancy at birth (2005): male 71.7 years; female 72.7 years.
Major causes of death per 100,000 population (2002): communicable diseases 251; ischemic heart diseases 91; malignant neoplasms (cancers) 54; cerebrovascular diseases 49; accidents, violence, and suicide 44.

National economy

Budget (2006). Revenue: Rf 6,548,800,000 (nontax revenue 41.3%, of which resort lease rent 19.2%; tax revenue 32.2%, of which import duties 23.2%; grants 25.9%; other 0.6%). Expenditures: Rf 8,644,700,000 (community programs 25.7%; economic services 18.0%; general administration 17.6%; education 13.6%; police/security 10.4%; health 8.9%).
Public debt (external, outstanding; 2007): U.S.$523,700,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): vegetables 28,526, bananas 11,000, coconuts 2,625, nuts 2,100; roundwood, n.a.; fisheries production (2006) 184,158, of which skipjack 138,458, yellowfin tuna 21,772 (from aquaculture, none). Mining and quarrying: coral for construction materials. Manufacturing: details, n.a.; however, major industries include boat building and repairing, coir yarn and mat weaving, coconut and fish processing, lacquerwork, garment manufacturing, and handicrafts. Energy production (consumption): electricity (kW-hr; 2005) 160,000,000 (160,000,000); petroleum products (metric tons; 2005) none (233,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 434; remittances (2007) 2; foreign direct investment (2004–06 avg.) 13; official development assistance (2006) 39. Disbursements for (U.S.$'000,000): tourism (2006) 78; remittances (2007) 84.
Population economically active (2006): total 128,836; activity rate of total population 43.1% (participation rates: ages 15–64, 65.8%; female 41.3%; unemployed 14.4%[10]).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index[11]	100.7	104.9	103.6	101.8	103.1	105.9	107.1

Household income and expenditure (2002–03)[12]. Average household size (2006) 6.5; average annual income per household Rf 188,743 (U.S.$14,746); sources of income: self-employment 34.5%, wages and salaries 31.5%, rent 13.4%; expenditure: housing and energy 35.8%, food, beverages, and tobacco 29.9%, transportation and communications 7.8%, health 5.2%.
Gross national income (GNI; 2007): U.S.$977,000,000 (U.S.$3,200 per capita); purchasing power parity GNI (U.S.$5,040 per capita).

Structure of gross domestic product and labour force

	2007 in value Rf '000,000[13]	2007 % of total value	2006 labour force	2006 % of labour force
Agriculture, fishing	665	6.6	12,624	9.8
Mining	54	0.5	339	0.3
Manufacturing	707	7.0	19,259	14.9
Public utilities	447	4.4	1,229	1.0
Construction	618	6.1	5,930	4.6
Transp. and commun.	1,893	18.8	7,098	5.5
Trade	386	3.8	23,801	18.5
Tourism (resorts)	2,800	27.8	...	...
Finance, real estate	1,150	11.4	1,738	1.3
Pub. admin., defense	1,592	15.8	15,949	12.4
Services	155	1.5	17,302	13.4
Other	–402[14]	–4.0[14]	23,567[15]	18.3[15]
TOTAL	10,065	100.0[16]	128,836	100.0

Land use as % of total land area (2003): in temporary crops *c.* 13%, in permanent crops *c.* 30%, in pasture *c.* 3%; overall forest area (2005) *c.* 3%.

Foreign trade[17, 18]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–259.3	–318.8	–460.8	–583.3	–701.3	–868.3
% of total	49.5%	51.2%	56.0%	64.3%	60.9%	65.6%

Imports (2007): U.S.$1,096,300,000 (consumer goods 33.6%, of which food 16.0%; refined petroleum 18.5%; goods for construction 15.7%; transport equipment/parts 7.2%). *Major import sources:* Singapore 22.5%; U.A.E. 19.1%; India 11.5%; Malaysia 8.5%; Sri Lanka 6.9%.
Exports (2007): U.S.$228,000,000 (reexports [mostly jet fuel] 52.7%; fish 46.0%, of which fresh skipjack tuna 18.4%, fresh yellowfin tuna 15.5%, canned fish 4.7%). *Major export destinations*[19]: Thailand 40.9%; Sri Lanka 14.9%; U.K. 11.4%; France 7.3%; Japan 4.5%.

Transport and communications

Transport. Railroads: none. Roads: total length, n.a. Vehicles: passenger cars (2007) 3,393; trucks and buses (2005) 1,573. Air transport (2005)[20]: passenger arrivals 773,845, passenger departures 761,922; cargo unloaded 17,336 metric tons, cargo loaded 10,923 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	41	144	PCs	2005	45	152
Telephones				Dailies	2005	8[21]	25[21]
Cellular	2007	318[22]	1,040[22]	Internet users	2007	33	108
Landline	2007	33	109	Broadband	2007	7.5[22]	25[22]

Education and health

Educational attainment (2000). Population age 25 and over 71,937; percentage with university education 0.4%. *Literacy* (2006): total population age 15 and over literate 93.5%; males literate 92.5%; females literate 94.5%.

Education (2003)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	231	2,216	66,169	29.9
Secondary (age 11–18)	106	1,530	26,967	17.6
Voc., teacher tr.	...	38	1,328	34.9
Higher[23]	1	138	6,898	50.0

Health (2005): physicians 380 (1 per 775 persons); hospital beds 765 (1 per 384 persons); infant mortality rate per 1,000 live births 12.1; undernourished population (2002–04) 30,000 (10% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (2006): n.a.; the national security service (paramilitary police force) includes an air element and coast guard. *Military expenditure as percentage of GDP* (2005): 5.5%; per capita expenditure U.S.$169.

[1]New constitution ratified on Aug. 7, 2008; first multiparty election held in October 2008. [2]Also known or translated as Majlis. [3]Includes eight nonelective seats. [4]Maldives is divided into 20 administrative districts corresponding to atoll groups; arrangement shown here is from north to south. Total area figures are pre–December 2004 (or pre–Indian Ocean tsunami). [5]For 196 inhabited administrative islets only. [6]Excludes foreigners residing in the Maldives for employment purposes. [7]Total area of all 1,192 islets (including 88 resort islets and 34 industrial/other islets) is 298 sq km (115 sq mi). [8]Based on areas of inhabited islands only. [9]The only non-Sunnī are Shī'ī members of the Indian trading community and non-Muslim workers who serve alcohol on the resort islands. [10]Includes workers not actively seeking employment. [11]Male (capital island) only. [12]Data taken from the Household Income and Expenditure Survey 2002–03, comprising 834 households in both Male and outer atolls. [13]At 1995 prices. [14]Less imputed bank service charges. [15]Includes 18,605 unemployed. [16]Detail does not add to total given because of rounding. [17]Imports c.i.f.; exports f.o.b. [18]Exports include reexports unless otherwise footnoted. [19]Domestic exports only. [20]Male airport. [21]Circulation of 2 daily newspapers. [22]Subscribers. [23]Maldives College of Higher Education.

Internet resources for further information:
- **Ministry of Planning and National Development http://www.planning.gov.mv**
- **Maldives Monetary Authority http://www.mma.gov.mv**

Mali

Official name: République du Mali (Republic of Mali).
Form of government: multiparty republic with one legislative house (National Assembly [147]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Bamako.
Official language: French.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Regions	Capitals	area sq mi	area sq km	population 1998 census
Gao	Gao	65,858	170,572	495,178
Kayes	Kayes	46,233	119,743	1,424,657
Kidal	Kidal	58,467	151,430	65,524
Koulikoro	Koulikoro	37,007	95,848	1,620,811
Mopti	Mopti	30,509	79,017	1,405,370
Ségou	Ségou	25,028	64,821	1,652,594
Sikasso	Sikasso	27,135	70,280	1,839,747
Tombouclou	Tombouctou (Timbuktu)	191,743	496,611	496,312
District				
Bamako	Bamako	97	252	1,178,977
TOTAL		482,077	1,248,574	10,179,170[1]

Demography

Population (2008): 12,324,000.
Density (2008): persons per sq mi 25.6, persons per sq km 9.9.
Urban-rural (2005): urban 30.5%; rural 69.5%.
Sex distribution (2006): male 49.67%; female 50.33%.
Age breakdown (2006): under 15, 48.1%; 15–29, 27.7%; 30–44, 12.9%; 45–59, 6.4%; 60–74, 4.1%; 75–84, 0.7%; 85 and over, 0.1%.
Population projection: (2010) 13,025,000; (2020) 17,505,000.
Doubling time: 21 years.
Ethnic composition (2000): Bambara 30.6%; Senufo 10.5%; Fula Macina (Niafunke) 9.6%; Soninke 7.4%; Tuareg 7.0%; Maninka 6.6%; Songhai 6.3%; Dogon 4.3%; Bobo 3.5%; other 14.2%.
Religious affiliation (2005): Muslim (nearly all Sunnī) *c.* 90%; Christian (mostly Roman Catholic) *c.* 5%; traditional beliefs/nonreligious *c.* 5%.
Major cities (1998): Bamako (2007) 1,494,000[2]; Sikasso 113,803; Ségou 90,898; Mopti 79,840; Koutiala 74,153; Kayes 67,262.

Vital statistics

Birth rate per 1,000 population (2006): 49.9 (world avg. 20.3).
Death rate per 1,000 population (2006): 16.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 33.0 (world avg. 11.7).
Marriage/divorce rates per 1,000 population (2005): n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2006): 7.42.
Life expectancy at birth (2006): male 47.2 years; female 51.0 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 1,487, of which HIV/AIDS 97; diseases of the circulatory system 135; accidents and injuries 120; malignant neoplasms (cancers) 54; chronic respiratory diseases 36.

National economy

Budget (2006). Revenue: CFAF 694,300,000,000 (tax revenue 66.1%, grants 23.4%, nontax revenue 4.3%, other 6.2%). Expenditures: CFAF 795,100,000,000 (current expenditure 56.8%; capital expenditure 43.2%).
Public debt (external, outstanding; 2006): U.S.$1,411,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 167; remittances (2007) 212; foreign direct investment (2004–06 avg.) 170; official development assistance (2006) 825. Disbursements for (U.S.$'000,000): tourism (2005) 77; remittances (2007) 57.
Population economically active (2004): total 2,598,200[3]; activity rate of total population *c.* 23% (participation rates: ages 15–64, 51.1%; female 42.5%; officially unemployed 8.8%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.2	110.5	109.0	105.6	112.4	114.1	115.7

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): millet 1,074,440, rice 955,300, sorghum 907,966, corn (maize) 542,100, seed cotton 414,965, peanuts (groundnuts) 180,000, karite nuts (2005) 85,000, cowpeas 70,000; livestock (number of live animals) 13,010,000 goats, 8,595,000 sheep, 7,917,000 cattle, (2005) 720,000 asses, 476,000 camels; roundwood 5,497,000 cu m, of which fuelwood 92%; fisheries production 101,000 (from aquaculture 1%). Mining and quarrying (2007): salt (2005) 6,000; gold 52,800 kg. Manufacturing (2005): beef and veal 98,000; goat meat (2001) 49,000; sheep meat 36,000; raw sugar 35,000; cement (2002) 18,125; soft drinks (2002) 197,700 hectolitres. Energy production (consumption): electricity (kW-hr; 2005) 459,000,000 (459,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (184,000); natural gas, none (none).

Household income and expenditure. Average household size (2004) 6.0; average annual income per household: n.a.; sources of income: n.a.; expenditure: n.a.
Gross national income (GNI; 2007): U.S.$6,136,000,000 (U.S.$500 per capita); purchasing power parity GNI (U.S.$1,040 per capita).

Structure of gross domestic product and labour force

	2005 in value CFAF '000,000	2005 % of total value	2004 labour force[3]	2004 % of labour force
Agriculture, fishing	1,001,900	36.5	984,600	37.9
Mining	269,500	9.8	11,400	0.4
Manufacturing	153,700	5.6	272,500	10.5
Construction	166,100	6.1	102,100	3.9
Public utilities	43,200	1.6	5,100	0.2
Transp. and commun.	128,400	4.7	55,300	2.1
Trade, hotels	424,200	15.5	675,700	26.0
Finance, real estate	166,000	6.0	8,400	0.3
Pub. admin., defense	...		39,900	1.5
Services	169,600	6.2	214,000	8.2
Other	220,200[4]	8.0[4]	229,200[5]	8.8[5]
TOTAL	2,742,800	100.0	2,598,200	100.0[6]

Land use as % of total land area (2003): in temporary crops 3.9%, in permanent crops, 0.03%, in pasture 28.4%; overall forest area (2005) 10.3%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFAF '000,000,000	+113.4	−35.2	−61.5	−76.2	+39.2	−137.1
% of total	10.2%	3.2%	5.6%	6.7%	2.5%	8.9%

Imports (2007): CFAF 842,700,000,000 (machinery and apparatus 30.3%, petroleum products 28.9%, food products 19.7%). *Major import sources* (2004): France 15.9%; Senegal 12.2%; Côte d'Ivoire 9.4%; Togo 8.5%; Benin 7.4%; China 4.9%.
Exports (2007): CFAF 705,600,000,000 (gold 73.0%, raw cotton and cotton products 15.2%, livestock 4.3%). *Major export destinations* (2004): South Africa 30.9%; Switzerland 20.4%; Senegal 6.3%; China 4.7%; Côte d'Ivoire 4.7%.

Transport and communications

Transport. Railroads (2004): route length 453 mi, 729 km; passenger-km (2002) 196,000,000; metric ton-km cargo (2002) 188,000,000. Roads (2004): total length 11,625 mi, 18,709 km (paved 18%). Vehicles (2001): passenger cars 18,900; trucks and buses 31,700. Air transport: n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	400	36	PCs	2005	45	4.1
Telephones				Dailies	2005	34[7]	3.1[7]
Cellular	2007	2,483[8]	207[8]	Internet users	2007	100	8.3
Landline	2007	85	7.1	Broadband	2007	3.2[8]	0.3[8]

Education and health

Educational attainment (2001)[9]. Population age 25 and over having: no formal schooling/unknown 82.1%; incomplete primary education 7.7%; complete primary 2.0%; secondary 6.5%; higher 1.7%. *Literacy* (2005): percentage of total population age 15 and over literate 29.5%; males literate 40.0%; females literate 19.4%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary[10] (age 6–14)	8,079	39,109	1,990,765	50.9
Secondary (age 15–17)	121	1,904	47,279	24.8
Vocational	119	..	51,604	...
Higher[11, 12]	1	...	32,609	..

Health: physicians (2004) 1,053 (1 per 10,566 persons); hospital beds (2001) 1,664 (1 per 6,203 persons); infant mortality rate per 1,000 live births (2006) 107.5; undernourished population (2002–04) 3,800,000[13] (29%[13] of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2007): 7,350 (army 100%). *Military expenditure as percentage of GDP* (2005): 2.3%; per capita expenditure U.S.$10.

[1]Excludes 772,006 Malians living abroad. [2]Population of urban agglomeration. [3]Per 2004 Malian labour force survey; the 2004 population economically active estimate of the ILO Employment Trends Unit is 5,322,000. [4]Import taxes. [5]Includes 227,500 unemployed. [6]Detail does not add to total given because of rounding. [7]Circulation of 2 out of 4 daily newspapers. [8]Subscribers. [9]Based on the Mali Demographic and Health Survey 2001, comprising 64,116 people in 12,331 households. [10]Includes lower secondary. [11]2004–05. [12]University of Bamako only. [13]Based on FAO data.

Internet resources for further information:

- **La Banque de France: La Zone Franc**
  http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm
- **Direction Nationale de la Statistique et de l'Informatique**
  http://www.dnsi.gov.ml

Malta

Official name: Repubblikka ta' Malta (Maltese); Republic of Malta (English).
Form of government: unitary multiparty republic with one legislative house (House of Representatives [69[1]]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Valletta.
Official languages: Maltese; English.
Official religion: Roman Catholicism.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.[2]

Area and population

Islands Statistical districts[3]	Largest localities	area sq mi	area sq km	population 2008[4] estimate
Comino	—	1.1	2.8	31,289[5]
Gozo	Rabat	25.9	67.1	
Malta		94.9[6]	245.7[6]	379,001
Northern District	Mosta	28.5	73.7	58,904
Northern Harbour	Birkirkara	9.3	24.0	121,382
South Eastern District	Żejtun	19.4	50.2	60,104
Southern Harbour	Żabbar	10.1	26.2	81,204
Western District	Rabat	28.0	72.5	57,407
TOTAL		121.9	315.6	410,290

Demography

Population (2008): 412,000.
Density (2008): persons per sq mi 3,380, persons per sq km 1,305.
Urban-rural (2005): urban 95.3%; rural 4.7%.
Sex distribution (2008[4]): male 49.75%; female 50.25%.
Age breakdown (2008[4]): under 15, 16.2%; 15–29, 21.6%; 30–44, 19.7%; 45–59, 21.9%; 60–74, 14.6%; 75–84, 4.7%; 85 and over, 1.3%.
Population projection: (2010) 417,000; (2020) 432,000.
Ethnic composition (2005): Maltese 97.0%; other European 2.3%, of which British 1.2%; other 0.7%.
Religious affiliation (2004): Roman Catholic *c.* 95%, of which practicing *c.* 63%; other Christian *c.* 0.5%; Muslim *c.* 0.7%; nonreligious/atheist *c.* 2%; other *c.* 1.8%.
Major localities (2005): Birkirkara 21,858; Mosta 18,735; Qormi 16,559; Żabbar 14,671; Valletta 6,300 (urban agglomeration 81,047).

Vital statistics

Birth rate per 1,000 population (2007): 9.5 (world avg. 20.3); within marriage 75.1%; outside of marriage 24.9%.
Death rate per 1,000 population (2007): 7.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 1.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.37.
Marriage/divorce rates per 1,000 population (2007): 6.1/7.
Life expectancy at birth (2005): male 77.7 years; female 81.4 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 335.4; malignant neoplasms (cancers) 185.6; diseases of the respiratory system 88.0; accidents, poisonings, and violence 31.4; endocrine and metabolic diseases 26.3; diseases of the digestive system 26.3.

National economy

Budget (2005). Revenue: Lm 1,032,046,000 (social security 21.5%; income tax 19.0%; grants and loans 17.1%; value-added tax 16.3%). Expenditures: Lm 985,552,000 (recurrent expenditures 76.7%, of which social security 22.4%, education 5.2%; capital expenditure 13.3%; public debt service 9.0%).
Public debt (December 2007): U.S.$4,053,000,000[8].
Production (metric tons except where noted). Agriculture, forestry, fishing (2007): cow's milk 41,000, potatoes 25,000, tomatoes 16,600, melons 9,400, wheat 9,200, pork 8,500, onions 7,800, eggs 7,000; livestock (number of live animals) 73,683 pigs, 19,233 cattle, 1,100,000 chickens; roundwood (2006), n.a.; fisheries production (2006) 3,537 (from aquaculture 32%). Mining and quarrying (2006): limestone 1,200,000 cu m, small quantities of salt. Manufacturing (value added in U.S.$'000,000; 2004): telecommunications equipment and electronics 171; food products 78; printing and publishing 59; rubber products 37. Energy production (consumption): electricity (kW-hr; 2005) 2,240,000,000 (2,240,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (831,000); natural gas, none (none).
Population economically active (2006): total 164,400; activity rate of total population 40.5% (participation rates: ages 15–64, 59.1%; female 32.1%; unemployed [March 2007] 6.8%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.9	105.2	106.6	109.5	112.3	115.2	116.0

Household income and expenditure. Average household size (2005) 2.9; average annual income per household (2000) Lm 7,945 (U.S.$18,155); sources of income (1993): wages and salaries 63.8%, professional and unincorporated enterprises 19.3%, rents, dividends, and interest 16.9%; expenditure (2000): food and beverages 36.6%, transportation and communications 23.4%, recreation, entertainment, and education 9.4%, household furnishings and operations 7.6%.
Gross national income (GNI; 2007): U.S.$7,200,000,000 (U.S.$17,600 per capita); purchasing power parity GNI, n.a..

Structure of gross domestic product and labour force

	2002 in value Lm '000	2002 % of total value	2006 labour force	2006 % of labour force
Agriculture	39,297	2.3	2,200	1.3
Manufacturing	326,468	19.4	26,500	16.1
Mining	48,315	2.9	700	0.4
Construction			12,200	7.4
Public utilities	[9]	[9]	3,400	2.1
Transp. and commun.	88,704	5.3	11,500	7.0
Trade, hotels	155,319	9.3	35,400	21.5
Finance, real estate	132,182	7.9	15,500	9.4
Pub. admin., defense	464,349[9]	27.6[9]	14,400	8.8
Services	170,235	10.1	29,900	18.2
Other	255,575[10]	15.2[10]	12,700[11]	7.7[11]
TOTAL	1,680,444	100.0	164,400	100.0[12]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 770; remittances (2007) 40; foreign direct investment (2004–06 avg.) 914. Disbursements for (U.S.$'000,000): tourism (2006) 321; remittances (2007) 51; foreign direct disinvestment (2004–06 avg.) –8.
Land use as % of total land area (2003): in temporary crops *c.* 31%, in permanent crops *c.* 3%, in pasture, n.a.; overall forest area (2005) *c.* 1%.

Foreign trade[13]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–713	–935	–1,166	–1,394	–1,480	–1,587
% of total	14.4%	15.9%	18.2%	22.3%	21.0%	20.6%

Imports (2006): U.S.$4,260,000,000 (machinery and apparatus 39.5%, of which electronic integrated circuits and micro-assemblies 22.9%; food 9.7%; refined petroleum 8.7%; chemicals and chemical products 8.6%). *Major import sources:* Italy 28.3%; U.K. 10.0%; France 9.5%; Germany 7.7%; Singapore 6.3%.
Exports (2006): U.S.$2,780,000,000 (machinery and apparatus 59.9%, of which semiconductor devices 47.3%; food 5.5%; medicine 4.6%; printed matter 3.7%; professional/scientific equipment 3.6%; children's toys 3.2%). *Major export destinations:* France 15.0%; Germany 12.8%; Singapore 12.7%; U.S. 12.5%; U.K. 9.4%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 1,400 mi, 2,254 km (paved 88%). Vehicles (2005[14]): passenger cars 207,055; trucks and buses 45,054. Air transport (2006)[15]: passenger-km 2,376,000,000; metric ton-km cargo 11,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	222	553	PCs	2005	67	166
Telephones				Dailies	2004	68[16]	169[16]
Cellular	2007	372[17]	908[17]	Internet users	2007	158	386
Landline	2007	198	484	Broadband	2007	61[17]	150[17]

Education and health

Educational attainment (2005). Percentage of population age 15 and over having: no formal schooling 2.4%; special education for disabled 0.3%; primary education 25.9%; secondary 45.3%; some postsecondary 16.5%; undergraduate or professional qualification 7.2%; graduate 2.4%. *Literacy* (2005): total population age 10 and over literate 92.8%; males literate 91.7%; females literate 93.9%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 5–10)	90	1,919	29,596	15.4
Secondary (age 11–17)	46	2,904	28,204	11.2
Voc., teacher tr			4,386	
Higher	2	825	10,367	12.6

Health: physicians (2006) 1,320 (1 per 308 persons); hospital beds (2002) 1,932 (1 per 205 persons); infant mortality rate per 1,000 live births (2005) 6.0; undernourished population (2002–04) less than 2.5% of total population.

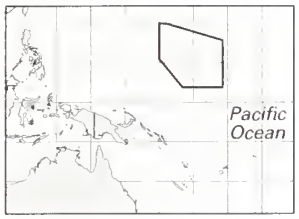
Military

Total active duty personnel (November 2007): 1,609 (armed forces includes air and marine elements); Italian military (November 2007) 49 troops. *Military expenditure as percentage of GDP* (2005): 0.7%[18]; per capita expenditure U.S.$101[18].

[1]Current number as of March 2008 elections; statutory number equals 65. [2]The Maltese lira (Lm) was the former monetary unit; on Jan. 1, 2008, 1 Lm = €2.33. [3]Actual local administration in 2008 was based on 68 local councils grouped into 3 regions. [4]January 1. [5]Four people lived on Comino as of Jan. 1, 2004. [6]Detail does not add to total given because statistical district data are based on older survey. [7]Divorce was illegal in mid-2008. [8]Long-term general government debt. [9]Pub. admin., defense includes Public utilities. [10]Indirect taxes less subsidies. [11]Includes 11,925 unemployed. [12]Detail does not add to total given because of rounding. [13]Imports c.i.f.; exports f.o.b. [14]June 30. [15]Air Malta only. [16]Circulation for 3 out of 4 daily newspapers. [17]Subscribers. [18]Excludes expenditure on military pensions.

Internet resources for further information:
- **National Statistics Office http://www.nso.gov.mt**
- **Central Bank of Malta http://www.centralbankmalta.com**

Marshall Islands



Official name: Majōl (Marshallese); Republic of the Marshall Islands (English).
Form of government: unitary republic with one legislative house[1] (Nitijela [33]).
Head of state and government: President.
Capital: Majuro[2].
Official languages: Marshallese (Kajin-Majōl); English.
Official religion: none.
Monetary unit: U.S. dollar (U.S.$); valuation (Sept. 8, 2008) 1 U.S.$ = £0.57.

Area and population

Atolls/Islands[3]	area sq km	population 1999 census	Atolls/Islands[3]	area sq km	population 1999 census
Aiinglaplap	14.69	1,959	Majuro	9.71	23,682
Ailuk	5.36	514	Maloelap	9.82	856
Arno	12.95	2,069	Mejit	1.86	416
Aur	5.62	537	Mili	15.93	1,032
Bikini	6.01	13	Namorik	2.77	772
Ebon	5.75	902	Namu	6.27	903
Enewelak	5.85	853	Rongelap	7.95	19
Jabat	0.57	95	Ujae	1.86	440
Jaluit	11.34	1,669	Ujelang	1.74	0
Kili	0.93	774	Utirik	2.43	433
Kwajalein	16.39	10,903	Wotho	4.33	145
Lae	1.45	322	Wotje	8.18	866
Lib	0.93	147	Other atolls	10.46	0
Likiep	10.26	527	TOTAL	181.43[4,5]	50,848

Demography

Population (2008): 53,200.
Density (2008): persons per sq mi 759.5, persons per sq km 293.2.
Urban-rural (2005): urban 66.1%; rural 33.9%.
Sex distribution (2006): male 51.02%; female 48.98%.
Age breakdown (2006): under 15, 38.1%; 15–29, 30.8%; 30–44, 16.5%; 45–59, 10.3%; 60–74, 3.4%; 75–84, 0.8%; 85 and over, 0.1%.
Population projection: (2010) 54,000; (2020) 62,000.
Ethnic composition (nationality; 2000): Marshallese 88.5%; U.S. white 6.5%; other Pacific Islanders and East Asians 5.0%.
Religious affiliation (1999): Protestant 85.0%, of which United Church of Christ 54.8%, Assemblies of God 25.8%; Roman Catholic 8.4%; Mormon 2.1%; nonreligious 1.5%; other/unknown 3.0%.
Major towns (1999): Majuro[2] (2004) 20,800; Ebeye (in Kwajalein Atoll) 9,345; Laura (in Majuro Atoll) 2,256; Ajeltake (in Majuro Atoll) 1,170; Enewetak 823.

Vital statistics

Birth rate per 1,000 population (2006): 33.0 (world avg. 20.3).
Death rate per 1,000 population (2006): 4.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 28.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 3.84.
Life expectancy at birth (2006): male 68.3 years; female 72.3 years.
Major causes of death per 100,000 population (2003–04; registered deaths only): sepsis/septicemia 83.7; malignant neoplasms (cancers) 41.9; myocardial infarction 27.3; pneumonia 25.5; suicide 23.7.

National economy

Budget (2005). Revenue: U.S.$83,900,000 (U.S. government grants 63.9%; tax revenue 26.4%, of which income tax 11.7%, import duties 9.3%; nontax revenue 9.7%). Expenditures: U.S.$86,900,000 (current expenditure 80.2%, capital expenditure 19.8%).
Public debt (external, outstanding; 2006–07): U.S.$98,700,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2002–03): copra (2007) 5,491, breadfruit 4,536, coconuts 885, bananas 161, pandanus 114, taro 108; livestock (number of live animals) 12,900 pigs, 86,000 chickens; roundwood, n.a.; fisheries production (2006) 42,019, of which skipjack 37,661 (from aquaculture, none). Mining and quarrying: for local construction only. Manufacturing (2005): copra 5,194; coconut oil and processed (chilled or frozen) fish are important products; the manufacture of handicrafts and personal items (clothing, mats, boats, etc.) by individuals is also significant. Energy production (consumption): electricity (kW-hr; 2005) 81,000,000 (81,000,000[6]); coal, none (none); petroleum products, n.a. (n.a.[6]).
Population economically active (1999): total 14,677; activity rate of total population 28.9% (participation rates: ages 15–64, 52.1%; female 34.1%; unemployed [2007] 30.9%).

Price and earnings indexes (2001 = 100)

	2002	2003	2004	2005	2006	2007
Consumer price index	101.3	98.5	100.6	105.1	109.6	116.1
Annual earnings index	100.3	99.3	105.5	..	..	..

Household income and expenditure. Average household size (2006)[7] 7.9; average annual income per household (2005)[7] U.S.$17,482; sources of income (2002)[8]: wages and salaries 89.3%, rent and investments 2.4%, social security 2.2%; expenditure (2003)[9]: food 35.9%, housing and energy 17.1%, transportation 13.7%, education and communication 6.6%, wearing apparel 4.3%.

Gross national income (2007): U.S.$204,000,000 (U.S.$3,070 per capita).

Structure of gross domestic product and labour force

	2001 in value U.S.$'000	2001 % of total value	2004 labour force[10]	2004 % of labour force[10]
Agriculture, fishing	10,296.1	10.4	952	10.4
Mining	291.4	0.3	—	—
Manufacturing	4,489.5	4.5	43	0.5
Public utilities	3,402.2	3.4	252	2.8
Construction	11,314.1	11.4	499	5.4
Transp. and commun.	5,044.8	5.1	531	5.8
Trade, restaurants, hotels	16,937.3	17.1	1,808	19.7
Finance, insurance, real estate	15,458.2	15.6	393	4.3
Public administration	31,043.6	31.3	2,630	28.7
Services			924	10.1
Other	896.7[11]	0.9[11]	1,128	12.3
TOTAL	99,173.8[5]	100.0	9,161[5]	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2004–05) 5.5; remittances (2005) 0.4; foreign direct investment (FDI; 2004–06 avg.) 279; official development assistance (2006) 55. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.[12]; FDI (2004–06 avg.) 13.
Land use as % of total land area (2003): in temporary crops *c.* 6%, in permanent crops *c.* 44%, in pasture *c.* 22%; overall forest area (2005) n.a.

Foreign trade[13]

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.$'000,000	–74.4	–69.4	–59.2	–63.3	–57.4	–69.3
% of total	80.9%	77.6%	72.2%	69.0%	64.6%	67.7%

Imports (2000): U.S.$68,200,000 (mineral fuels and lubricants 43.6%; machinery and transport equipment 16.9%; food, beverages, and tobacco 10.9%). *Major import sources* (2005): U.S. 47.1%; Guam 13.5%; Australia 8.5%; Japan 7.9%; Philippines 5.9%.
Exports (2005): U.S.$16,400,000 (reexports of diesel fuel 80.9%; crude coconut oil 15.4%; remainder 3.7%). *Major export destinations* (2005): mostly the U.S.

Transport and communications

Transport. Roads (2002): only Majuro and Kwajalein have paved roads (40.0 mi, 64.5 km). Vehicles (2004): passenger cars 1,694; trucks and buses 602. Air transport (2006)[14]: passenger-km 31,236,000; metric ton-km cargo 348,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004			PCs	2004	5.0	92
Telephones				Dailies	2005	0	0
Cellular	2004	0.6[15]	12[15]	Internet users	2006	2.2	36
Landline	2004	4.5	82	Broadband	2005	..	..

Education and health

Educational attainment (2006)[7]. Percentage of population age 25 and over having: no formal schooling 2.1%; elementary education 28.0%; secondary 55.8%; some higher 7.9%; undergraduate degree 5.1%; advanced degree 1.1%. *Literacy* (2000): total population age 15 and over literate 92.0%; males literate 92.0%; females literate 92.0%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 6–14)	100	759	10,991	14.5
Secondary (age 15–18)	16	207	3,196	15.4
Voc., teacher tr.[16]	1		27	.
Higher[17]	1		250	

Health (2004): physicians 33 (1 per 1,744 persons); hospital beds 140 (1 per 411 persons); infant mortality rate per 1,000 live births (2006) 28.3; undernourished population, n.a.

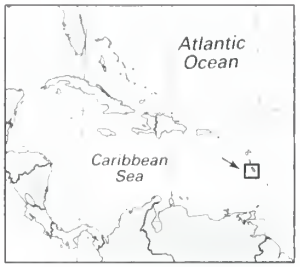
Military

The United States provides for the defense of the Republic of the Marshall Islands under the 1984 and 2003 compacts of free association[18].

[1]In addition, the Council of Iroij, a 12-member body of tribal chiefs, serves in an advisory capacity. [2]Local name of town is DUD (an acronym for Delap [Woja], Uliga, and Djarrit [Rita]—three small islands now merged by landfill). [3]Four districts centred at Majuro, Ebeye, Wotje, and Jaluit make up the local government structure. [4]Land area only; excludes lagoon area of 11,673 sq km (4,507 sq mi). [5]Detail does not add to total given because of rounding. [6]Rising costs of imported diesel fuel for the country's main power plants at Majuro and Ebeye prompted the government to declare a state of economic emergency in July 2008. [7]Based on the 2006 RMI Community Survey, comprising 9,491 respondents in 1,205 households. [8]Based on the 2002 Household Income and Expenditure Survey, comprising 5,074 respondents in 657 households. [9]Weights of consumer price index components. [10]Employed only. [11]Import duties less imputed bank service charges. [12]Labour income of Marshallese at Kwajalein (2003–04) U.S.$17,600,000. [13]Imports f.o.b. in balance of trade; c.i.f. in commodities and trading partners. [14]Air Marshall Islands only. [15]Subscribers. [16]Fisheries and Nautical Training Center only. [17]University of the South Pacific Marshall Islands campus only. [18]The U.S. Army's premier ballistic missile test site is at Kwajalein; number of troops at site, n.a.

Internet resources for further information:
- **Economic Policy-Planning and Statistics Office**
  http://www.spc.int/prism/country/mh/stats
- **Republic of the Marshall Islands: Documents**
  http://marshall.wetserver.net/index.jsp

Martinique



Official name: Département de la Martinique (Department of Martinique).
Political status: overseas department (France) with two legislative houses (General Council [45]; Regional Council [41]).
Chief of state: President of France.
Heads of government: Prefect (for France); President of the General Council (for Martinique); President of the Regional Council (for Martinique).
Capital: Fort-de-France.
Official language: French.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Arrondissements	Capitals	area sq mi	area sq km	population 1999 census
Fort-de-France	Fort-de-France	66	171	166,139
La Trinité	La Trinité	131	338	85,006
Le Marin	Le Marin	158	409	106,818
Saint-Pierre	Saint-Pierre	81	210	23,464
TOTAL		436	1,128	381,427

Demography

Population (2008): 403,000.
Density (2008): persons per sq mi 924.3, persons per sq km 357.3.
Urban-rural (2007): urban 98.0%; rural 2.0%.
Sex distribution (2005[1]): male 47.01%; female 52.99%.
Age breakdown (2005): under 15, 21.4%; 15–29, 19.4%; 30–44, 23.7%; 45–59, 18.4%; 60–74, 11.1%; 75–84, 4.3%; 85 and over, 1.7%.
Population projection: (2010) 405,000; (2020) 408,000.
Ethnic composition (2000): mixed race (black/white/Asian) 93.4%; French (metropolitan and Martinique white) 3.0%; East Indian 1.9%; other 1.7%.
Religious affiliation (2000): Roman Catholic 86.0%; Protestant 5.6% (mostly Seventh-day Adventist); other Christian 5.4%; other 3.0%.
Major communes (2003): Fort-de-France (2007) 93,000; Le Lamentin 36,400; Schœlcher 21,400; Le Robert (1999) 21,201; Sainte-Marie 20,600.

Vital statistics

Birth rate per 1,000 population (2007): 12.4 (world avg. 20.3); (1997) within marriage 31.8%; outside of marriage 68.2%.
Death rate per 1,000 population (2007): 7.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 4.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.90.
Marriage/divorce rates per 1,000 population: (2006) 3.7/(2005) 1.5.
Life expectancy at birth (2007): male 76.5 years; female 82.3 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 181.8; malignant neoplasms (cancers) 167.9; accidents, poisoning, and violence 51.5; metabolic and nutritional disorders 42.2; diseases of the nervous system 36.4; diseases of the respiratory system 34.6.

National economy

Budget (2004). Revenue[2]: €599,000,000 (current revenue 75.3%, of which tax revenue 46.1%, aid from France 25.7%; capital revenue 24.7%). Expenditures: €599,000,000 (current expenditure 70.8%, of which transfers 51.1%, wages and salaries 13.2%; capital expenditure 29.2%).
Public debt (1994): U.S.$186,700,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 300,000, sugarcane 215,000, roots and tubers 20,000 (of which yams 7,500, sweet potatoes 1,000), plantains 18,000, pineapples 18,000, tomatoes 6,700, lettuce 5,000, cucumbers and gherkins 4,000, melons 3,000, green beans 1,500, coconuts 1,150; livestock (number of live animals) 25,000 cattle, 20,000 pigs, 15,000 sheep, 13,500 goats; roundwood (2006) 26,501 cu m, of which fuelwood 92%; fisheries production (2006) 6,392 (from aquaculture 1%). Mining and quarrying (2006): salt 200,000, pumice 130,000. Manufacturing (2004): cement 224,090; sugar 4,140; rum 81,091 hectolitres; other products include clothing, fabricated metals, and yawls and sails. Energy production (consumption): electricity (kW-hr; 2005) 1,195,000,000 (1,195,000,000); coal, none (none); crude petroleum (barrels; 2005) none (4,435,000); petroleum products (metric tons; 2005) 823,000 (609,000); natural gas, none (none).
Household income and expenditure. Average household size (2004–05) 2.6; average annual disposable income per household (2001) €32,859 (U.S.$36,720); sources of income (2000): wages and salaries 54.7%, inheritance or endowment 14.0%, self-employment 12.7%, other 18.6%; expenditure (1993): food and beverages 32.1%, transportation and communications 20.7%, housing and energy 10.6%, household durable goods 9.4%, clothing and footwear 8.0%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 306; remittances, n.a.; foreign direct investment (FDI) n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.; FDI, n.a.
Population economically active (2003): total 183,000[3]; activity rate of total population 46.7%[3] (participation rates: ages 15–64, 70.4%[3]; female 49.7%[3]; unemployed [2007] 21.2%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.1	104.2	106.4	108.6	111.2	113.9	116.7

Gross domestic product (2003): U.S.$9,595,000,000 (U.S.$23,987 per capita).

Structure of gross domestic product and labour force

	2004 in value €'000,000	2004 % of total value	2005[1, 4] labour force	2005[1, 4] % of labour force
Agriculture, fishing	174	2.6	8,922	5.9
Mining	.	.	4,998	3.3
Manufacturing	372	5.5		
Construction	399	5.9	6,044	4.0
Public utilities	146	2.1	1,163	0.8
Transp. and commun.	218	3.2	5,939	3.9
Trade, restaurants, hotels	1,082	15.9	19,693	13.0
Finance, real estate, insurance	1,962	28.8	8,003	5.3
Pub. admin., defense	2,108	31.0	22,390	14.8
Services			36,247	23.9
Other	339	5.0[5]	38,020[6]	25.1[6]
TOTAL	6,800	100.0	151,419	100.0

Land use as % of total land area (2003): in temporary crops *c.* 9%, in permanent crops *c.* 10%, in pasture *c.* 10%; overall forest area (2005) *c.* 44%.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	−1,530	−1,574	−1,695	−1,922	−2,015	−2,099
% of total	70.2%	69.8%	72.2%	71.8%	67.3%	76.3%

Imports (2006): €2,504,000,000 (mineral fuels 21.8%, food and agricultural products 16.5%, machinery and apparatus 15.1%, automobiles/parts 11.7%). *Major import sources:* metropolitan France 55.6%; U.K. 15.3%; Italy 3.4%; Germany 2.6%; The Netherlands 2.5%; Guadeloupe 2.0%.
Exports (2006): €489,000,000 (refined petroleum 60.5%, agricultural and fishery products [significantly bananas] 14.1%, beverages [significantly rum] 9.4%). *Major export destinations:* Guadeloupe 32.9%; metropolitan France 21.9%; U.S. 16.8%; St. Lucia 12.7%; French Guiana 3.7%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 1,308 mi, 2,105 km (paved [1988] 75%). Vehicles (1998): passenger cars 147,589; trucks and buses 35,615. Air transport (2007): passengers 1,695,000; cargo 13,926 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	66	169	PCs	2004	82	207
Telephones				Dailies	2007	30[8]	75[8]
Cellular	2004	295[9]	745[9]	Internet users	2005	130	326
Landline	2001	172	417	Broadband	2003	6.0[9]	15[9]

Education and health

Educational attainment (1999). Percentage of population age 20 and over having: unknown, or no formal education through lower secondary education 63.6%; vocational 16.7%; upper secondary 9.2%; incomplete higher 5.0%; complete higher 5.5%. *Literacy* (2005): percentage of total population age 15 and over literate 98.0%; males literate 97.6%; females literate 98.3%.

Education (2007–08)

	schools[10]	teachers[11]	students	student/teacher ratio
Primary (age 6–11)	258	3,031	48,443	...
Secondary (age 12–18)	87	4,553	33,421	...
Vocational			11,927	...
Higher	.	..	8,985	...

Health (2006[1]): physicians 1,011 (1 per 392 persons); hospital beds 1,993 (1 per 199 persons); infant mortality rate per 1,000 live births (2007) 6.6; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 1,250 French troops (including troops stationed in Guadeloupe, excluding gendarmerie).

[1]January 1. [2]In 2006, aid from the French government made up an estimated 30.8% of Martinique's revenue. [3]Estimate of the ILO Employment Trends Unit. [4]Salaried employees only. [5]Import duties less subsidies and less imputed financial service charges. [6]Unemployed. [7]Imports c.i.f.; exports f.o.b. [8]Circulation of *France Antilles* daily newspaper only. [9]Subscribers. [10]2003–04. [11]2004–05.

Internet resources for further information:
- **INSEE: Martinique**
  http://www.insee.fr/fr/regions/martinique
- **Martinique Chamber of Commerce and Industry**
  http://www.martinique.cci.fr

Mauritania

Official name: Al-Jumhūrīyah al-Islāmīyah al-Mūrītānīyah (Arabic) (Islamic Republic of Mauritania).
Form of government: military regime[1].
Head of state and government: Chairman of the High Council of State assisted by the Prime Minister.
Capital: Nouakchott.
Official language: Arabic[2].
Official religion: Islam.
Monetary unit: ouguiya (UM); valuation (Sept. 8, 2008) 1 U.S.$ = UM 231.85; 1 £ = UM 409.61.

Area and population

Regions	Capitals	area sq mi	area sq km	population 2006 estimate[3]
El-'Açâba	Kiffa	14,100	36,600	281,645
Adrar	Atar	83,100	215,300	80,846
Brakna	Aleg	13,000	33,800	287,157
Dakhlet Nouadhibou	Nouadhibou	8,600	22,300	92,441
Gorgol	Kaédi	5,300	13,600	282,164
Guidimaka	Sélibaby	4,000	10,300	206,593
Hodh ech-Chargui	Néma	70,600	182,700	327,374
Hodh el-Gharbi	'Ayoûn el-'Atroûs	20,600	53,400	246,642
Inchiri	Akjoujt	18,100	46,800	13,369
Tagant	Tidjikdja	36,800	95,200	89,075
Tiris Zemmour	Zouérate	97,600	252,900	47,805
Trarza	Rosso	25,800	66,800	311,819
Capital District				
Nouakchott	Nouakchott	400	1,000	648,930
TOTAL		398,000	1,030,700	2,915,860

Demography

Population (2008): 3,204,000.
Density (2008): persons per sq mi 8.1, persons per sq km 3.1.
Urban-rural (2006): urban 65.5%; rural 34.5%.
Sex distribution (2006): male 49.50%; female 50.50%.
Age breakdown (2006): under 15, 45.6%; 15–29, 27.2%; 30–44, 15.6%; 45–59, 8.0%; 60–74, 3.1%; 75 and over, 0.5%.
Population projection: (2010) 3,363,000; (2020) 4,153,000.
Doubling time: 24 years.
Ethnic composition (2003)[4]: black African-Arab-Berber (Black Moor) 40%; Arab-Berber (White Moor) 30%; black African (mostly Wolof, Tukulor, Soninke, and Fulani) 30%.
Religious affiliation (2000): Sunnī Muslim 99.1%; traditional beliefs 0.5%; Christian 0.3%; other 0.1%.
Major cities (2005): Nouakchott 743,500; Nouadhibou 94,700; Rosso (2000) 48,922; Boghé (2000) 37,531; Adel Bagrou (2000) 36,007.

Vital statistics

Birth rate per 1,000 population (2006): 41.0 (world avg. 20.3).
Death rate per 1,000 population (2006): 12.2 (world avg. 8.6).
Marriage/divorce rates per 1,000 population (2005): n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2006): 5.86.
Life expectancy at birth (2006): male 50.9 years; female 55.4 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 178; malignant neoplasms (cancers) 71; diseases of the respiratory system 44; diseases of the digestive system 26.

National economy

Budget (2005). Revenue: UM 131,300,000,000 (tax revenue 57.9%, of which VAT 20.3%, corporate taxes 17.0%, import taxes 8.2%; nontax revenue 34.3%, of which fishing royalties 26.9%; grants 7.8%). Expenditures: UM 166,100,000,000 (current expenditure 76.2%, of which goods and services 36.5%, wages and salaries 13.5%, defense 10.7%; capital expenditure 23.8%).
Public debt (external, outstanding; 2008[10]): U.S.$1,751,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 77,000, sorghum 58,000, dates 22,000, corn (maize) 17,000, peas 10,000, cowpeas 7,200; livestock (number of live animals) 8,850,000 sheep, 5,600,000 goats, 1,692,000 cattle, 1,600,000 camels; roundwood (2006) 1,665,899 cu m, of which fuelwood 99.8%; fisheries production (2006) 571,496, of which octopuses 15,589 (from aquaculture, none). Mining and quarrying (gross weight; 2006–07): iron ore 11,439,000; gypsum (2005) 39,000; copper 5,000. Manufacturing (value added in U.S.$'000,000; 1997): food, beverages, and tobacco products 5.2; machinery, transport equipment, and fabricated metals 3.8; bricks, tiles, and cement 1.6. Energy production (consumption): electricity (kW-hr; 2006–07) 404,000,000 (290,000,000); coal (metric tons; 2004) none (7,000); crude petroleum (barrels; 2006–07)[5] 9,600,000 ([2004] 8,830,000); petroleum products (metric tons; 2006–07) none (431,000).
Household income and expenditure. Average household size (2004): 5.8; expenditure (2002–03)[6]: food and beverages 53.1%, housing and energy 13.7%, transportation and communications 12.1%, household furnishings 6.3%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 11; remittances (2007) 2; foreign direct investment (2004–06 avg.) 418; official development assistance (2006) 188. Disbursements for (U.S.$'000,000): tourism (1999) 55; remittances, n.a.
Population economically active (2006): total 1,238,000; activity rate of total population 39.2% (participation rates: over age 15, 68.8%; female 40.4%; unemployed [2005] 32.5%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.7	108.8	114.4	126.3	141.6	150.4	161.3
Hourly earnings index[7]	103.8	103.8	103.8	124.4	193.7	..	..

Gross national income (GNI; 2007): U.S.$2,636,000,000 (U.S.$840 per capita); purchasing power parity GNI (U.S.$2,010 per capita).

Structure of gross domestic product and labour force

	2006 in value UM '000,000	2006 % of total value	2000 labour force	2000 % of labour force
Agriculture, livestock, fishing	112,075	15.7	314,306	48.2
Mining	91,212	12.8	5,769	0.9
Crude petroleum	158,626	22.2	..	..
Manufacturing	23,952	3.4	30,156	4.6
Public utilities			2,837	0.4
Construction	39,638	5.5	15,562	2.4
Transp. and commun	27,461	3.8	17,916	2.8
Trade	68,631	9.6	108,532	16.7
Finance			2,011	0.3
Services	66,005	9.2	98,720	15.1
Pub. admin., defense	71,296	10.0		
Other	55,798[8]	7.8[8]	55,958[9]	8.6[9]
TOTAL	714,694	100.0	651,767	100.0

Land use as % of total land area (2003): in temporary crops 0.5%, in permanent crops 0.01%, in pasture 38.3%; overall forest area (2005) 0.3%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−110.0	−99.5	−223.8	−483.8	−803.2	+199.6	+143.7
% of total	13.4%	13.0%	26.0%	35.5%	39.1%	7.9%	5.7%

Imports (2007): U.S.$1,198,800,000 (imports for extractive industries 28.3%, petroleum products 23.1%, unspecified 48.6%). *Major import sources* (2006): France 11.9%; China 8.2%; U.S. 6.8%; Belgium 6.7%; Italy 5.9%; Spain 4.1%.
Exports (2007): U.S.$1,342,500,000 (iron ore 39.7%, petroleum 23.1%, fish 15.3%). *Major export destinations* (2006): China 26.3%; Italy 11.8%; France 10.2%; Belgium 6.8%; Spain 6.7%; Japan 5.4%.

Transport and communications

Transport. Railroads (2005): route length 433 mi, 697 km; (2000) passenger-km, negligible; (2000) metric ton-km cargo 7,766,000,000. Roads (2005): total length 5,682 mi, 9,144 km (paved 30%). Vehicles (2001): passenger cars 12,200; trucks and buses 18,200. Air transport (2002)[11]: passenger-km 45,000,000; metric ton-km cargo 4,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	123	44	PCs	2005	42	14
Telephones				Dailies	1996	1.0[12]	0.4[12]
Cellular	2007	1,300[13]	416[13]	Internet users	2006	100	33
Landline	2006	34	11	Broadband	2006	0.7[13]	0.2[13]

Education and health

Educational attainment (2000). Percentage of population age 6 and over having: no formal schooling 43.9%; no formal schooling but literate 2.5%; Islamic schooling 18.4%; primary education 23.2%; lower secondary 5.3%; upper secondary 4.6%; higher technical 0.4%; higher 1.7%. *Literacy* (2007): percentage of total population age 15 and over literate 43.6%; males literate 53.2%; females literate 34.3%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	2,732[14]	11,252[15]	465,970[15]	41.4[15]
Secondary (age 12–17)	179[16]	2,995	89,540	29.9
Voc., teacher tr	..	195	3,256	16.7
Higher	..	356	8,758	24.6

Health (2006): physicians (2005) 477 (1 per 6,212 persons); hospital beds 1,826 (1 per 1,667 persons); infant mortality rate per 1,000 live births 69.5; undernourished population (2002–04) 300,000 (10% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2007): 15,870 (army 94.5%, navy 3.9%, air force 1.6%). *Military expenditure as percentage of GDP* (2005): 3.6%; per capita expenditure U.S.$24.

[1]From Aug. 6, 2008. [2]The 1991 constitution names Arabic as the official language and the following as national languages: Arabic, Fulani, Soninke, and Wolof. [3]Mid-year official projection based on 2000 census. [4]Estimated figures. [5]Offshore crude petroleum production began in February 2006. [6]Weights of consumer price index components. [7]Minimum wage; private sector. [8]Indirect taxes. [9]Not adequately defined. [10]January 1. [11]Includes 1/11 of the traffic of the defunct (from 2002) Air Afrique. [12]Circulation of daily newspapers. [13]Subscribers. [14]2002–03. [15]2005–06. [16]2003–04.

Internet resources for further information:
- **Office National de Statistique http://www.ons.mr**
- **Central Bank of Mauritania http://www.bcm.mr**

Mauritius

Official name: Republic of Mauritius.
Form of government: republic with one legislative house (National Assembly [70]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Port Louis.
Official language: English[1].
Official religion: none.
Monetary unit: Mauritian rupee (Mau Re; plural Mau Rs); valuation (Sept. 8, 2008) 1 U.S.$ = Mau Rs 28.85; 1 £ = Mau Rs 50.97.

Area and population

Islands Non-administrative districts[2]	Principal centres	area sq mi	area sq km	population 2007 estimate
Mauritius		720	1,865[3]	1,223,100
Black River	Tamarin	100	259	71,800
Flacq	Centre de Flacq	115	298	137,200
Grand Port	Mahébourg	100	260	113,800
Moka	Moka	89	231	80,200
Pamplemousses	Pamplemousses	69	179	134,000
Plaines Wilhems	Rose Hill	78	203	379,400
Port Louis	Port Louis	17	43	130,000
Rivière du Rempart	Poudre d'Or	57	148	106,800
Savanne	Souillac	95	245	69,900
Mauritian dependencies				
Agalega[4]		27	70	289[5]
Cargados Carajos Shoals (Saint Brandon)[4]	—	0.4	1	0[5]
Rodrigues	Port Mathurin	40	104	37,300
TOTAL		788[3]	2,040	1,260,689

Demography

Population (2008): 1,269,000.
Density (2008): persons per sq mi 1,610, persons per sq km 622.1.
Urban-rural (2006): urban 42.1%; rural 57.9%.
Sex distribution (2007): male 49.42%; female 50.58%.
Age breakdown (2006): under 15, 23.9%; 15–29, 24.9%; 30–44, 23.4%; 45–59, 18.0%; 60–74, 7.2%; 75–84, 2.1%; 85 and over, 0.5%.
Population projection: (2010) 1,287,000; (2020) 1,370,000.
Ethnic composition (2000): Indo-Pakistani 67.0%; Creole (mixed Caucasian, Indo-Pakistani, and African) 27.4%; Chinese 3.0%; other 2.6%.
Religious affiliation (2000)[6]: Hindu 49.6%; Christian 32.2%, of which Roman Catholic 23.6%; Muslim 16.6%; Buddhist 0.4%; other 1.2%.
Major municipalities (2007): Port Louis 148,939; Beau Bassin–Rose Hill 109,701; Vacoas-Phoenix 106,865; Curepipe 83,754; Quatre Bornes 80,780.

Vital statistics

Birth rate per 1,000 population (2007): 13.5 (world avg. 20.3).
Death rate per 1,000 population (2007): 6.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 6.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.73.
Marriage/divorce rates per 1,000 population (2007): 9.2/1.0.
Life expectancy at birth (2007): male 69.1 years; female 75.8 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 262.6; endocrine, nutritional, and metabolic disorders 168.7; malignant neoplasms (cancers) 74.9.

National economy

Budget (2005–06). Revenue: Mau Rs 39,220,000,000 (tax revenue 90.2%, of which taxes on goods and services 47.8%, taxes on trade 18.3%, corporate income tax 12.0%; nontax revenue/grants 9.8%). Expenditures: Mau Rs 48,875,000,000 (social security 21.1%; interest on debt 15.0%; education 14.0%; police/defense 8.8%; health 8.6%).
Public debt (external, outstanding; 2006): U.S.$585,000,000.
Gross national income (GNI; 2007): U.S.$6,878,000,000 (U.S.$5,450 per capita); purchasing power parity GNI (U.S.$11,390 per capita).

Structure of gross domestic product and labour force

	2006 in value Mau Rs '000,000	% of total value	labour force[7]	% of labour force[7]
Agriculture	9,988	4.9	48,100	9.3
Mining	101	0.1	300	0.1
Manufacturing	36,313	17.6	121,000	23.5
Construction	10,109	4.9	48,400	9.4
Public utilities	3,591	1.7	3,000	0.6
Transp. and commun.	22,427	10.9	36,900	7.1
Trade, hotels	37,587	18.3	110,600	21.4
Finance, real estate	37,865	18.4	30,500	5.9
Pub. admin., defense	12,199	5.9	39,600	7.7
Services	21,442	10.4	77,400	15.0
Other	14,202[8]	6.9[8]	—	—
TOTAL	205,824	100.0	515,800	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 4,400,000, chicken meat 37,000, tomatoes 13,000, potatoes 13,000, bananas 10,500, eggs 5,250, tea 1,723; livestock (number of live animals) 28,500 cattle, 10,000,000 chickens; roundwood (2006) 15,000 cu m, of which fuelwood 47%; fisheries production (2006) 8,784 (from aquaculture 5%). Mining (2005): basalt, n.a.; marine salt 7,900. Manufacturing (value added in Mau Rs '000,000; 2005)[9]: wearing apparel 8,823; food products 6,220; beverages and tobacco products 3,053; cement, bricks, and ceramics 1,968; textiles 1,374; printing and publishing 1,230. Energy production (consumption): electricity (kW-hr; 2007) 2,465,000,000 ([2005] 2,271,000,000); coal (metric tons; 2005) none (364,000); petroleum products (metric tons; 2005) none (796,000).
Population economically active (2004): total 549,600; activity rate of total population 44.5% (participation rates: ages 15 and over, 59.2%; female 35.0%; unemployed [2006] 8.9%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.4	112.2	116.6	122.1	128.1	139.5	152.6
Daily earnings index[10]	105.0	109.9	122.7	130.4	136.9	...	...

Household income and expenditure. Average household size (2004) 3.9; annual income per household (2006–07) Mau Rs 228,996 (U.S.$7,047); sources of income: n.a.; expenditure (2006–07): food and nonalcoholic beverages 28.6%, transportation 14.7%, housing and energy 13.1%, alcohol and tobacco 9.2%, household furnishings 6.4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,005; remittances (2007) 215; foreign direct investment (FDI; 2004–06 avg.) 54; official development assistance (2006) 19. Disbursements for (U.S.$'000,000): tourism (2006) 327; remittances (2007) 13; FDI (2004–06 avg.) 30.
Land use as % of total land area (2003): in temporary crops *c.* 49%, in permanent crops *c.* 3%, in pasture *c.* 3%; overall forest area (2005) *c.* 18%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
Mau Rs '000,000	−10,715	−12,920	−21,482	−30,063	−46,595	−51,599
% of total	9.9%	10.9%	16.4%	19.2%	24.6%	27.1%

Imports (2006): Mau Rs 115,522,000,000 (machinery and apparatus 21.0%, of which telecommunications equipment 8.5%; food 15.0%, of which fish 5.2%; refined petroleum 14.7%; aircraft/parts 6.2%; fabrics/yarn 6.1%). *Major import sources:* France 14.3%; India 13.6%; China 8.6%; South Africa 7.3%; Germany 4.0%.
Exports (2006): Mau Rs 68,927,000,000 (apparel/clothing accessories 35.5%; food 29.2%, of which raw sugar 16.2%, tuna 7.2%; telecommunications equipment 12.3%). *Major export destinations:* U.K. 32.4%; France 15.1%; U.A.E. 11.4%; U.S. 8.3%; Madagascar 4.8%.

Transport and communications

Transport. Railroads: none. Roads (2006[12]): total length 1,255 mi, 2,020 km (paved 98%). Vehicles (2006[12]): passenger cars 84,818; trucks and buses 38,596. Air transport (2005)[13]: passenger-km 6,274,000,000; metric ton-km cargo 211,716,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	260	209	PCs	2005	210	169
Telephones				Dailies	2004	60[14]	48[14]
Cellular	2007	936[15]	742[15]	Internet users	2007	340	270
Landline	2006	357	285	Broadband	2006	22[15]	17[15]

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal education 12.3%; primary 44.1%; lower secondary 23.2%; upper secondary/some higher 17.3%; complete higher 2.6%; unknown 0.5%. *Literacy* (2000): percentage of total population age 12 and over literate 85.1%; males literate 88.7%; females literate 81.6%.

Education (2006)

	schools	teachers	students	student/teacher ratio
Primary (age 5–12)	290	4,183	121,387	29.0
Secondary (age 12–20)	189	7,079	114,657	16.2
Higher	7	...	16,773	...

Health (2007): physicians 1,444 (1 per 873 persons); hospital beds 3,756 (1 per 336 persons); infant mortality rate per 1,000 live births (2006) 14.1; undernourished population (2002–04) 60,000 (5% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

Military

Total active duty personnel (November 2007): none; a 2,000-person paramilitary force includes a 500-person coast guard unit. *Paramilitary expenditure as percentage of GDP* (2005): 0.2%; per capita expenditure U.S.$9.

[1]French is not official but may be used to address the speaker of the National Assembly. [2]The island of Mauritius is administratively divided between 5 municipalities and 4 district councils; detail is unavailable. [3]Detail does not add to total given because of rounding. [4]Administered directly from Port Louis. [5]As of 2000 census. [6]Includes Rodrigues; Rodrigues is 91% Roman Catholic. [7]Estimate of employed workers only (including foreigners). [8]Taxes less subsidies and imputed bank service charges. [9]Establishments employing 10 or more persons only. [10]September. [11]Imports c.i.f.; exports f.o.b. [12]January 1. [13]Air Mauritius only. [14]Circulation of daily newspapers. [15]Subscribers.

Internet resources for further information:
- **Central Statistical Office http://www.gov.mu/portal/site/cso**
- **Bank of Mauritius http://bom.intnet.mu**

Mayotte

Official name: Collectivité Départementale de Mayotte[1] (Departmental Collectivity of Mayotte).[2]
Political status: overseas dependency of France[3] with one legislative house (General Council [19]).
Chief of state: President of France.
Head of government: Prefect (for France); President of the General Council (for Mayotte).
Capital: Mamoudzou.
Official language: French.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Islands Communes	Capitals	area sq mi	 sq km	population 2007 census
Grande Terre				
Acoua	Acoua	4.9	12.6	4,622
Bandraboua	Bandraboua	12.5	32.4	9,013
Bandrele	Bandrele	14.1	36.5	6,838
Boueni	Boueni	5.4	14.1	5,296
Chiconi	Chiconi	3.2	8.3	6,412
Chirongui	Chirongui	11.3	29.3	6,605
Dembeni	Dembeni	15.0	38.8	10,141
Kani-Keli	Kani-Keli	7.9	20.5	4,527
Koungou	Koungou	11.0	28.4	19,831
Mamoudzou	Mamoudzou	16.2	41.9	53,022
M'tsangamouji	M'tsangamouji	8.4	21.8	5,028
M'tzamboro	M'tzamboro	5.3	13.7	6,917
Ouangani	Ouangani	7.3	19.0	6,577
Sada	Sada	4.3	11.2	8,007
Tsingoni	Tsingoni	13.4	34.8	9,200
Petite Terre				
Dzaoudzi	Dzaoudzi	2.6	6.7	15,339
Pamandzi	Pamandzi	1.7	4.3	9,077
TOTAL		144.5	374.2[4]	186,452[5]

Demography

Population (2008): 192,000.
Density (2008): persons per sq mi 1,329, persons per sq km 513.1.
Urban-rural: n.a.
Sex distribution (2006): male 52.27%; female 47.73%.
Age breakdown (2006): under 15, 45.9%; 15–29, 24.6%; 30–44, 18.1%; 45–59, 8.4%; 60–74, 2.5%; 75–84, 0.4%; 85 and over, 0.1%.
Population projection: (2010) 201,000; (2020) 252,000.
Doubling time: 21 years.
Ethnic composition (2000): Comorian[6] 92.3%; Swahili 3.2%; white (French) 1.8%; Makua 1.0%; other 1.7%.
Religious affiliation (2000): Sunnī Muslim 96.5%; Christian, principally Roman Catholic, 2.2%; other 1.3%.
Major communes (2007): Mamoudzou 53,022; Koungou 19,831; Dzaoudzi 15,339.

Vital statistics

Birth rate per 1,000 population (2006): 41.0 (world avg. 20.3).
Death rate per 1,000 population (2006): 7.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 33.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 5.79.
Life expectancy at birth (2006): male 59.6; female 64.0.

National economy

Budget (2005)[7]. Revenue: €269,400,000 (current revenue 81.0%, of which taxes including customs duties 44.8%; development revenue 19.0%). Expenditures: €252,000,000 (current expenditure 78.9%, development expenditure 21.1%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): ylang-ylang 8,609 kg[8], vanilla, negligible[8], bananas, coconuts, and mangoes are also cultivated; livestock (number of live animals; 2003) 22,800 goats, 17,200 cattle; roundwood, n.a.; fisheries production (2006) 5,912 (from aquaculture 2%). Mining and quarrying: negligible. Manufacturing: mostly processing of agricultural products, housing construction materials, printing and publishing, and textiles/clothing. Energy production (consumption): electricity (kW-hr; 2007) n.a. (172,000,000); petroleum products, none (n.a.).
Household income and expenditure. Average household size (2002) 4.3; average annual income per household: n.a.; expenditure (1995)[9]: food and beverages 38.8%, transport and communications 13.1%, clothing and footwear 10.7%, household furnishings 9.8%, housing 7.1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 18; remittances, n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.
Population economically active (2002): total 44,558; activity rate of total population 27.8% (participation rates: ages 15–60, 50.0%; female 38.6%; unemployed [2006] 25.6%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	100.3	103.2	104.3	104.9	106.7	108.1	112.3
Hourly earnings index[10,11]	108.0	119.9	129.5	138.6	152.6		

Gross national income (2002): U.S.$444,000,000 (U.S.$2,780 per capita).

Structure of value added[12] and labour force

	2005 in value €'000	 % of total value	2002 labour force	 % of labour force
Agriculture, forestry, and fishing	1,000	0.4	3,229	7.2
Mining				
Manufacturing	38,000	16.7	1,105	2.5
Public utilities			519	1.2
Construction	37,000	16.3	5,614	12.6
Transp. and commun	19,000	8.4	2,007	4.5
Trade	62,000	27.3	5,435	12.2
Finance, insurance	18,000	7.9	145	0.3
Pub. admin., defense	61,000	26.9	13,460	30.2
Services				
Other	−9,000	−4.0	13,044[13]	29.3[13]
TOTAL	227,000	100.0[4]	44,558	100.0

Public debt (1997): U.S.$74,600,000.
Land use as % of total land area (2005): in temporary crops, n.a., in permanent crops, n.a., in pasture, n.a.; overall forest area 14.7%.

Foreign trade[14]

Balance of trade (current prices)

	2002	2003	2004	2005	2006
U.S.$'000,000	166.5	210.6	−276.7	−303.1	−357.7
% of total	93.7%	95.5%	96.6%	95.9%	96.0%

Imports (2006): U.S.$365,100,000 (machinery and apparatus 17.9%; food 16.2%, of which meat 6.2%; refined petroleum 13.2%; road vehicles 12.1%; chemicals and chemical products 8.4%). *Major import sources:* France 45.9%; Seychelles 12.2%; China 4.9%; Brazil 2.9%; Germany 2.7%.
Exports (2006):U.S.$7,400,000 (road vehicles *c.* 23%; food *c.* 14%, of which fresh fish *c.* 11%; telecommunications equipment *c.* 12%; essential oils [nearly all ylang-ylang] *c.* 8%; tools *c.* 5%). *Major export destinations* (2005): France 42.6%; Comoros 36.1%; Réunion 14.9%; Madagascar 3.1%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 144 mi, 232 km (paved 100%). Vehicles (2004): passenger cars 2,279; trucks and buses 1,453. Air transport (2005): passenger arrivals and departures 200,389; cargo unloaded and loaded 1,395 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2005			PCs	2005		
Telephones				Dailies	2005	0	0
Cellular	2004	48[15]	277[15]	Internet users	2005		
Landline	2002	10	63	Broadband	2005		

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: no formal education 37.6%; participating in formal education 17.8%; primary education 20.8%; lower secondary 13.4%; upper secondary 6.3%; higher 4.1%. *Literacy* (1997): 86.1%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	122	2,308	31,764	13.8
Secondary (age 12–18)	16	1,419	14,620	
Voc. teacher tr.	8		6,247	
Higher	—	—	—	—

Health (2006): physicians 120 (1 per 1,587 persons); hospital beds 245 (1 per 780 persons); infant mortality rate per 1,000 live births 61.2; undernourished population, n.a.

Military

Total active duty personnel (2006): n.a.; a detachment of the French Foreign Legion and French naval personnel is stationed at Dzaoudzi.

[1]Mahoré or Maore in Shimaoré, the local Swahili-based language. [2]Scheduled to become an overseas department of France in 2011. [3]Final status of Mayotte has not yet been determined; it is claimed by Comoros as an integral part of that country. [4]Detail does not add to total given because of rounding. [5]Including illegal residents (mostly Comorians from adjacent islands but also Malagasy and continental Africans). [6]About ⅓ of all Comorians (a mixture of Bantu, Arab, and Malagasy peoples) are recent arrivals from other nearby Comorian islands. [7]Mayotte is largely dependent on French aid. [8]Export production only. [9]Weights of consumer price index components. [10]Minimum wage. [11]December 31. [12]For 555 larger enterprises only. [13]Unemployed. [14]Imports c.i.f.; exports f.o.b. [15]Subscribers.

Internet resources for further information:

- **IEDOM: Agence de Mayotte**
  http://www.iedom.fr/dom/mayotte/publications.asp
- **INSEE: Mayotte**
  http://www.insee.fr/fr/insee_regions/reunion/zoom/Mayotte

Mexico

Official name. Estados Unidos Mexicanos (United Mexican States).
Form of government: federal republic with two legislative houses (Senate [128]; Chamber of Deputies [500]).
Head of state and government: President.
Capital: Mexico City.
Official language: Spanish.
Official religion: none.
Monetary unit: Mexican peso (Mex$); valuation (Sept. 8, 2008)
1 U.S.$ = Mex$10.54;
1 £ = Mex$18.62.

Area and population

States	Capitals	area sq mi	area sq km	population 2005 census
Aguascalientes	Aguascalientes	2,112	5,471	1,065,416
Baja California	Mexicali	26,997	69,921	2,844,469
Baja California Sur	La Paz	28,369	73,475	512,170
Campeche	Campeche	19,619	50,812	754,730
Chiapas	Tuxtla Gutiérrez	28,653	74,211	4,293,459
Chihuahua	Chihuahua	94,571	244,938	3,241,444
Coahuila de Zaragoza	Saltillo	57,908	149,982	2,495,200
Colima	Colima	2,004	5,191	567,996
Durango	Durango	47,560	123,181	1,509,117
Guanajuato	Guanajuato	11,773	30,491	4,893,812
Guerrero	Chilpancingo	24,819	64,281	3,115,202
Hidalgo	Pachuca	8,036	20,813	2,345,514
Jalisco	Guadalajara	31,211	80,836	6,752,113
México	Toluca	8,245	21,355	14,007,495
Michoacan de Ocampo	Morelia	23,138	59,928	3,966,073
Morelos	Cuernavaca	1,911	4,950	1,612,899
Nayarit	Tepic	10,417	26,979	949,684
Nuevo León	Monterrey	25,067	64,924	4,199,292
Oaxaca	Oaxaca	36,275	93,952	3,506,821
Puebla	Puebla	13,090	33,902	5,383,133
Queretaro de Arteaga	Querétaro	4,420	11,449	1,598,139
Quintana Roo	Chetumal	19,387	50,212	1,135,309
San Luis Potosí	San Luis Potosí	24,351	63,068	2,410,414
Sinaloa	Culiacán	22,521	58,328	2,608,442
Sonora	Hermosillo	70,291	182,052	2,394,861
Tabasco	Villahermosa	9,756	25,267	1,989,969
Tamaulipas	Ciudad Victoria	30,650	79,384	3,024,238
Tlaxcala	Tlaxcala	1,551	4,016	1,068,207
Veracruz-Llave	Jalapa (Xalapa)	27,683	71,699	7,110,214
Yucatán	Mérida	14,827	38,402	1,818,948
Zacatecas	Zacatecas	28,283	73,252	1,367,692
Federal District				
Distrito Federal	—	571	1,479	8,720,916
CONTINENTAL AREA		756,066[1]	1,958,201[1]	
LAND		736,950	1,908,690	
WATER		19,116	49,511	
INSULAR AREA[2]		1,980	5,127	
TOTAL		758,450[3]	1,964,375[3]	103,263,388

Demography

Population (2008): 106,683,000.
Density (2008): persons per sq mi 140.7, persons per sq km 54.3.
Urban-rural (2005): urban 76.0%; rural 24.0%.
Sex distribution (2005): male 48.66%; female 51.34%.
Age breakdown (2005): under 15, 30.7%; 15–29, 26.3%; 30–44, 20.4%; 45–59, 11.8%; 60–74, 5.9%; 75–84, 1.7%; 85 and over, 0.5%; unknown 2.7%.
Population projection: (2010) 108,396,000; (2020) 115,762,000.
Doubling time: 49 years.
Ethnic composition (2000): mestizo 64.3%; Amerindian 18.0%, of which detribalized 10.5%; Mexican white 15.0%; Arab 1.0%; Mexican black 0.5%; Spaniard 0.3%; U.S. white 0.2%; other 0.7%.
Religious affiliation (2000): Christian 96.3%, of which Roman Catholic 87.0%, Protestant 3.2%, independent Christian 2.7%, unaffiliated Christian 1.4%, other Christian (mostly Mormon and Jehovah's Witness) 2.0%; Muslim 0.3%; nonreligious 3.1%; other 0.3%.
Major cities/urban agglomerations (2005/2007): Mexico City 8,463,906 (19,028,000); Ecatepec 1,687,549[4]; Guadalajara 1,600,894 (4,198,000); Puebla 1,399,519 (2,195,000); Juárez 1,301,452 (1,343,000); Tijuana 1,286,187 (1,553,000); León 1,137,465 (1,488,000); Ciudad Netzahualcóyotl 1,136,300[4]; Monterrey 1,133,070 (3,712,000); Zapopan 1,026,492[5]; Naucalpan 792,226[4]; Chihuahua 748,518 (841,000); Mérida 734,153 (1,017,000); Guadelupe 691,434[6]; San Luis Potosí 685,934 (1,050,000); Tlalnepantla 674,417[4]; Aguascalientes 663,671 (927,000); Mexicali 653,046 (935,000); Hermosillo 641,791; Saltillo 633,667 (802,000); Acapulco 616,394; Morelia 608,049; Culiacán 605,304 (837,000); Querétaro 596,450 (1,032,000); other cities with an urban agglomeration of more than one million include: Torreon 548,723 (1,201,000) and Toluca 467,712 (1,584,000).
Households. Total households (2005) 24,006,357; distribution by size (2005): 1 person 7.3%, 2 persons 14.0%, 3 persons 18.2%, 4 persons 22.8%, 5 persons 17.4%, 6 persons 9.5%, 7 or more persons 10.8%.
Migration. Legal Mexican immigrants entering the U.S. in 2004: 173,664; total number of illegal Mexican immigrants in U.S. (2006) 6,600,000.

Vital statistics

Birth rate per 1,000 population (2007): 18.6 (world avg. 20.3).
Death rate per 1,000 population (2007): 4.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 13.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 2.10.
Marriage/divorce rates per 1,000 population (2006): 5.6/0.7.
Life expectancy at birth (2006): male 72.4 years; female 77.2 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 107.4; endocrine, metabolic, and nutritional disorders 77.8; malignant neoplasms (cancers) 63.7; accidents and violence 50.9; diseases of the digestive system 45.7; diseases of the respiratory system 41.5.
Adult population (ages 15–49) *living with HIV* (2007): 0.3%[7] (world avg. 0.8%).

Social indicators

Educational attainment (2005). Percentage of population age 15 and over having: no formal schooling 8.4%; incomplete primary education 14.3%; complete primary 17.6%; incomplete/complete secondary 25.2%; vocational/professional 31.3%; advanced university (masters or doctorate degree) 0.7%; other/unknown 2.5%.
Access to services (2005). Proportion of dwellings having: electricity 96.6%; piped water supply 87.8%; piped sewage 84.8%.

Distribution of income (2006)

percentage of household income by decile

1	2	3	4	5	6	7	8	9	10 (highest)
2.3	3.6	4.2	5.4	6.3	7.3	9.4	11.7	15.6	34.2

Material well-being. Percentage of households possessing (2005): television 91.0%, refrigerator 79.0%, washing machine 62.7%, computer 19.6%.
Quality of working life. Average workweek (2004): 43.5 hours[8]. Annual rate per 100,000 insured workers for (2004): injury 2,922; death 11. Labour stoppages (2001): 35, involving 23,234 workers.
Social participation. Eligible voters participating in last national election (July 2006): 58.6%. Trade union membership in total workforce (2000): formal sector only, less than 20%; both formal and informal sectors, *c.* 17%. Practicing religious population (1995–97): percentage of adult population attending church services at least once per week 46%.
Social deviance (2006). Formally registered offense rate per 100,000 population for: murder 6.1; property damage 14.9; rape 4.5; battery 31.5; robbery 67.1; illegal narcotics possession 15.6; fraud 4.5; squatting 3.2; breaking and entering 2.7. Incidence per 100,000 in general population of: alcoholism (2000) 7.6; suicide (2006) 3.4.

National economy

Gross national income (GNI; 2007): U.S.$878,020,000,000 (U.S.$8,340 per capita); purchasing power parity GNI (U.S.$12,580 per capita).

Structure of gross domestic product and labour force

	2004 in value Mex$'000,000	2004 % of total value	2006 labour force	2006 % of labour force
Agriculture, fishing	267,704	3.8	6,033,000	13.8
Mining	100,704	1.4	164,100	0.4
Manufacturing	1,257,054	18.1	7,078,700	16.2
Construction	380,234	5.5	3,452,500	7.9
Public utilities	92,699	1.3	186,300	0.4
Transp. and commun.	725,500	10.4	2,001,400	4.6
Trade	1,449,270	20.8	12,109,800	27.8
Finance, real estate	904,356	13.0	2,287,900	5.3
Pub. admin., defense	1,864,912	26.8	2,032,100	4.7
Services			6,542,300	15.0
Other	−78,375[9]	−1.1[9]	1,687,400[10]	3.9[10]
TOTAL	6,964,059[11]	100.0	43,575,500	100.0

Budget (2007). Revenue: Mex$2,485,600,000,000 (tax revenue 40.3%, of which income tax 21.2%; nontax revenue 28.6%; other revenue, from PEMEX state oil company 15.0%, other state-owned organizations or companies 16.1%). Expenditures: Mex$2,483,000,000,000 (current expenditure 59.4%; capital expenditure 16.9%; extra-budgetary expenditure 23.7%).
Public debt (external, outstanding; 2006): U.S.$96,304,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 50,680,000, corn (maize) 22,500,000, cow's milk 9,599,437, sorghum 5,500,000, oranges 4,160,000, wheat 3,000,000, tomatoes 2,900,000, chicken meat 2,500,000, bananas 2,200,000, guavas and mangoes 2,050,000, lemons and limes 1,880,000, chilies and green peppers 1,690,000, cattle meat 1,650,000, potatoes 1,530,000, dry beans 1,390,000, dry onions 1,200,000, avocados 1,140,000, papayas 800,000, blue agave (2006) *c.* 778,000, string beans 755,000, pineapples 635,000, grapefruit and pomelos 390,000, coffee (green) 320,000, nuts 165,000, green onions and shallots 150,000; livestock (number of live animals) 29,000,000 cattle, 15,500,000 pigs, 8,900,000 goats, 7,500,000 sheep, 6,350,000 horses, 290,000,000 chickens; roundwood (2006) 44,714,000 cu m, of which fuelwood 86%; fisheries production (2006) 1,458,642 (from aquaculture 11%); aquatic plants production (2006) 27,000 (from aquaculture, none). Mining and quarrying (2005): fluorite 876,000 [world rank: 2]; bismuth 970[12] [world rank: 2]; silver 2,894,161 kg[12] [world rank: 2]; celestite 110,833 [world rank: 3]; lead 134,388[12] [world rank: 5]; cadmium 1,627[12] [world rank: 5]; gypsum 6,251,969 [world rank: 6]; zinc 476,307[12] [world rank: 6]; iron ore 7,012,000[12]; sulfur 1,590,000; copper 429,042[12]; gold 30,356 kg. Manufacturing (value added in U.S.$'000,000; 2005): food and beverages *c.* 29,000; motor vehicles/parts *c.* 20,800; chemicals and chemical products *c.* 13,100; bricks, cement, and ceramics *c.* 7,600; basic metals *c.* 7,350; fabricated metal products *c.* 4,900; nonelectrical machinery and equipment *c.* 4,150; textiles *c.* 4,050; rubber and plastic products *c.* 3,800; electrical machinery and apparatus *c.* 3,550; radio, television, and communications equipment *c.* 3,450; paper and paper products *c.* 2,800; printing and publishing *c.* 2,800; computers/office machines/parts *c.* 2,700; refined petroleum/coke/nuclear fuel 2,550.
Household income and expenditure. Average household size (2005) 4.2; average annual income per household (2004) Mex$28,177 (U.S.$2,497); sources of income (2004): wages and salaries 53.7%, nonmonetary income 19.0%,

self-employment 14.0%, transfers 9.6%, other 3.7%; expenditure (2004): food and nonalcoholic beverages 24.3%, transportation 17.2%, housing/energy 13.4%, household furnishings 7.9%, restaurants and hotels 7.2%, health 4.7%, education 3.9%, clothing and footwear 3.1%.

Selected economic activities (2003)

	no. of establish-ments	no. of employees	yearly wage as a % of avg of all wages	value added (Mex$'000,000)
Manufacturing	328,178	4,198,579	130.8	927,987
Services				
Transportation, storage	41,899	634,940	158.1	124,561
Mass media	7,586	244,679	340.7	166,901
Finance, insurance	10,417	275,830	358.4	285,715
Real estate, rental	45,579	179,146	52.2	38,967
Professional, scientific, and technical	68,589	472,348	109.8	65,479
Sanitation, waste management	43,152	815,388	129.2	90,233
Education	30,891	517,958	118.6	53,846
Health, social assistance	102,940	355,169	46.2	22,700
Recreation	31,790	143,589	53.1	11,340
Hotel, restaurant	277,436	1,218,262	35.2	64,700
Trade				
Wholesale	86,997	962,143	113.3	261,546
Retail	1,493,590	4,035,223	35.2	318,648
Mining	3,077	122,640	255.2	432,764
Electricity, gas, water	2,437	221,335	279.5	168,941
Construction	13,444	652,387	59.7	60,542

Energy production (consumption): electricity (kW-hr; 2005) 234,895,000,000 (233,691,000,000); hard coal (metric tons; 2005) 1,790,000 (1,830,000); lignite (metric tons; 2005) 8,960,000 (15,100,000); crude petroleum (barrels; 2007) 1,160,000,000 ([2005] 530,000,000); petroleum products (metric tons; 2005) 66,952,000 (74,614,000); natural gas (cu m; 2007) 66,081,000,000 ([2005] 52,701,000,000).

Population economically active (2006): total 43,575,500; activity rate of total population 41.6% (participation rates: ages 15–64, 63.0%; female 37.1%; unemployed 3.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	106.4	111.7	116.8	122.3	127.1	131.8	137.0
Monthly earnings index	106.7	108.7	110.2	110.5	110.2	110.6	111.8

Financial aggregates

	2001	2002	2003	2004	2005	2006	2007
Exchange rate[13], Mex$ per:							
U.S. dollar	9.14	10.31	11.24	11.26	10.78	10.88	10.87
£	13.26	16.62	20.05	21.75	18.56	21.36	21.77
SDR	11.49	14.02	16.70	17.49	15.40	16.37	17.17
International reserves (U.S.$)							
Total (excl. gold; '000,000)	44,741	50,594	58,956	64,141	74,054	76,271	87,109
SDRs ('000,000)	356	392	433	465	445	482	466
Reserve pos. in IMF ('000,000)	—	308	782	898	594	340	334
Foreign exchange ('000,000)	44,384	49,895	57,740	62,778	73,015	75,448	86,309
Gold ('000,000 fine troy oz)	0.23	0.23	0.17	0.14	0.11	0.09	0.12
% world reserves	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Interest and prices							
Treasury bill rate	11.31	7.09	6.23	6.82	9.20	7.19	7.19
Balance of payments (U.S.$'000,000)							
Balance of visible trade, of which:	−9,617	−7,633	−5,780	−8,811	−7,587	−6,134	−10,074
Imports, f.o.b.	−168,397	−168,679	−170,546	−196,810	−221,820	−256,059	−281,949
Exports, f.o.b.	158,780	161,046	164,766	187,999	214,233	249,925	271,875
Balance of invisibles	−8,104	−6,521	−2,808	+2,201	+2,365	+3,890	+4,535
Balance of payments, current account	−17,721	−14,154	−8,588	−6,610	−5,222	−2,244	−5,539

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2007) 12,901, of which border shoppers only 2,648; remittances (2007) 23,979; foreign direct investment (FDI; 2004–06 avg.) 20,390; official development assistance (2006) 247. Disbursements for (U.S.$'000,000): tourism (2007) 8,378, of which border shoppers only 4,089; remittances, n.a.; FDI (2004–06 avg.) 5,555.

Land use as % of total land area (2003): in temporary crops 13.0%, in permanent crops 1.3%, in pasture 41.9%; overall forest area (2005) 33.7%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−7,633	−5,780	−8,811	−7,587	−6,133	−11,209
% of total	2.3%	1.7%	2.3%	1.7%	1.2%	2.0%

Imports (2006): U.S.$256,130,000,000 (non-maquiladora sector 65.8%, of which imports for automotive industry 10.9%, special machinery for industries 9.8%, imports for extractive industries 8.2%, electrical and electronic equipment 6.3%, imports for chemical industry 5.6%; maquiladora sector 34.2%, of which electrical and electronic equipment 15.5%). *Major import sources:* U.S. 50.9%; China 9.5%; Japan 6.0%; South Korea 4.2%; Germany 3.7%; Canada 2.9%; Brazil 2.2%; Taiwan 1.9%; Malaysia 1.7%; Italy 1.6%.

Exports (2006): U.S.$249,997,000,000 (non-maquiladora sector 55.3%, of which road vehicles and parts 15.1%, crude petroleum 13.9%, special machinery for industries 3.1%, electrical and electronic equipment 2.5%, food/beverages/tobacco products 2.4%; maquiladora sector 44.7%, of which electrical and electronic equipment 20.1%, exports of automotive industry 6.1%, professional/scientific equipment 2.6%). *Major export destinations:* U.S. 84.7%; Canada 2.1%; Spain 1.3%; Germany 1.2%; Colombia 0.9%; Venezuela 0.7%; China 0.7%.

Trade by commodity group (2006)

	imports		exports	
SITC group	U.S.$'000,000	%	U.S.$'000,000	%
00 Food and live animals	12,007	4.7	10,342	4.1
01 Beverages and tobacco	14	14	3,021	1.2
02 Crude materials, excluding fuels	7,418	2.9	3,548	1.4
03 Mineral fuels, lubricants, and related materials	14,471	5.7	38,636	15.5
04 Animal and vegetable oils, fats, and waxes	14	14	15	15
05 Chemicals and related products, n.e.s	27,525	10.7	8,832	3.5
06 Basic manufactures	40,532	15.8	20,838	8.3
07 Machinery and transport equipment	122,105	47.7	135,168	54.1
08 Miscellaneous manufactured articles	27,153	10.6	27,701	11.1
09 Goods not classified by kind	3,455	1.3	15	15
TOTAL	256,086	100.0	249,961	100.0

Direction of trade (2005)

	imports		exports	
	U.S.$'000,000	%	U.S.$'000,000	%
Western Hemisphere	137,680	62.2	198,708	93.0
United States	118,262	53.4	183,052	85.7
Latin America and the Caribbean	13,255	6.0	11,426	5.3
Canada	6,163	2.8	4,230	2.0
Europe	28,371	12.8	9,462	4.4
EU	25,963	11.7	9,166	4.3
Other Europe	2,408	1.1	296	0.1
Asia	53,426	24.1[11]	4,760	2.2
Japan	13,023	5.9	1,471	0.7
China	17,631	8.0	1,134	0.5
Other Asia	22,772	10.3	2,155	1.0
Africa	570	0.3	343	0.2
Other	1,222	0.6	438	0.2
TOTAL	221,270[11]	100.0	213,711	100.0

Transport and communications

Transport. Railroads (2006): route length 16,567 mi, 26,662 km; passenger-km 73,000,000; metric ton-km cargo 55,113,000,000. Roads (2005): total length 221,081 mi, 355,796 km (paved 34%). Vehicles (2004): passenger cars 14,713,085; trucks and buses 7,158,105. Air transport (2005): passenger-km 27,864,000,000; metric ton-km cargo 177,048,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	29,400	282	PCs	2005	14,000	131
Telephones				Dailies	2000	9,850[16]	98[16]
Cellular	2007	68,254[17]	645[17]	Internet users	2007	22,812	216
Landline	2007	19,754	187	Broadband	2007	4,549[17]	43[17]

Education and health

Literacy (2005): total population age 15 and over literate (2005) 91.6%; males literate 93.2%; females literate 90.2%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	98,045	561,342	14,548,200	25.9
Secondary (age 12–18) (incl. technical and pre-university)	44,853	604,164	9,638,100	16.0
Higher	4,977	261,889	2,446,700	9.3

Health (2005): physicians 134,157 (1 per 777 persons); hospital beds 76,420 (1 per 1,364 persons); infant mortality rate per 1,000 live births (2006) 16.2; undernourished population (2002–04) 5,300,000 (5% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

Military

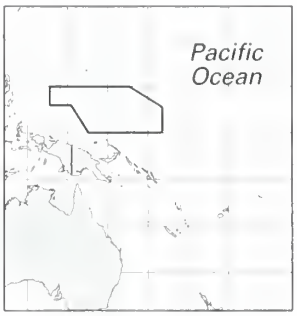
Total active duty personnel (November 2007): 248,700 (army 71.6%, navy 18.6%, marines 5.1%, air force 4.7%). *Military expenditure as percentage of GDP* (2005): 0.4%[18]; per capita expenditure U.S.$29[18].

[1]Continental area per more recent survey equals 756,470 sq mi (1,959,248 sq km). [2]Uninhabited (nearly all Pacific) islands directly administered by federal government. [3]Total area based on more recent survey figure for continental area. [4]Within Mexico City urban agglomeration. [5]Within Guadalajara urban agglomeration. [6]Within Monterrey urban agglomeration. [7]Statistically derived midpoint within range. [8]Hours actually worked. [9]Less imputed bank service charge. [10]Includes 1,377,700 unemployed. [11]Detail does not add to total given because of rounding. [12]Metal content. [13]End of year. [14]Together categories 01 and 04 equal U.S.$1,420,000,000 and 0.6%. [15]Together categories 04 and 09 equal U.S.$1,875,000,000 and 0.8%. [16]Circulation of daily newspapers. [17]Subscribers. [18]Excludes military pensions.

Internet resources for further information:

- **National Institute of Statistics, Geography, and Informatics http://www.inegi.gob.mx/inegi/default.asp**
- **Banco de México http://www.banxico.org.mx/sitioIngles/index.html**

Micronesia, Federated States of



Official name: Federated States of Micronesia.
Form of government: federal nonparty republic in free association with the United States with one legislative house (Congress [14]).
Head of state and government: President.
Capital: Palikir, on Pohnpei.
Official language: none.
Official religion: none.
Monetary unit: U.S. dollar (U.S.$); valuation (Sept. 8, 2008) 1 U.S.$ = £0.57.

Area and population

States Major Islands	Capitals	area sq mi	area sq km	population 2000 census
Chuuk (Truk)	Weno	49.1	127.2	53,595
Chuuk Islands		...	.	40,465
Kosrae	Tofol	42.3	109.6	7,686
Kosrae Island		42.3	109.6	7,686
Pohnpei (Ponape)	Kolonia	133.3	345.2	34,486
Pohnpei Island		129.0	334.1	32,395
Yap	Colonia	45.9	118.9	11,241
Yap Islands[1]		38.7	100.2	7,391
TOTAL		270.8[2]	701.4[2]	107,008

Demography

Population (2008): 110,000.
Density (2008): persons per sq mi 406.2, persons per sq km 156.8.
Urban-rural (2007): urban 22.0%; rural 78.0%.
Sex distribution (2007): male 50.37%; female 49.63%.
Age breakdown (2005): under 15, 37.1%; 15–29, 29.6%; 30–44, 17.2%; 45–59, 11.7%; 60–74, 3.5%; 75 and over, 0.9%.
Population projection: (2010) 111,000; (2020) 116,000.
Doubling time: 35 years.
Ethnic composition (2000): Chuukese/Mortlockese 33.6%; Pohnpeian 24.9%; Yapese 10.6%; Kosraean 5.2%; U.S. white 4.5%; Asian 1.3%; other 19.9%.
Religious affiliation (2005): Roman Catholic *c.* 50%; Protestant *c.* 47%; other *c.* 3%.
Major towns (2000): Weno, in Chuuk state 13,802; Palikir, on Pohnpei 6,444; Nett, on Pohnpei 6,158; Kolonia, on Pohnpei 5,681; Colonia, on Yap 3,216.

Vital statistics

Birth rate per 1,000 population (2007): 25.5 (world avg. 20.3); (2003) within marriage 78.9%; outside of marriage 21.1%.
Death rate per 1,000 population (2007): 5.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 20.0 (world avg. 11.7).
Marriage/divorce rates per 1,000 population (2005): n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2007): 4.00.
Life expectancy at birth (2007): male 67.4 years; female 68.0 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 116.1; malignant neoplasms (cancers) 57.1; diseases of the respiratory system 55.3; diseases of the endocrine system 54.4; infectious and parasitic diseases 40.0.

National economy

Budget (2005–06)[3]. Revenue: U.S.$140,000,000 (external grants 60.9%; tax revenue 21.2%; nontax revenue 17.9%, of which fishing access revenue 9.5%). Expenditures: U.S.$153,000,000 (current expenditures 95.7%, capital expenditure 4.3%).
Public debt (external, outstanding; 2005): U.S.$60,800,000.
Population economically active (2000): total 37,414; activity rate of total population 35.0% (participation rates: ages 15–64, 60.7%; female 42.9%; unemployed 22.0%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	100.5	100.4	100.5	102.9	107.2	112.3	115.8
Earnings index[4]	101.6	104.0	106.4	103.8	101.2	98.4	94.3

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 41,000, cassava 12,000, sweet potatoes 3,200, bananas 2,100, betel nuts (2005) 228, kava (sakau) n.a.; livestock (number of live animals) 33,000 pigs, 14,000 cattle; roundwood, n.a.; fisheries production (2006) 11,630, of which significantly skipjack tuna (from aquaculture, none). Mining and quarrying: quarrying of sand and aggregate for local construction only. Manufacturing: n.a.; however, copra and coconut oil, traditionally important products, are being displaced by garment production; the manufacture of handicrafts and personal items (clothing, mats, boats, etc.) by individuals is also important. Energy production (consumption): electricity (kW-hr; 2005) 74,400,000 (n.a.); coal, none (none); crude petroleum, none (none); petroleum products, none (n.a.); natural gas, none (none).
Household income and expenditure (2005). Average household size 6.9; annual median income per household U.S.$12,390; sources of income: wages and salaries 47.2%, rent 10.3%, self-employment 9.1%, transfers and remittances 6.9%; expenditure: food 39.4%, housing 17.4%, transportation and communications 9.3%, energy 5.1%, household furnishings 4.1%, clothing and footwear 3.7%, alcohol, tobacco, kava (*sakau*), and betel nut 3.5%.
Gross national income (GNI; 2007): U.S.$274,000,000 (U.S.$2,470 per capita); purchasing power parity GNI (U.S.$3,560[5] per capita).

Structure of gross domestic product and labour force

	2006 in value U.S $'000,000	2006 % of total value	2000 labour force	2000 % of labour force
Agriculture and fishing[6]	44.0	18.0	15,216	40.7
Public utilities	3.4	1.4	360	1.0
Mining			1,164	3.1
Manufacturing	3.3	1.3		
Construction	2.4	1.0	781	2.1
Transp. and commun.	10.8	4.4	806	2.1
Trade, hotels	55.2	22.5	2,540	6.8
Finance			726	1.9
Services	109.0	44.5	1,445	3.9
Public administration			6,137	16.4
Other	16.9	6.9	8,239[7]	22.0[7]
TOTAL	245.0	100.0	37,414	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 17; remittances (2005) 6.0; foreign direct investment, n.a.; official development assistance (2006) 108. Disbursements for (U.S.$'000,000): tourism (2005) 5.7; remittances, n.a.
Land use as % of total land area (2003): in temporary crops *c.* 6%, in permanent crops *c.* 46%, in pasture *c.* 16%; overall forest area *c.* 91%.

Foreign trade[8]

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.$'000,000	−90.0	−95.4	−89.8	−99.7	−118.7	−117.2
% of total	72.8%	72.2%	75.7%	73.3%	80.9%	82.0%

Imports (2006): U.S.$137,993,000 (food and beverages 32.1%, mineral fuels 22.4%, machinery and apparatus 10.6%, transport equipment 6.0%, chemicals and chemical products 5.9%). *Major import sources* (2006): U.S. 39.7%; Japan 8.8%; South Korea 5.8%; Singapore 4.6%; Philippines 4.4%.
Exports (2005): U.S.$12,984,000 (deep-sea products [nearly all fish] 89.9%, reef fish 4.0%, betel nuts 3.1%, kava [*sakau*] 1.0%). *Major export destinations* (2004)[9]: Japan 21.4%; U.S. 20.9%; Guam 3.4%; Northern Marianas 1.0%; unspecified 53.0%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 149 mi, 240 km (paved 18%). Vehicles (2004): passenger cars 4,601; trucks and buses 3,770. Air transport (2006)[10]: passenger-km 4,762,000,000; metric ton-km cargo 102,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	2.8	26	PCs	2005	6.0	55
Telephones				Dailies	2005	0	0
Cellular	2007	27[11]	247[11]	Internet users	2007	15	135
Landline	2007	8.7	78	Broadband	2007	...	...

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling/unknown 13.4%; primary education 37.0%; some secondary 18.3%; secondary 12.9%; some college 18.4%. *Literacy* (2000): total population age 10 and over literate 72,140 (92.4%); males literate 36,528 (92.9%); females literate 35,612 (91.9%).

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Elementary (age 6–12)	140[12]	1,113	18,512	16.6
Secondary (age 13–18)	..	829	14,742	17.8
Voc., teacher tr.				
College[13]	1	97	2,705	27.9

Health: physicians (2005) 62 (1 per 1,774 persons); hospital beds (2006) 365 (1 per 301 persons); infant mortality rate per 1,000 live births (2007) 37.5; undernourished population, n.a.

Military

External security is provided by the United States.

[1]Yap Islands is the collective name of Yap Island and its immediately adjacent islands linked by common coral reef. The population of Yap Island at the 2000 census was 4,916. [2]Detail does not add to total given because of rounding. [3]For consolidated general government. [4]Fiscal year. [5]Estimate is based on regression. [6]Includes subsistence farming and fishing. [7]Unemployed. [8]Imports c.i.f.; exports f.o.b. [9]Value of fishing services (in 2004) for foreign licenses and transshipment fees was U.S.$14,794,000. [10]Continental Micronesia only. [11]Subscribers. [12]2004–05. [13]Data refers to the five campuses of the College of Micronesia–FSM at the beginning of the fall 2004–05 academic term.

Internet resources for further information:

- **Division of Statistics**
  http://www.spc.int/prism/country/fm/stats
- **Asian Development Bank: Key Indicators for Asia and the Pacific 2008**
  http://www.adb.org/Documents/Books/Key_Indicators/2008/

Moldova

Official name: Republica Moldova (Republic of Moldova).
Form of government: unitary parliamentary republic with a single legislative body (Parliament [101]).
Head of state: President.
Head of government: Prime Minister.
Capital: Chişinău.
Official language: [1].
Official religion: none.
Monetary unit: Moldovan leu (plural lei); valuation (Sept. 8, 2008) 1 U.S.$ = 9.66 Moldovan lei; 1 £ = 17.07 Moldovan lei[2].

Population (2006 estimate[3])

Districts	population	Districts	population	Districts	population
Anenii-Noi	81,500	Floreşti	88,600	Străşeni	88,700
Basarabeasca	28,900	Glodeni	60,500	Taraclia	43,000
Briceni	77,300	Hînceşti	119,600	Teleneşti	69,900
Cahul	119,200	Ialoveni	97,800	Ungheni	110,700
Călăraşi	74,800	Leova	51,600	**Municipalities**	
Cantemir	61,300	Nisporeni	64,900	Bălţi	127,600
Căuşeni	90,400	Ocniţa	56,400	Chişinău	717,900
Cimişlia	60,800	Orhei	115,800	**Autonomous Region**	
Criuleni	72,000	Rezina	47,800	Găgăuzia	155,700
Donduşeni	45,900	Rîşcani	68,900	**Disputed Territory[4]**	
Drochia	86,400	Sîngerei	87,000	Transdniestria (Stînga Nistrului)	550,000
Dubăsari (rural)	34,200	Şoldăneşti	41,900	TOTAL	3,941,700[5]
Edineţ	83,500	Soroca	100,900		
Făleşti	89,800	Ştefan-Vodă	70,500		

Demography

Area: 13,067 sq mi, 33,843 sq km[6].
Population (2008): 3,760,000[7].
Density (2008)[7]: persons per sq mi 287.7, persons per sq km 111.1.
Urban-rural (2007)[8]: urban 41.3%; rural 58.7%.
Sex distribution (2007)[8]: male 48.06%; female 51.94%.
Age breakdown (2004)[8]: under 15, 19.1%; 15–29, 26.3%; 30–44, 20.9%; 45–59, 19.1%; 60 and over, 14.3%; unknown 0.3%.
Population projection[7]: (2010) 3,707,000; (2020) 3,580,000.
Ethnic composition (2004)[8, 9]: Moldovan 75.8%; Ukrainian 8.4%; Russian 5.9%; Gâgauz 4.4%; Rom (Gypsy) 2.2%; Bulgarian 1.9%; other 1.4%.
Religious affiliation (2005): Moldovan Orthodox 31.8%; Bessarabian Orthodox 16.1%; Russian Orthodox 15.4%; Sunnī Muslim 5.5%; Protestant 1.7%; Jewish 0.6%; nonreligious 19.9%; other 9.0%.
Major cities (2006): Chişinău 593,800; Tiraspol 159,163[10]; Bălţi 122,700; Tighina (2004) 97,027[10]; Râbniţa (2004) 53,648[10].

Vital statistics

Birth rate per 1,000 population (2007): 10.6 (world avg. 20.3); within marriage 77.3%; outside of marriage 22.7%.
Death rate per 1,000 population (2007): 12.0 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 1.22.
Marriage/divorce rates per 1,000 population (2007): 8.2/3.9.
Life expectancy at birth (2006): male 64.6 years; female 72.2 years.
Major causes of death per 100,000 population (2007)[8]: diseases of the circulatory system 676.0; malignant neoplasms (cancers) 150.6; diseases of the digestive system 119.4; accidents, poisoning, and violence 101.9.

National economy

Budget (2004). Revenue: 11,324,000,000 Moldovan lei (tax revenue 84.3%, of which VAT 30.3%, social fund contributions 22.0%; nontax and extra budgetary revenue 14.6%; grants 1.1%). Expenditures: 11,092,000,000 Moldovan lei (current expenditures 95.5%, of which social fund expenditures 25.0%, education 15.2%, interest payments 5.5%; capital expenditure 4.5%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugar beets 612,000, grapes 598,000, wheat 402,000, corn (maize) 363,000, potatoes 199,000, apples 172,000, sunflower seeds 156,000, tobacco leaves 4,000; livestock (number of live animals) 835,077 sheep, 531,818 pigs, 299,105 cattle; roundwood (2006) 56,800 cu m, of which fuelwood 52%; fisheries production (2006) 5,082 (from aquaculture 88%). Mining and quarrying (2005): gypsum 110,000. Manufacturing (value of production in '000,000 Moldovan lei; 2004)[8]: alcoholic beverages 4,013, of which wine 3,098; food products 3,461; nonmetallic mineral products 1,273; tobacco products 410. Energy production (consumption): electricity (kW-hr; 2005) 3,865,000,000 (7,006,000,000); coal (metric tons; 2005) none (167,000); petroleum products (metric tons; 2005) 4,000 (621,000); natural gas (cu m; 2005) none (2,924,000,000).
Land use as % of total land area (2003): in temporary crops 56.4%, in permanent crops 9.1%, in pasture 11.5%; overall forest area (2005) 10.0%.
Population economically active (2005)[8]: total 1,422,300; activity rate of total de facto population 39.5% (participation rates: ages 15–64, 53.2%; female 51.5%; unemployed [2006] 7.4%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	109.8	115.6	129.2	145.3	164.4	183.5	206.2
Earnings index	133.3	169.5	218.4	270.6	323.2	416.0	506.2

Gross national income (GNI; 2007)[8]: U.S.$4,323,000,000 (U.S.$1,260 per capita); purchasing power parity GNI (U.S.$2,930 per capita).

Structure of gross domestic product and labour force

	2004[8]		2005[8]	
	in value '000,000 Moldovan lei	% of total value	labour force	% of labour force
Agriculture	5,833	18.2	535,500	37.7
Mining	105	0.3	1,800	0.1
Manufacturing	4,602	14.4	131,800	9.3
Public utilities	524	1.6	25,800	1.8
Construction	1,314	4.1	51,600	3.6
Transp. and commun.	3,692	11.6	71,000	5.0
Trade, hotels	3,392	10.6	182,900	12.9
Finance, real estate	.	.	42,100	3.0
Pub. admin., defense	.	.	61,500	4.3
Services	8,609	26.9	213,000	15.0
Other	3,921[11]	12.3[11]	105,300[12]	7.4[12]
TOTAL	31,992	100.0	1,422,300	100.0[13]

Public debt (external, outstanding; end of 2006): U.S.$718,000,000.
Household income and expenditure. Average household size (2004) 3.2; annual average income per household (2002) U.S.$1,200; sources of income (2007): wages and salaries 41.2%, self-employment 15.1%, social benefits 13.5%, remittances 13.1%, agricultural income 6.4%; expenditure (2007): food and drink 44.0%, housing and energy 18.3%, clothing and footwear 11.9%, transportation and communications 9.1%, health 5.4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 112; remittances (2007) 1,498; foreign direct investment (2004–06 avg.) 190; official development assistance (2006) 228. Disbursements for (U.S.$'000,000): tourism (2006) 187; remittances (2007) 87.

Foreign trade[14]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–395	–613	–793	–1,202	–1,642	–2,348
% of total	23.5%	27.9%	28.8%	35.5%	34.6%	46.7%

Imports (2006): U.S.$2,693,000,000 (machinery and apparatus 13.8%, refined petroleum 12.6%, chemicals and chemical products 11.9%, natural/manufactured gas 8.1%, food 7.4%). *Major import sources:* Ukraine 19.2%; Russia 15.5%; Romania 12.8%; Germany 7.9%; Italy 7.3%.
Exports (2006): U.S.$1,051,000,000 (food 19.8%, of which cereals 4.3%, walnuts 3.6%; apparel/clothing accessories 19.1%; wine/grape must 15.4%; machinery and apparatus 5.2%). *Major export destinations:* Russia 17.3%; Romania 14.8%; Ukraine 12.2%; Italy 11.1%; Belarus 7.0%.

Transport and communications

Transport. Railroads (2007): length 1,154 km; passenger-km 468,000,000; metric ton-km cargo 3,120,000,000. Roads (2007): total length 9,337 km (paved 94%). Vehicles (2003): passenger cars 252,490; trucks and buses 77,534. Air transport (2007): passenger-km 550,000,000; metric ton-km cargo 1,300,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,300	327	PCs	2005	348	83
Telephones				Dailies	2004	75[15]	18[15]
Cellular	2007	1,883[16]	496[16]	Internet users	2007	700	185
Landline	2007	1,080	285	Broadband	2007	47[16]	12[16]

Education and health

Literacy (2003): total population age 15 and over literate 99.1%.

Education (2007–08)[8]

	schools	teachers	students	student/teacher ratio
Primary (age 7–13) } Secondary (age 14–17) }	1,534	38,600	461,000	11.9
Voc., teacher tr.	75	2,400	24,500	10.2
Higher	80	7,600	154,200	20.3

Health (2006): physicians[8] 12,674 (1 per 283 persons); hospital beds[8] 22,471 (1 per 160 persons); infant mortality rate (2007) 11.3; undernourished population (2002–04) 450,000 (11% of total population based on the consumption of a minimum daily requirement of 1,970 calories).

Military

Total active duty personnel (November 2007): 6,750 (army 84.6%, air force 15.4%). Opposition forces (excluding Russian troops) in Transdniestria (2006) *c.* 7,500; Russian troops in Transdniestria (November 2007) 1,200. *Military expenditure as percentage of GDP* (2005): 0.3%; per capita expenditure U.S.$6.

[1]Moldovan, a form of Romanian, is the national language per article 13 of the constitution. [2]The Transdniestrian ruble is the official currency of Transdniestria. [3]Population for the Disputed Territory (Transdniestria) is from a separate unofficial 2006 estimate; 2004 census population was 555,347. [4]Breakaway area from 1991 also known as Transnistria or Pridnestrovye. [5]Summed total of separate estimates; excludes Moldovans abroad. [6]Of which Transdniestria 1,607 sq mi, 4,163 sq km. [7]Includes Transdniestria; excludes (unofficially estimated) 750,000 Moldovans abroad. [8]Excludes Transdniestria. [9]Transdniestria ethnic composition (2004): Moldovan 31.9%; Russian 30.4%; Ukrainian 28.8%; other 8.9%. [10]Within Transdniestria. [11]Import and production taxes less imputed bank service charges. [12]Includes unemployed. [13]Detail does not add to total given because of rounding. [14]Imports c.i.f.; exports f.o.b. [15]Circulation of daily newspapers. [16]Subscribers.

Internet resources for further information:
- **Department for Statistics and Sociology http://www.statistica.md**
- **National Bank of Moldova http://www.bnm.org**

Monaco

Official name: Principauté de Monaco (Principality of Monaco).
Form of government: constitutional monarchy with one legislative body (National Council [24]).
Chief of state: Prince.
Head of government[1]: Minister of State assisted by the Council of Government.
Capital: [2].
Official language: French.
Official religion: Roman Catholicism.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Quarters[2]	Capitals[2]	area sq mi	area sq km	population 2000 census[3]
Fontvieille	—	0.13	0.32	3,292
La Condamine	—	0.19	0.50	9,184
Monaco-Ville	—	0.07	0.19	1,034
Moneghetti	—	0.04	0.11	3,003
Monte-Carlo	—	0.33	0.85	15,507
TOTAL		0.76[4]	1.97[4]	32,020

Demography

Population (2008): 34,300.
Density (2008): persons per sq mi 43,974, persons per sq km 16,980.
Urban-rural (2005): urban 100%.
Sex distribution (2005): male 47.65%; female 52.35%.
Age breakdown (2005): under 15, 15.4%; 15–29, 13.9%; 30–44, 20.2%; 45–59, 21.3%; 60–74, 17.3%; 75–84, 8.7%; 85 and over, 3.2%.
Population projection: (2010) 35,000; (2020) 37,000.
Doubling time: 67 years.
Ethnic composition (2007): French 47%; Italian 16%; Monegasque 16%; other 21%.
Religious affiliation (2000): Christian 93.2%, of which Roman Catholic 89.3%; Jewish 1.7%; nonreligious and other 5.1%.

Vital statistics

Birth rate per 1,000 population (2006): 26.8 (world avg. 20.3); (2005) within marriage 61.4%, outside of marriage 38.6%.
Death rate per 1,000 population (2006): 16.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 10.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.70.
Marriage/divorce rates per 1,000 population (2005): 4.8/2.1.
Life expectancy at birth (2005): male 74.7 years; female 83.6 years.
Major causes of death per 100,000 population: n.a.; however, principal causes are those of a developed country with an older population.

National economy

Budget (2007). Revenue: €845,600,700 (taxes on commerce 47.4%[5]; property taxes 12.9%; state-run monopolies 10.0%; customs duties 3.1%). Expenditures: €843,119,681 (current expenditure 65.1%; capital expenditure 34.9%).
Public debt: n.a.
Production. Agriculture, forestry, fishing: some horticulture and greenhouse cultivation; no agriculture as such; roundwood, n.a.; fisheries production (2006; metric tons) 1 (from aquaculture, none). Mining and quarrying: none. Manufacturing (value of sales in €'000; 2007): chemicals, cosmetics, perfumery, and pharmaceuticals 364,077; plastic products 266,366; light electronics and precision instruments 86,113; textiles 41,982; paper and card manufactures 41,470. Energy production (consumption): electricity (kW-hr; 2001) n.a. (475,000,000 [imported from France]); coal, none (n.a.); crude petroleum, none (n.a.); natural gas, none (n.a.).
Gross national income (2006): U.S.$1,165,000,000 (U.S.$35,725 per capita).

Structure of gross domestic product and labour force

	2006 in value €'000,000	2006 % of total value	2007 labour force[6]	2007 % of labour force[6]
Agriculture, forestry, fishing	19,605	2.4	29	—
Mining and quarrying	16,000	1.9	2	—
Public utilities			139	0.3
Manufacturing	113,000	13.7	3,535	8.0
Construction	45,969	5.6	3,560	8.0
Transp. and commun.	52,473	6.4	2,463	5.5
Trade, hotels	108,000	13.1	12,476	28.1
Public administration			256	0.6
Finance, real estate			13,717	30.8
Services			8,305	18.7
Other	470,000	57.0	..	..
TOTAL	825,000[7]	100.0[7]	44,482	100.0

Population economically active (2005): total 40,289; activity rate of total population 58.4% (participation rates: ages 17–64 [2000] 61.1%; female 41.4%; unemployed [2000] 3.6%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index[8]	101.7	103.6	105.8	108.0	110.0	111.7	113.4
Earnings index[8]	104.5	108.4	112.8	116.1	119.3	122.7	126.0

Household income and expenditure. Average household size (2004) 2.3; average annual income per household: n.a.; sources of income: n.a.; expenditure: n.a.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2007) n.a., 2,773 hotel rooms, 327,985 overnight visitors; remittances (2007) n.a.; foreign direct investment, n.a. Disbursements for (U.S.$'000,000): tourism (2007) n.a.; remittances (2007) n.a.; foreign direct investment, n.a.
Land use as % of total land area (2000): public gardens *c.* 20%.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	−79	+188	+17	−128	−73	+16
% of total	8.3%	18.4%	1.5%	8.9%	5.1%	9.6%

Imports (2007): €850,202,845 (nonelectrical machinery and apparatus 40.2%; pharmaceuticals, perfumes, clothing, and publishing 19.2%; rubber and plastic products, glass, construction materials, organic chemicals, and paper products 15.7%; food products 7.4%; products of the automobile industry 7.0%). *Major import sources:* China 34.9%; Italy 18.6%; Japan 8.5%; U.K. 7.1%; Belgium 5.3%.
Exports (2007): €834,108,693 (rubber and plastic products, glass, construction materials, organic chemicals, and paper products 39.9%; products of the automobile industry 12.7%; pharmaceuticals, perfumes, clothing, and publishing 12.2%; nonelectrical machinery and apparatus 12.1%; food products 9.6%). *Major export destinations:* Germany 10.7%; Italy 8.4%; Spain 7.9%; U.K. 6.6%; Lithuania 5.2%; unspecified 26.0%.

Transport and communications

Transport. Railroads (2001): length 1.1 mi, 1.7 km; passengers 2,171,100; cargo 3,357 tons. Roads (2001): total length 31 mi, 50 km (paved 100%). Vehicles (1997): passenger cars 21,120; trucks and buses 2,770. Air transport: [10, 11].

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	25	758	PCs	2005	...	...
Telephones				Dailies	2005	0	0
Cellular	2005	17[12]	510[12]	Internet users	2006	20	593
Landline	2005	34	1,019	Broadband	2005	9.4[12]	282[12]

Education and health

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	5	133	1,827	13.7
Secondary (age 11–17)	4	330	3,095	9.4
Higher	1	53[13]	650[13]	12.3[13]

Educational attainment (2000). Percentage of population age 17 and over having: primary/lower secondary education 24.7%; upper secondary 27.6%; vocational 12.7%; university 35.0%. *Literacy:* virtually 100%.
Health (2002): physicians 156 (1 per 207 persons); hospital beds 521 (1 per 62 persons); infant mortality rate per 1,000 live births (2005) 5.4; undernourished population, n.a.

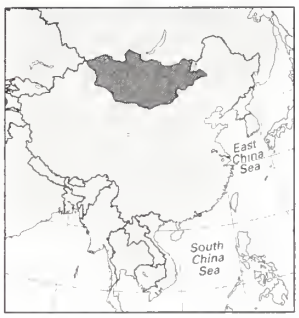
Military

Defense responsibility lies with France according to the terms of the Versailles Treaty of 1919.

[1]Under the authority of the prince. [2]The principality is a single administrative unit, and no separate area within it is distinguished as capital. [3]Final figures. [4]Total area including the new breakwater is 0.78 sq mi (2.02 sq km). [5]On hotels, banks, and the industrial sector. [6]Private sector only. [7]Detail does not add to total given because of rounding. [8]The index is for France. [9]Excludes trade with France; Monaco has participated in a customs union with France since 1963. [10]Fixed-wing service is provided at Nice, France; helicopter service is available at Fontvieille. [11]Charter service of Monacair (2004): passenger-km 414,000; metric ton-km cargo, none. [12]Subscribers. [13]2003–04.

Internet resources for further information:
- **La Principauté de Monaco**
  http://www.gouv.mc
- **Monaco—Monte-Carlo**
  http://www.monte-carlo.mc

Mongolia



Official name: Mongol Uls (Mongolia).
Form of government: unitary multiparty republic with one legislative house (State Great Hural [76]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Ulaanbaatar (Ulan Bator).
Official language: Khalkha Mongolian.
Official religion: none.
Monetary unit: tugrik (Tug); valuation (Sept. 8, 2008) 1 U.S.$ = Tug 1,149; 1 £ = Tug 2,030.

Area and population

Provinces	area[1] sq km	population 2008[2] estimate	Provinces	area[1] sq km	population 2008[2] estimate
Arhangay	55,300	92,800	Hovd	76,100	88,600
Bayan-Ölgiy	45,700	100,800	Hövsgöl	100,600	122,400
Bayanhongor	116,000	84,200	Ömnögovi (South Gobi)	165,400	46,900
Bulgan	48,700	60,500	Orhon	840	80,100
Darhan-Uul	3,280	87,600	Övörhangay	62,900	115,700
Dornod (Eastern)	123,600	72,900	Selenge	41,200	100,500
Dornogovi (East Gobi)	109,500	55,600	Sühbaatar	82,300	55,100
Dundgovi (Central Gobi)	74,700	48,800	Töv (Central)	74,000	85,900
Dzavhan	82,500	81,100	Uvs	69,600	80,400
Govi-Altay	141,400	60,200	**Autonomous municipality**		
Govi-Sümber	5,540	12,600	Ulaanbaatar	4,700	1,031,200
Hentiy	80,300	71,300	TOTAL	1,564,160	2,635,200

Demography

Population (2008): 2,652,000.
Density (2008): persons per sq mi 4.4, persons per sq km 1.7.
Urban-rural (2006): urban 60.9%; rural 39.1%.
Sex distribution (2005[2]): male 49.60%; female 50.40%.
Age breakdown (2005): under 15, 28.9%; 15–29, 32.3%; 30–44, 22.6%; 45–59, 10.3%; 60–74, 4.5%; 75–84, 1.1%; 85 and over, 0.3%.
Population projection: (2010) 2,723,000; (2020) 3,015,000.
Ethnic composition (2000): Khalkha Mongol 81.5%; Kazakh 4.3%; Dörbed Mongol 2.8%; Bayad 2.1%; Buryat Mongol 1.7%; Dariganga Mongol 1.3%; Zakhchin 1.3%; Tuvan (Uriankhai) 1.1%; other 3.9%.
Religious affiliation (2005): traditional beliefs (shamanism) *c.* 32%[3]; Buddhist (Lamaism) *c.* 23%[3]; Muslim *c.* 5%; Christian *c.* 1%; nonreligious *c.* 30%; atheist/other *c.* 9%.
Major cities (2008[2]): Ulaanbaatar (Ulan Bator) 1,031,200; Erdenet 74,300; Darhan 72,400; Choybalsan (2000) 41,714; Ulaangom (2000) 26,319.

Vital statistics

Birth rate per 1,000 population (2007): 21.2 (world avg. 20.3); within marriage (2001) 82.2%; outside of marriage (2001) 17.8%.
Death rate per 1,000 population (2007): 5.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 15.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.97.
Marriage/divorce rates per 1,000 population (2004): 4.4/1.1.
Life expectancy at birth (2005[2]): male 61.6 years; female 67.8 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 230.6; malignant neoplasms (cancers) 121.6; accidents and violence 103.4; diseases of the digestive system 48.2; diseases of the respiratory system 30.3.

National economy

Budget (2006). Revenue: Tug 1,360,400,000,000 (tax revenue 83.0%, of which income taxes 35.0%, taxes on goods and services 25.9%; nontax revenue 16.6%; other 0.4%). Expenditures: Tug 1,237,000,000,000 (economic services 26.1%; social security 20.8%; general administration 19.6%; education 15.6%; health 8.0%; defense/public order 3.7%).
Population economically active (2005[2]): total 986,100; activity rate of total population 39.3% (participation rates: ages 16–59, 63.7%; female 51.0%; unemployed [2006] 3.2%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	106.3	107.3	112.8	122.0	137.6	144.6	157.7

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): hay 930,405, potatoes 114,490, wheat 109,560, vegetables 76,500, raw (greasy) wool 16,500; livestock (number of live animals) 15,451,700 goats, 14,815,100 sheep, 2,167,900 cattle, 2,114,800 horses, 253,500 camels; roundwood (2006) 744,000 cu m, of which fuelwood 95%; fisheries production (2006) 289 (from aquaculture, none). Mining and quarrying (2006): fluorspar 393,000; copper (metal content) 129,693; molybdenum (metal content) 1,404; gold 22,561 kg[4]. Manufacturing (value of production in Tug '000,000; 2006): textiles 93,475; base metals 74,879; food products 71,428; beverages 51,623; clothing and apparel 29,495; bricks, cement, and ceramics 20,226. Energy production (consumption): electricity (kW-hr; 2005) 3,419,000,000 (3,575,000,000); hard coal (metric tons; 2005) 1,225,000 (1,225,000); lignite (metric tons; 2005) 6,292,000 (4,176,000); crude petroleum (barrels; 2005) 201,000 (n.a.); petroleum products (metric tons; 2005) none (545,000); natural gas, none (none).

Gross national income (GNI; 2007): U.S.$3,362,000,000 (U.S.$1,290 per capita); purchasing power parity GNI (U.S.$3,160 per capita).

Structure of gross domestic product and labour force

	2007 in value Tug '000,000,000	2007 % of total value	2005[2] labour force	2005[2] % of labour force
Agriculture	937.8	20.6	381,800	38.7
Mining	1,248.6	27.4	33,500	3.4
Manufacturing	188.4	4.1	57,300	5.8
Construction	85.6	1.9	39,200	4.0
Public utilities	106.1	2.3	23,400	2.4
Transp. and commun.	415.3	9.1	42,200	4.3
Trade, hotels	373.2	8.2	162,100	16.4
Finance, real estate	410.2	9.0	27,100	2.7
Public admin., defense	175.5	3.9	46,200	4.7
Services	301.7	6.6	137,700	14.0
Other	314.9[5]	6.9[5]	35,600[6]	3.6[6]
TOTAL	4,557.5[7]	100.0	986,100	100.0

Public debt (external; 2006): U.S.$1,361,000,000.
Household income and expenditure. Average household size (2005[2]) 4.2; annual income per household (2005) Tug 1,629,600 (U.S.$1,350); sources of income (2005): wages 35.2%, self-employment 31.3%, transfer payments 10.6%, other 22.9%; expenditure (2005)[8]: food and nonalcoholic beverages 42.2%, housing and energy 10.5%, clothing and footwear 10.1%, transportation 9.5%, education 5.4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 225; remittances (2007) 194; foreign direct investment (2004–06 avg.) 147; official development assistance (2006) 203. Disbursements for (U.S.$'000,000): tourism (2006) 188; remittances (2007) 77.
Land use as % of total land area (2003): in temporary crops 0.8%, in permanent crops, negligible, in pasture 82.5%; overall forest area (2005) 6.5%.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−166.8	−185.1	−151.4	−119.4	+39.6	−228.3
% of total	13.7%	13.1%	8.0%	5.3%	1.3%	5.7%

Imports (2006): U.S.$1,489,200,000 (mineral fuels 30.0%, machinery and apparatus 18.2%, food and agricultural products 12.4%, transportation equipment 10.3%). *Major import sources:* Russia 36.6%; China 27.5%; Japan 6.8%; South Korea 5.6%; Kazakhstan 3.5%.
Exports (2006): U.S.$1,528,800,000 (copper concentrate 42.7%, gold 18.1%, refined copper 7.2%, combed goat down 5.3%, raw [greasy] cashmere 4.2%, molybdenum 3.2%). *Major export destinations:* China 68.1%; Canada 11.2%; U.S. 7.8%; Russia 2.9%; U.K. 2.5%.

Transport and communications

Transport. Railroads (2006): route length 1,810 km; passenger-km 1,287,000,000; metric ton-km cargo 10,513,000,000. Roads (2002): total length 49,250 km (paved 4%). Vehicles (2006): passenger cars 95,115; trucks and buses 41,234. Air transport (2006): passenger-km 835,800,000; metric ton-km cargo 86,400,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	220	88	PCs	2005	340	133
Telephones				Dailies	2004	50[10]	20[10]
Cellular	2005	557[11]	211[11]	Internet users	2007	320	123
Landline	2005	156	59	Broadband	2007	7.4[11]	2.8[11]

Education and health

Educational attainment (2000). Percentage of population age 10 and over having: no formal education 11.6%; primary education 23.5%; secondary 46.1%; vocational secondary 11.2%; higher 7.6%. *Literacy* (2004): percentage of total population age 15 and over literate 97.8%; males 98.0%; females 97.5%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12) / Secondary (age 13–16)	724	22,600	556,900	24.6
Vocational (age 16–18)	35	1,100	32,500	29.5
Higher	174	6,500	136,600	21.0

Health (2005[2]): physicians 6,590 (1 per 384 persons); hospital beds 18,400 (1 per 138 persons); infant mortality rate per 1,000 live births (2006) 19.8; undernourished population (2002–04) 700,000 (27% of total population based on the consumption of a minimum daily requirement of 1,870 calories).

Military

Total active duty personnel (November 2007): 8,600 (army 87.2%, air force 9.3%, unspecified 3.5%). *Military expenditure as percentage of GDP* (2005): 1.6%; per capita expenditure U.S.$12.

[1]Rounded figures. [2]January 1. [3]Buddhism in Mongolia has close connections with shamanic ideas and rituals. [4]Excludes gold contained in copper concentrate. [5]Net taxes on products less imputed bank service charges. [6]Unemployed. [7]Detail does not add to total given because of rounding. [8]Weights of consumer price index components. [9]Imports c.i.f.; exports f.o.b. [10]Circulation of daily newspapers. [11]Subscribers.

Internet resources for further information:
- **National Statistical Office of Mongolia http://www.nso.mn/eng/index.php**
- **Bank of Mongolia http://www.mongolbank.mn**

Montenegro

Official name. Crna Gora (Montenegro).
Form of government: multiparty republic with one legislative house (Parliament [81])[1].
Chief of state: President.
Head of government: Prime Minister.
Capital: Podgorica; Cetinje is the old royal capital.
Official language: Montenegrin.
Official religion: none.
Monetary unit: euro (€)[2]; valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Municipalities	area sq km	population 2003 census	Municipalities	area sq km	population 2003 census
Andrijevica	283	5,785	Nikšić	2,065	75,282
Bar	598	40,037	Plav	486	13,805
Berane	717	35,068	Pljevlja	1,346	35,806
Bijelo Polje	924	50,284	Plužine	854	4,272
Budva	122	15,909	Podgorica	1,441	169,132
Cetinje	910	18,482	Rožaje	432	22,693
Danilovgrad	501	16,523	Šavnik	553	2,947
Herceg Novi	235	33,034	Tivat	46	13,630
Kolašin	897	9,949	Ulcinj	255	20,290
Kotor	335	22,947	Žabljak	445	4,204
Mojkovac	367	10,066	TOTAL	13,812	620,145

Demography

Population (2008): 626,000.
Density (2008): persons per sq mi 117.4, persons per sq km 45.3.
Urban-rural (2005)[3]: urban 52.2%; rural 47.8%.
Sex distribution (2007[4]): male 49.28%; female 50.72%.
Age breakdown (2005): under 15, 19.6%; 15–29, 23.6%; 30–44, 19.8%; 45–59, 19.1%; 60–74, 12.8%; 75–84, 4.3%; 85 and over, 0.8%.
Population projection: (2010) 627,000; (2020) 627,000.
Ethnic composition (2003): Montenegrin 43.2%; Serb 32.0%; Bosniac/Muslim 11.8%; Albanian 5.0%; undeclared 4.0%; other 4.0%.
Religious affiliation (2003): Orthodox *c.* 70%; Muslim *c.* 21%; Roman Catholic *c.* 4%; other *c.* 5%.
Major cities (2007[4]): Podgorica 174,000; Nikšić 75,000; Bijelo Polje 50,000; Bar 41,000; Berane 35,000.

Vital statistics

Birth rate per 1,000 population (2007): 12.6 (world avg. 20.3); (2005) within marriage 79.1%[3], outside of marriage 20.9%[3].
Death rate per 1,000 population (2007): 9.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 3.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.64.
Marriage/divorce rates per 1,000 population (2007): 6.8/0.7.
Life expectancy at birth (2004): male *c.* 71 years; female *c.* 75 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 543; malignant neoplasms (cancers) 156.1; injuries, accidents, and violence 47.0, of which suicide 22.1; diseases of the respiratory system 41.0; ill-defined conditions 89.4.

National economy

Budget (2006). Revenue: €582,258,287 (tax revenue 85.8%, of which VAT 44.5%, income tax 12.5%, excise tax 12.4%, taxes on international trade 9.7%; nontax revenue 14.2%). Expenditures: €579,780,129 (wages and salaries 27.4%; transfers 20.7%; debt service 20.0%).
Public debt (external, outstanding; January 2008): U.S.$680,259,100.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 130,000, grapes 41,000, tomatoes 22,000, chilies and peppers 17,000, corn (maize) 9,000, oranges 7,200, plums 5,500, apples 4,500, figs 4,500, onions 4,000, peaches 3,800, cherries 2,000, pears 1,900, olives 1,900, tobacco 400; livestock (number of live animals) 249,281 sheep, 114,922 cattle, 13,294 pigs; roundwood[5] 263,787 cu m, of which fuelwood 12%; fisheries production (2006) 911 (from aquaculture 1%). Mining and quarrying (2007): bauxite 667,053; sea salt 20,000. Manufacturing (gross value added in €'000; 2004): base metals and fabricated metal products (mostly of aluminum) 58,718; food products, beverages, and tobacco 56,846; paper products, publishing, and printing 6,647; wood and wood products 4,612; transportation equipment 4,504. Energy production (consumption): electricity (kW-hr; 2007) 2,144,000,000 ([2005] 19,000,000); hard coal (metric tons; 2006) 10,000 ([2005] 66,900); lignite (metric tons; 2007) 1,195,500 ([2005] 1,230,000); crude petroleum (barrels; 2004) n.a. (164,000); petroleum products, n.a. (n.a.); natural gas, n.a. (n.a.).
Land use as % of total land area (2005): in temporary crops 3.3%, in permanent crops 1.1%, in pasture 32.8%; overall forest area 44.7%.
Population economically active (2007): total 269,500; activity rate 43.2% (participation rates: over age 15, 52.9%; female 43.0%; unemployed [September 2007–August 2008] 15.8%).

Price and earnings indexes (2000 = 100)

	2000	2001	2002	2003	2004	2005
Consumer price index	100.0	100.3	99.1	98.8	98.5	98.5
Monthly earnings index	100.0	147.6	162.0	...	...	...

Gross national income (GNI; 2007): U.S.$3,109,000,000 (U.S.$5,180 per capita); purchasing power parity GNI (U.S.$10,290 per capita).

Structure of gross domestic product and labour force

	2006 in value €'000,000	2006 % of total value	2007 labour force	2007 % of labour force
Agriculture, forestry, fishing	178.2	8.3	17,600	6.5
Mining and quarrying	28.6	1.3	23,900	8.9
Manufacturing	164.7	7.7		
Construction	76.0	3.5	8,300	3.1
Public utilities	88.5	4.1	6,100	2.3
Transp. and commun.	208.3	9.7	22,900	8.5
Trade, hotels	302.0	14.1	60,700	22.5
Finance, real estate	310.1	14.4	9,200	3.4
Pub. admin., defense	174.3	8.1	20,400	7.6
Services	226.2	10.5	48,200	17.9
Other	392.1[6]	18.3[6]	52,100[7]	19.3[7]
TOTAL	2,149.0	100.0	269,500[8]	100.0

Household income and expenditure (2007)[9]. Average household size 3.5; average annual income per household €6,816 (U.S.$9,329); sources of income: wages and salaries 61.1%, transfer payments 19.0%, agriculture 4.5%; expenditure: food and nonalcoholic beverages 35.4%, housing and energy 12.9%, transportation 11.0%, clothing and footwear 8.2%, communications 6.1%, household furnishings 5.1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 340; remittances (2006) *c.* 100; foreign direct investment (FDI; 2004–06 avg.) 391; official development assistance (2006) 96. Disbursements for (U.S.$'000,000): tourism (2007) n.a.; remittances (2007) n.a.; FDI (2004–06 avg.) 14.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	−401.6	−359.3	−416.4	−505.9	−855.2	−1,535.4
% of total	39.7%	39.9%	31.5%	36.8%	40.5%	56.2%

Imports (2007): €2,134,377,900 (mineral fuels 11.6%; automobiles 11.4%; nonelectrical machinery and apparatus 9.0%; electrical machinery and apparatus 8.8%; base and fabricated metals 7.1%). *Major import sources:* Serbia 29.9%; Germany 10.0%; Italy 9.8%; Croatia 3.9%; Greece 3.5%.
Exports (2007): €599,020,700,000 (aluminum and aluminum products 47.0%; base metals 11.9%; beverages and tobacco 8.9%; mineral fuels 8.1%). *Major export destinations:* Serbia 28.3%; Italy 27.4%; Greece 12.3%; Hungary 11.1%; Bosnia and Herzegovina 5.1%.

Transport and communications

Transport. Railroads (2007): length (2006) 155 mi, 250 km; passenger-km 110,000,000; metric ton-km cargo 184,957,000. Roads (2006): total length 4,578 mi, 7,368 km (paved 64%). Vehicles (2006): passenger cars 152,581; trucks and buses, n.a. Air transport (2007): passengers 1,024,491; freight 1,320 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions[3]	2000	3,000	299	PCs[3]	2004	389	359
Telephones				Dailies	2004	73[11]	118[11]
Cellular	2006	644[12]	1,073[12]	Internet users	2007	280	468
Landline	2006	353	589	Broadband	2006	26[12]	42[12]

Education and health

Educational attainment (2005). Percentage of population age 15 and over having: no formal education 3.2%; incomplete primary education 6.8%; complete primary 22.5%; secondary 55.0%; higher 12.5%. *Literacy* (2003): total population age 20 and over literate 97.3%; males literate 99.2%; females literate 95.5%.

Education (2007–08)

	schools	teachers	students	student/teacher ratio
Primary (age 6–14)	444	4,889	75,038	15.3
Secondary (age 15–18)	47	2,254	31,557	14.0
Higher[13]	4	1,035	16,173	15.6

Health (2006): physicians 1,274 (1 per 490 persons); hospital beds 4,043 (1 per 154 persons); infant mortality rate per 1,000 live births (2007) 7.4; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 5,800 (army 43.1%, navy 56.9%).
Military expenditure as percentage of GDP (2006): n.a.; per capita expenditure, n.a.

[1]New constitution effective from Oct. 22, 2007. [2]Montenegro uses the euro as its official currency, even though it is not a member of the EU. [3]Data for Serbia and Montenegro. [4]January 1. [5]State forests only. [6]Taxes on products less imputed bank service charges and less subsidies. [7]Unemployed. [8]Detail does not add to total given because of rounding. [9]Based on the 2007 Household Budget Survey. [10]Imports c.i.f.; exports f.o.b. [11]Circulation of daily newspapers. [12]Subscribers. [13]2006–07.

Internet resources for further information:
- **Central Bank of Montenegro http://www.cb-mn.org/indexE.htm**
- **Statistical Office of the Republic of Montenegro http://www.monstat.cg.yu/EngPrva.htm**

Morocco

Official name: Al-Mamlakah al-Maghribīyah (Kingdom of Morocco).
Form of government: constitutional monarchy with two legislative houses (House of Councillors [270[1]]; House of Representatives [325]).
Chief of state and head of government: King assisted by Prime Minister.
Capital: Rabat.
Official language: Arabic.
Official religion: Islam.
Monetary unit: Moroccan dirham (DH); valuation (Sept. 8, 2008) 1 U.S.$ = DH 7.92; 1 £ = DH 13.99.

Area and population[2]

Regions	area sq km	population 2006 estimate	Regions	area sq km	population 2006 estimate
Chaouia-Ouardigha	16,760	1,675,000	Meknès-Tafilalet	79,210	2,174,000
Doukkala-Abda	13,285	2,008,000	Oriental	82,820	1,942,000
Fès-Boulemane	19,795	1,615,000	Oued Eddahab-Lagouira[5]	120,000	120,000
Gharb-Chrarda-Beni Hssen	8,805	1,893,000	Rabat-Salé-Zemmour-Zaer	9,580	2,453,000
Grand Casablanca	1,615	3,685,000	Souss-Massa-Dràa	70,880	3,198,000
Guelmim-Es Smara[3]	130,500	476,000	Tadla-Azilal	17,125	1,465,000
Laâyoune-Bojador-Sakia El-Hamra[4]	76,300	274,000	Tanger-Tétouan	11,570	2,545,000
Marrakech-Tensift-Al Haouz	31,160	3,159,000	Taza-Al Hoceima-Taounate	24,155	1,824,000
			TOTAL	710,850[6]	30,506,000[7]

Demography

Area[2]: 274,461 sq mi, 710,850 sq km.
Population (2008)[2]: 32,103,000[8, 9].
Density (2008)[2]: persons per sq mi 117.0, persons per sq km 45.2.
Urban-rural (2006): urban 56.0%; rural 44.0%.
Sex distribution (2006): male 49.51%; female 50.49%.
Age breakdown (2006): under 15, 29.8%; 15–29, 29.2%; 30–44, 20.3%; 45–59, 12.7%; 60–74, 5.9%; 75 and over, 2.1%.
Population projection[2]: (2010) 32,911,000; (2020) 36,923,000.
Ethnic composition (2000): Amazigh (Berber) *c.* 45%, of which Arabized *c.* 24%; Arab *c.* 44%; Moors originally from Mauritania *c.* 10%; other *c.* 1%.
Religious affiliation (2004): Muslim more than 99% (including Sunnī *c.* 97%; Shī'ī *c.* 2%); other less than 1%.
Major urban areas (2004)[10]: Casablanca 2,946,440; Fès 920,737; Marrakech 801,043; Salé 760,186; Tangier 669,685; Rabat 621,480.

Vital statistics

Birth rate per 1,000 population (2005): 22.3 (world avg. 20.3).
Death rate per 1,000 population (2005): 5.6 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2005): 2.73.
Life expectancy at birth (2005): male 68.4 years; female 73.1 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 201, of which ischemic heart disease 100; infectious and parasitic diseases 120; malignant neoplasms (cancers) 41; accidents and injuries 40.

National economy

Budget. Revenue (2007): DH 167,904,000,000 (VAT 29.6%; corporate taxes 18.1%; income tax 16.5%; nontax revenue 8.8%). Expenditures (2007): DH 168,959,000,000 (current expenditure 78.5%; capital expenditure 16.3%; other 5.2%).
Public debt (external, outstanding; 2006): U.S.$14,108,000,000.
Household income and expenditure. Average household size (2004) 5.3; expenditure (2001): food 41.3%, housing and energy 22.1%, health 7.6%.
Population economically active (2006): total 10,990,000; activity rate 36.0% (participation rates: ages 15 and over, 51.3%; female [2005] 27.5%; unemployed 9.7%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugar beets 3,000,000, wheat 1,583,000, potatoes 1,450,000, tomatoes 1,140,000, oranges 740,000, olives 657,000, clementines (2006–07) 336,000, grapes 325,000, green broad beans (2005) 140,000; livestock (number of live animals) 17,250,000 sheep, 2,700,000 cattle, 140,000,000 chickens; roundwood (2006) 944,000 cu m, of which fuelwood 37%; fisheries production (2006) 866,083 (from aquaculture, negligible)[11]. Mining and quarrying (2006): phosphate rock 28,000,000; barite 612,800; zinc 72,600[12]; lead 45,000[12]; cobalt 1,100[12]; silver 245,700 kg[13]. Manufacturing (value added in U.S.$'000,000; 2004): food products 1,130; wearing apparel 733; tobacco products 595; bricks, pottery, and cement 568; basic chemicals 457. Energy production (consumption): electricity (kW-hr; 2007) 19,116,000,000 ([2005] 20,057,000,000); coal (metric tons; 2005) none (6,750,000); crude petroleum (barrels; 2007) 81,000 ([2005] 51,500,000); petroleum products (metric tons; 2005) 5,815,000 (7,481,000); natural gas (cu m; 2007) 61,000,000 ([2005] 460,000,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 5,984; remittances (2007) 5,700; foreign direct investment (FDI; 2004–06 avg.) 2,305; official development assistance (2006) 1,046. Disbursements for (U.S.$'000,000): tourism (2006) 703; remittances (2007) 41; FDI (2004–06 avg.) 225.
Gross national income (GNI; 2007): U.S.$69,352,000,000 (U.S.$2,250 per capita); purchasing power parity GNI (U.S.$3,990 per capita).

Structure of gross domestic product and labour force

	2006 in value DH '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	80,475	14.0	4,303,300	39.2
Mining and quarrying	10,271[14]	1.8[14]		
Manufacturing	84,528[14]	14.7[14]	1,224,700	11.1
Public utilities	16,045[14]	2.8[14]		
Construction	31,694	5.5	789,600	7.2
Transp. and commun.	39,251	6.8	394,700	3.6
Pub. admin., defense	50,102	8.7	508,900	4.6
Trade, hotels	75,936	13.2	1,402,600	12.8
Finance, real estate Services	124,886	21.7	1,292,800	11.8
Other	62,082[15]	10.8[15]	1,073,400[16]	9.8[16]
TOTAL	575,271[17]	100.0	10,990,000	100.0[17]

Land use as % of total land area (2003): in temporary crops 19.0%, in permanent crops 2.0%, in pasture 47.1%; overall forest area (2005) 9.8%.

Foreign trade[18]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
DH '000,000	−44,021	−52,183	−69,954	−83,636	−94,715	−133,199
% of total	20.3%	23.7%	29.0%	32.0%	30.1%	37.0%

Imports (2006): DH 204,934,000,000 (mineral fuels 21.6%, of which crude petroleum 12.3%; machinery and apparatus 19.6%; chemical products 9.7%; food 7.0%; fabrics 6.1%; road vehicles 6.1%). *Major import sources:* France 16.5%; Spain 11.6%; Saudi Arabia 6.8%; Italy 6.4%; China 5.4%.
Exports (2006)[19]: DH 110,219,000,000 (apparel/clothing accessories 25.8%; fish/shrimp/octopuses 9.3%; inorganic chemicals 8.2%; vegetables/fruit 6.8%; equipment for distributing electricity 6.7%; microcircuits/transistors 5.8%). *Major export destinations:* France 28.4%; Spain 20.8%; U.K. 6.0%; Italy 4.9%; India 4.3%.

Transport and communications

Transport. Railroads (2004): route length 1,907 km; passenger-km 2,645,000,000; metric ton-km cargo 5,563,000,000. Roads (2005[20]): total length 56,987 km (paved 61%). Vehicles: passenger cars (2002) 1,326,108; trucks and buses (2000) 415,700. Air transport (2006)[21]: passenger-km 8,643,000,000; metric ton-km cargo 72,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	5,010	164	PCs	2005	740	24
Telephones				Dailies	2005	411[22]	14[22]
Cellular	2007	20,029[23]	632[23]	Internet users	2007	7,300	230
Landline	2007	2,394	75	Broadband	2007	477[23]	15[23]

Education and health

Educational attainment (2004). Percentage of population age 10 and over having: no formal education through incomplete primary education 45.5%; complete primary 40.8%; secondary 8.7%; higher 5.0%. *Literacy* (2005): total population over age 15 literate 53.5%; males 65.5%; females 41.5%.

Education (2004–05)

	schools[24]	teachers	students	student/teacher ratio
Primary (age 6–11)	6,565	147,730	4,070,182	27.6
Secondary (age 12–17)	1,664	92,133	1,764,785	19.2
Vocational	69	5,082	114,698	22.6
Higher	68	18,593	343,599	18.5

Health (2004): physicians 16,775 (1 per 1,778 persons); hospital beds[25] 26,136 (1 per 1,141 persons); infant mortality rate (2005) 41.6; undernourished population (2002–04) 1,800,000 (6% of total population based on the consumption of a minimum daily requirement of 1,870 calories).

Military

Total active duty personnel (November 2007): 195,800 (army 89.4%, navy 4.0%, air force 6.6%). *Military expenditure as percentage of GDP* (2005): 4.5%; per capita expenditure U.S.$77.

[1]All seats indirectly elected. [2]Includes Western Sahara, annexure of Morocco whose political status has been unresolved since 1991; Western Sahara area: 97,344 sq mi, 252,120 sq km; Western Sahara population (2008 est.) 497,000. [3]Roughly 50% of the land area of Guelmim-Es Smara is located within Western Sahara. [4]Roughly 90% of the land area of Laâyoune-Bojador-Sakia El-Hamra is located within Western Sahara. [5]The entire area of Oued Eddahab-Lagouira is located within Western Sahara. [6]Detail does not add to total given because of gross rounding of the Western Sahara areas of Morocco. [7]Official estimate of Moroccan demographic research centre. [8]Estimate of *UN World Population Prospects (2006 Revision)*. [9]In addition, about 90,000 Western Saharan refugees live in camps near Tindouf, Alg. [10]Combined arrondissement populations of 6 largest urban areas. [11]Roughly 60% of Morocco's fisheries production comes from Atlantic waters off of Western Sahara. [12]Metal content. [13]Including smelter bullion. [14]Public utilities includes crude petroleum and refined petroleum. [15]Import taxes and duties less subsidies. [16]Including 1,062,000 unemployed. [17]Detail does not add to total given because of rounding. [18]Imports c.i.f.; exports f.o.b. [19]Cannabis is an important illegal export; Morocco was the world's largest producer in 2005. [20]January 1. [21]Royal Air Maroc only. [22]Circulation of daily newspapers. [23]Subscribers. [24]1999–2000. [25]Public hospitals only.

Internet resources for further information:
- **Haut-Commissariat au Plan http://www.hcp.ma**
- **Bank al-Maghrib http://www.bkam.ma**

Mozambique

Official name: República de Moçambique (Republic of Mozambique).
Form of government: multiparty republic with a single legislative house (Assembly of the Republic [250]).
Head of state and government: President.
Capital: Maputo.
Official language: Portuguese.
Official religion: none.
Monetary unit: (new) metical (MTn; plural meticais)[1]; valuation (Sept. 8, 2008) 1 U.S.$ = MTn 24.15; 1 £ = MTn 42.67.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2007 preliminary census
Cabo Delgado	Pemba	31,902	82,625	1,632,809
Gaza	Xai-Xai	29,231	75,709	1,219,013
Inhambane	Inhambane	26,492	68,615	1,267,035
Manica	Chimoio	23,807	61,661	1,418,927
Maputo	Maputo	9,944	25,756	1,259,713
Nampula	Nampula	31,508	81,606	4,076,642
Niassa	Lichinga	49,828	129,055	1,178,117
Sofala	Beira	26,262	68,018	1,654,163
Tete	Tete	38,890	100,724	1,832,339
Zambézia	Quelimane	40,544	105,008	3,892,854
City				
Maputo	—	232	602	1,099,102
TOTAL		308,642[2]	799,379	20,530,714

Demography

Population (2008): 21,285,000.
Density (2008): persons per sq mi 69.0, persons per sq km 26.6.
Urban-rural (2007): urban 36.2%; rural 63.8%.
Sex distribution (2007): male 47.67%; female 52.33%.
Age breakdown (2005): under 15, 43.1%; 15–29, 26.8%; 30–44, 16.5%; 45–59, 9.0%; 60–74, 3.9%; 75 and over, 0.7%.
Population projection: (2010) 22,061,000; (2020) 26,480,000.
Doubling time: 39 years.
Ethnic composition (2000): Makuana 15.3%; Makua 14.5%; Tsonga 8.6%; Sena 8.0%; Lomwe 7.1%; Tswa 5.7%; Chwabo 5.5%; other 35.3%.
Religious affiliation (2005): traditional beliefs *c.* 46%; Christian *c.* 37%, of which Roman Catholic *c.* 19%, Protestant *c.* 11%; Muslim *c.* 9%; other *c.* 8%.
Major cities (2007): Maputo 1,099,102 (metro area 1,774,524); Matola 675,422; Nampula 477,900; Beira 436,240; Chimoio 238,976.

Vital statistics

Birth rate per 1,000 population (2006): 39.0 (world avg. 20.3).
Death rate per 1,000 population (2006): 20.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 18.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 5.35.
Life expectancy at birth (2006): male 41.2 years; female 40.4 years.
Adult population (ages 15–49) *living with HIV* (2007): 12.5%[3] (world avg. 0.8%).

National economy

Budget (2004). Revenue: MT 26,891,000,000,000 (tax revenue 58.0%, of which VAT 23.9%, personal income tax 9.0%, taxes on international trade 8.5%; grants 37.4%; nontax revenue 4.6%). Expenditures: MT 32,602,000,000,000 (current expenditures 58.3%; capital expenditures 38.5%; net lending 3.2%).
Public debt (external, outstanding; 2006): U.S.$2,511,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 7,350,000, sugarcane 2,650,000, corn (maize) 1,579,400, sorghum 350,000, coconuts 265,000, rice 196,000, peanuts (groundnuts) 105,000, cashews 58,000, tobacco 11,000, tea 10,500; livestock (number of live animals) 1,330,000 cattle, 393,000 goats, 28,500,000 chickens; roundwood (2006) 18,028,000 cu m, of which fuelwood 93%; fisheries production (2006) 43,710 (from aquaculture 3%). Mining and quarrying (2006): limestone 750,000; bauxite 12,000; tantalite 240,000 kg; garnet 4,400 kg; gold 68 kg[4]. Manufacturing (value added in MT '000,000,000; 2003): aluminum 19,067; beverages 4,773; food products 2,577; tobacco 581; chemicals and chemical products 297. Energy production (consumption): electricity (kW-hr; 2005) 13,289,000,000 (10,866,000,000); coal (metric tons; 2005) 41,000 (26,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (478,000); natural gas (cu m; 2005) 2,256,000,000 (73,191,000).
Household income and expenditure. Average household size (2004) 4.2; income per household: n.a.; source of income (1992–93)[5]: wages and salaries 51.6%, self-employment 12.5%, barter 11.5%, private farming 7.7%; expenditure (1998)[5]: food, beverages, and tobacco 63.5%, firewood and furniture 17.0%, transportation and communications 4.6%, clothing and footwear 4.6%, education and recreation 2.7%.
Population economically active (2003)[6]: total 8,981,000; activity rate 47.1% (participation rates: ages 15–64, 84.4%; female 53.8%; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	109.0	127.4	144.4	162.7	174.7	197.5	213.6

Gross national income (GNI; 2007): U.S.$6,787,000,000 (U.S.$320 per capita); purchasing power parity GNI (U.S.$690 per capita).

Structure of gross domestic product and labour force

	2006 in value MT '000,000,000	2006 % of total value	2002 labour force	2002 % of labour force
Agriculture	44,551	25.2	7,837,000	80.8
Mining	1,709	1.0		
Manufacturing	26,233	14.8		
Construction	5,356	3.0		
Public utilities	9,579	5.4		
Transp. and commun.	16,077	9.1	1,859,000	19.2
Finance, real estate	8,355	4.7		
Trade, hotels	35,666	20.2		
Pub. admin., defense	6,640	3.8		
Services	11,831	6.7		
Other	10,806[7]	6.1[7]	...	...
TOTAL	176,804[2]	100.0	9,696,000	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 140; remittances (2007) 80; foreign direct investment (2004–06 avg.) 169; official development assistance (2006) 1,611. Disbursements for (U.S.$'000,000): tourism (2006) 179; remittances (2007) 26.
Land use as % of total land area (2003): in temporary crops 5.5%, in permanent crops 0.3%, in pasture 56.1%; overall forest area (2005) 24.6%.

Foreign trade[8]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−271	−667	−604	−346	−497	−268
% of total	15.7%	29.2%	22.4%	10.3%	12.5%	5.3%

Imports (2006): U.S.$2,869,000,000 (machinery and apparatus 14.5%; refined petroleum 13.1%; food 11.4%, of which cereals 6.7%; road vehicles 9.4%; unspecified 19.7%). *Major import sources:* South Africa 37.4%; The Netherlands 15.8%; India 4.6%; U.A.E. 4.2%; U.S. 3.5%.
Exports (2006): U.S.$2,381,000,000 (aluminum 58.9%; food 10.2%, of which shrimp 3.6%; electricity 7.5%; natural gas 4.6%; tobacco 4.6%). *Major export destinations:* The Netherlands 59.7%; South Africa 14.1%; Zimbabwe 3.2%; Switzerland 2.2%.

Transport and communications

Transport. Railroads (2002): route length 1,940 mi, 3,123 km; (2003) passenger-km 167,000,000; (2003) metric ton-km cargo 1,362,000,000. Roads (2000): total length 18,890 mi, 30,400 km (paved 19%). Vehicles (2001): passenger cars 81,600; trucks and buses 76,000. Air transport (2007)[9]: passenger-km 440,000,000; metric ton-km cargo 6,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	391	20	PCs	2005	283	14
Telephones				Dailies	2004	16[10]	0.8[10]
Cellular	2007	3,300[11]	154[11]	Internet users	2007	200	9.3
Landline	2006	67	3.3	Broadband	2007	—	—

Education and health

Educational attainment (1997). Percentage of population age 15 and over having: no formal schooling 78.4%; primary education 18.4%; secondary 2.0%; technical 0.4%; higher 0.2%; other/unknown 0.6%. *Literacy* (2007): percentage of total population age 15 and over literate 53.0%; males literate 67.9%; females literate 38.6%.

Education (2003)

	schools	teachers	students	student/ teacher ratio
Primary (age 7–12)	9,027	51,912	3,177,586	61.2
Secondary (age 13–18)	154	4,112	160,093	38.9
Voc., teacher tr.	36	924	20,086	21.7
Higher[12]	3	954	7,156	7.5

Health: physicians (2003) 635 (1 per 30,525 persons); hospital beds (2003) 16,493 (1 per 1,175 persons); infant mortality rate per 1,000 live births (2006) 112.1; undernourished population (2002–04) 8,300,000 (44% of total population based on the consumption of a minimum daily requirement of 1,890 calories).

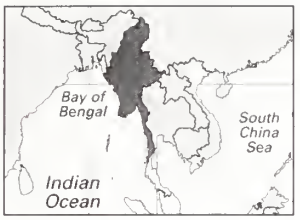
Military

Total active duty personnel (November 2007): *c.* 11,200 (army *c.* 89%, navy *c.* 2%, air force *c.* 9%). *Military expenditure as percentage of GDP* (2005): 0.9%; per capita expenditure U.S.$3.

[1]The (new) metical (MTn) replaced the (old) metical (MT) on July 1, 2006, at a rate of 1 MTn = MT 1,000. [2]Detail does not add to total given because of rounding. [3]Statistically derived midpoint of range. [4]Official figures; unofficial artisanal production is 360–480 kg per year. [5]Weights of consumer price index components. [6]Estimates of the ILO Employment Trends Unit. [7]Taxes less subsidies and less imputed bank service charges. [8]Imports are f.o.b. in balance of trade and c.i.f. for commodities and trading partners. [9]LAM (Linhas Aéreas de Moçambique) only. [10]Circulation of daily newspapers. [11]Subscribers. [12]1997.

Internet resources for further information:
- **Instituto Nacional de Estatística http://www.ine.gov.mz**
- **Banco de Moçambique http://www.bancomoc.mz**

Myanmar (Burma)



Official name: Pyidaungzu Myanma Naingngandaw (Union of Myanmar).
Form of government: military regime[1].
Head of state and government: Chairman[2].
Capital: Naypyidaw[3].
Official language: Burmese.
Official religion: none.
Monetary unit: Myanmar kyat (K); valuation[4] (Sept. 8, 2008) 1 U.S.$ = K 6.44; 1 £ = K 11.37.

Area and population

Divisions	Capitals	area sq mi	area sq km	population 2000 estimate
Ayeyarwady (Irrawaddy)	Pathein (Bassein)	13,567	35,138	6,779,000
Bago (Pegu)	Bago (Pegu)	15,214	39,404	5,099,000
Magway (Magwe)	Magway (Magwe)	17,305	44,820	4,548,000
Mandalay	Mandalay	14,295	37,024	6,574,000
Sagaing	Sagaing	36,535	94,625	5,488,000
Tanintharyi (Tenasserim)	Dawei (Tavoy)	16,735	43,343	1,356,000
Yangôn	Yangon (Rangoon)	3,927	10,171	5,560,000
States				
Chin	Hakha	13,907	36,019	480,000
Kachin	Myitkyina	34,379	89,041	1,272,000
Kayah	Loi-kaw	4,530	11,733	266,000
Kayin (Karen)	Hpa-an (Pa-an)	11,731	30,383	1,489,000
Mon	Mawlamyine (Moulmein)	4,748	12,297	2,502,000
Rakhine (Arakan)	Sittwe (Akyab)	14,200	36,778	2,744,000
Shan	Taunggyi	60,155	155,801	4,851,000
TOTAL		261,228	676,577	49,008,000[5]

Demography

Population (2008): 47,758,000[6].
Density (2008): persons per sq mi 182.8, persons per sq km 70.6.
Urban-rural (2005): urban 30.6%; rural 69.4%.
Sex distribution (2006): male 49.48%; female 50.52%.
Age breakdown (2006): under 15, 26.5%; 15–29, 29.2%; 30–44, 23.1%; 45–59, 13.5%; 60–74, 6.1%; 75–84, 1.4%; 85 and over, 0.2%.
Population projection: (2010) 48,511,000; (2020) 51,787,000.
Ethnic composition (2000): Burman 55.9%; Karen 9.5%; Shan 6.5%; Han Chinese 2.5%; Mon 2.3%; Yangbye 2.2%; Kachin 1.5%; other 19.6%.
Religious affiliation (2005): Buddhist *c.* 74%; Protestant *c.* 6%; Muslim *c.* 3%; Hindu *c.* 2%; traditional beliefs *c.* 11%; other *c.* 4%.
Major cities (2004): Yangon (Rangoon) 4,107,000[7]; Mandalay 924,000[7]; Mawlamyine (Moulmein) 405,800; Pathein (Bassein) 215,600; Bago (Pegu) 200,900.

Vital statistics

Birth rate per 1,000 population (2006): 17.7 (world avg. 20.3).
Death rate per 1,000 population (2006): 9.4 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 1.98.
Life expectancy at birth (2006): male 59.9 years; female 64.4 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 477; cardiovascular diseases 258; injuries, accidents, and violence 92; malignant neoplasms (cancers) 74; chronic respiratory diseases 57.
Adult population (ages 15–49) *living with HIV* (2007): 0.7% (world avg. 0.8%).

National economy

Budget (2002–03). Revenue: K 279,377,000,000 (nontax revenue 59.6%; revenue from taxes 40.3%, of which taxes on goods and services 22.1%, taxes on individual income 16.3%; foreign grants 0.1%). Expenditures: K 353,389,000,000 (economic affairs 31.4%, of which transport 18.4%; public services 23.4%; defense 21.5%; education 14.6%; health 5.3%).
Public debt (external, outstanding; 2006): U.S.$5,234,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 32,610,000, sugarcane 7,450,000, dry beans 1,765,000, peanuts (groundnuts) 1,000,000, corn (maize) 789,000, onions 740,000, plantains 630,000, sesame seeds 600,000, pigeon peas 540,000, coconuts 370,000, sunflower seeds 365,000, chickpeas 225,000, garlic 128,000; livestock (number of live animals) 12,500,000 cattle, 6,300,000 pigs, 94,500,000 chickens; roundwood (2006) 42,548,000 cu m, of which fuelwood 90%; fisheries production (2006) 2,581,780 (from aquaculture 22%). Mining and quarrying (2006): copper (metal content) 34,500[7]; jade 20,647,000 kg; rubies 1,685,000 carats; spinel 908,000 carats; sapphires 423,000 carats. Manufacturing (value added in U.S.$'000,000; 2003): tobacco products (2002) 1,320; nonelectrical machinery and apparatus 728; transportation equipment 483; fabricated metal products 254; food products, n.a.; cement (2006) 570,000 metric tons. Energy production (consumption): electricity (kW-hr; 2005) 6,015,000,000 (6,015,000,000); hard coal (metric tons; 2005) 993,000 (124,000); lignite (metric tons; 2005) 367,000 (72,000); crude petroleum (barrels; 2006) 7,675,000 ([2005] 5,153,000); petroleum products (metric tons; 2005) 645,000 (1,844,000); natural gas (cu m; 2006) 12,502,000,000 ([2005] 2,526,000,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 46; remittances (2007) 125; foreign direct investment (2004–06 avg.) 210; official development assistance (2006) 147. Disbursements for (U.S.$'000,000): tourism (2006) 37; remittances (2007) 32.
Household income and expenditure. Average household size (2004) 5.0; average annual income per household: n.a.; sources of income: n.a.; expenditure (1997): food and nonalcoholic beverages 70.4%, fuel and lighting 6.6%, transportation 3.3%, clothing and footwear 2.4%.
Gross national income (2007): U.S.$18,853,000,000 (U.S.$386 per capita).

Structure of gross domestic product and labour force

	2004–05 in value K '000,000,000	2004–05 % of total value	1997–98 labour force[8]	1997–98 % of labour force[8]
Agriculture	4,390	48.3	12,093,000	65.9
Mining	57	0.6	121,000	0.7
Manufacturing	1,050	11.6	1,666,000	9.1
Construction	357	3.9	400,000	2.2
Public utilities	7	0.1	26,000	0.1
Transp. and commun	934	10.3	495,000	2.7
Trade	2,022	22.3	1,781,000	9.7
Finance	6	0.1	1,485,000	8.1
Public administration	104	1.1		
Services, other	152	1.7	270,000	1.5
TOTAL	9,079	100.0	18,337,000	100.0

Population economically active (2003)[9]: total 26,361,000; activity rate of total population 53.3% (participation rates: ages 15–64, 78.7%; female 44.9%; unemployed [2006] 10.2%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	121.1	190.2	259.8	271.6	297.0	356.4	481.3

Land use as % of total land area (2003): in temporary crops 15.3%, in permanent crops 1.4%, in pasture 0.5%; overall forest area (2005) 49.0%.

Foreign trade[10]

Balance of trade (current prices)[11]

	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
K '000,000	+5,045	+721	+5,359	+9,132	+13,191	+16,878
% of total	14.5%	2.6%	19.1%	28.4%	28.1%	31.4%

Imports (2006–07[11]): K 16,835,000,000 (mineral fuels 24.8%, nonelectrical machinery and transport equipment 15.9%, base and fabricated metals 7.0%, synthetic fabrics 6.5%). *Major import sources:* Singapore 36.5%; China 24.4%; Thailand 10.3%; India 5.3%; Japan 4.9%.
Exports (2006–07[11]): K 30,026,000,000 (natural gas 42.6%; pulses [mostly beans] 11.1%; hardwood 10.0%, of which teak 6.0%; garments 5.3%; unspecified [including gemstones] 22.3%). *Major export destinations:* Thailand 48.9%; India 13.7%; Hong Kong 8.2%; China 7.9%; Singapore 3.5%.

Transport and communications

Transport. Railroads (2004): route length 3,955 km; (2006) passenger-km 5,263,000,000; (2006) metric ton-km cargo 829,000,000. Roads (1999): total length 27,966 km (paved 11%). Vehicles (2007[12]): passenger cars 203,441; trucks and buses 74,037. Air transport (2006): passenger-km 124,697,000; metric ton-km cargo 245,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	373	8.1	PCs	2005	400	8.6
Telephones				Dailies	2004	501[13]	11[13]
Cellular	2006	214[14]	4.2[14]	Internet users	2007	40	0.8
Landline	2005	504	9.3	Broadband	2007	1.5[14]	—[14]

Education and health

Educational attainment: n.a. *Literacy* (2003): total population age 15 and over literate 89.7%; males literate 93.7%; females literate 86.2%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 5–9)	36,010[15]	160,110	4,948,198	30.9
Secondary (age 10–15)	3,068[15]	78,144	2,589,312	33.1
Voc., teacher tr				
Higher[16]	958	15,947	587,300	36.8

Health (2004–05): physicians 17,564 (1 per 2,660 persons); hospital beds 34,654 (1 per 1,350 persons); infant mortality rate (2006) 52.3; undernourished population (2002–04) 2,400,000 (5% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

Military

Total active duty personnel (November 2007): 513,250 (army 73.1%, navy 3.1%, air force 2.9%, paramilitary [people's militia and people's police] 20.9%).
Military expenditure as percentage of GDP (2004): 7.6%.

[1]The regime claimed that a new draft constitution was approved in a May 2008 referendum; parliamentary elections are scheduled for 2010. At least 25% of the newly created parliament will be military. [2]Of State Peace and Development Council, assisted by Prime Minister; under draft constitution, President. [3]Site near Pyinmana was officially proclaimed the new capital on March 27, 2006. [4]The kyat is not freely traded internationally; the unofficial (but tolerated) black market rate in May 2008 was about 1 U.S.$ = K 1,000. [5]Estimate from http://www.citypopulation.de. [6]Estimate from U.S. Census Bureau International Database (August 2006 update). [7]2005. [8]Employed only. [9]Estimates of ILO Employment Trends Unit. [10]Imports c.i.f.; exports f.o.b. [11]Fiscal year beginning April 1. [12]January 1. [13]Circulation of daily newspapers. [14]Subscribers. [15]2002–03. [16]2001–02.

Internet resources for further information:
- **Key Indicators for Asia and the Pacific http://www.adb.org/documents/books/key_indicators/2008/pdf/Key-Indicators-2008.pdf**
- **Central Statistical Organization http://www.csostat.gov.mm**

Namibia

Official name: Republic of Namibia.
Form of government: republic with two legislative houses (National Council [26]; National Assembly [78[1]]).
Head of state and government: President.
Capital: Windhoek.
Official language: English.
Official religion: none.
Monetary unit: Namibian dollar (N$); valuation (Sept. 8, 2008) 1 U.S.$ = N$8.03; 1 £ = N$14.19.

Area and population

Regions	Capitals	area sq mi	area sq km	population 2001 census
Caprivi	Katima Mulilo	5,609	14,528	79,826
Erongo	Swakopmund	24,548	63,579	107,663
Hardap	Mariental	42,336	109,651	68,249
Karas	Keetmanshoop	62,245	161,215	69,329
Kavango	Rundu	18,712	48,463	202,694
Khomas	Windhoek	14,288	37,007	250,262
Kunene	Opuwo	44,515	115,293	68,735
Ohangwena	Eenhana/Oshikango	4,132	10,703	228,384
Omaheke	Gobabis	32,669	84,612	68,039
Omusati	Outapi	10,260	26,573	228,842
Oshana	Oshakati	3,341	8,653	161,916
Oshikoto	Tsumeb	14,924	38,653	161,007
Otjozondjupa	Otjiwarongo/Grootfontein	40,612	105,185	135,384
TOTAL		318,193[2]	824,116[2]	1,830,330

Demography

Population (2008): 2,089,000.
Density (2008): persons per sq mi 6.6, persons per sq km 2.5.
Urban-rural (2007): urban 36.3%; rural 63.7%.
Sex distribution (2006): male 50.13%; female 49.87%.
Age breakdown (2006): under 15, 38.2%; 15–29, 31.3%; 30–44, 15.6%; 45–59, 9.2%; 60–74, 4.5%; 75 and over 1.2%.
Population projection: (2010) 2,128,000; (2020) 2,263,000.
Ethnic composition (2000): Ovambo 34.4%; mixed race (black/white) 14.5%; Kavango 9.1%; Afrikaner 8.1%; San (Bushmen) and Bergdama 7.0%; Herero 5.5%; Nama 4.4%; Kwambi 3.7%; German 2.8%; other 10.5%.
Religious affiliation (2000): Protestant (mostly Lutheran) 49.3%; Roman Catholic 17.7%; unaffiliated Christian 14.1%; independent Christian 10.8%; traditional beliefs 6.0%; other 2.1%.
Major urban localities (2001): Windhoek 233,529; Rundu 44,413; Walvis Bay 42,015; Oshakati 28,255; Katima Mulilo 22,694.

Vital statistics

Birth rate per 1,000 population (2006): 24.3 (world avg. 20.3).
Death rate per 1,000 population (2006): 18.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 5.4 (world avg. 11.7).
Marriage/divorce rates per 1,000 population (2005): n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2006): 3.06.
Life expectancy at birth (2006): male 44.5 years; female 42.3 years.
Adult population (ages 15–49) *living with HIV* (2007): 15.3%[3] (world avg. 0.8%).

National economy

Budget (2006–07). Revenue: N$16,209,000,000 (tax revenue 90.0%, of which customs duties and excises 39.9%, income tax 28.9%, VAT 19.7%; nontax revenue and grants 10.0%). Expenditures: N$15,287,800,000 (current expenditure 82.0%, of which wages and salaries 40.2%; capital expenditure 18.0%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): roots and tubers 290,000, millet 58,000, corn (maize) 40,000, wheat 10,000, pulses 9,000, grapes 8,500, sorghum 6,000, seed cotton 5,200; livestock (number of live animals) 2,700,000 sheep, 2,500,000 cattle, 2,000,000 goats; roundwood, n.a.; fisheries production (2006) 509,445 (from aquaculture, negligible). Mining and quarrying (2006): salt 603,501; fluorspar 132,249; zinc (metal content) 100,000; lead (metal content) 11,830; copper (metal content) 6,262; uranium oxide 3,617; amethyst 40,000 kg; silver 31,307 kg; gold 2,790 kg; gem diamonds 2,356,000 carats. Manufacturing (value added in N$'000,000; 2006): food and food products 2,633 (of which fish processing 620, meat processing 101); other manufactures, which include fur products (from Karakul sheep), textiles, carved wood products, and refined metals 2,962. Energy production (consumption): electricity (kW-hr; 2004) 1,397,000,000 (2,819,000,000); coal, none (none); crude petroleum, none (none); petroleum products, none (n.a.); natural gas, none (none).
Household income and expenditure (2003–04). Average household size[4] 4.9; average annual income per household[4] N$43,520 (U.S.$6,554); sources of income[4]: wages and salaries 46.4%, farming 29.6%, transfer payments 10.2%, self-employment 7.1%; expenditure (2001)[5]: food and nonalcoholic beverages 29.6%, housing and energy 20.6%, transportation 14.8%, education 7.6%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 381; remittances (2007) 17; foreign direct investment (2004–06 avg.) 300; official development assistance (2006) 145. Disbursements for (U.S.$'000,000): tourism (2006) 118; remittances (2007) 20; foreign direct disinvestment (2004–06 avg.) –16.
Population economically active (2006): total 656,000; activity rate of total population 32.0% (participation rates: over age 15, 54.0%; female 43.4%; officially unemployed 5.3%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	109.2	121.7	130.4	135.8	138.9	145.9	155.8

Public debt (external, outstanding; 2006–07): U.S.$2,526,000,000.
Gross national income (GNI; 2007): U.S.$6,970,000,000 (U.S.$3,360 per capita); purchasing power parity GNI (U.S.$5,120 per capita).

Structure of gross domestic product and labour force

	2006 in value N$'000,000	2006 % of total value	2000 labour force	2000 % of labour force
Agriculture, fishing	4,400	9.9	134,259	20.6
Diamond mining	2,231	5.0	3,868	0.6
Other mining	1,463	3.3		
Manufacturing	5,596	12.6	22,922	3.5
Construction	1,743	3.9	21,788	3.3
Public utilities	1,250	2.8	4,193	0.7
Transp. and commun.	3,237	7.3	14,308	2.2
Trade, hotels	5,870	13.2	46,579	7.1
Finance, real estate	5,609	12.6	44,251	6.8
Services	1,075	2.4	112,172	17.2
Pub. admin., defense	8,269	18.6	24,419	3.7
Other	3,723[6]	8.4[6]	223,726[7]	34.3[7]
TOTAL	44,467[2]	100.0	652,483[2]	100.0

Land use as % of total land area (2003): in temporary crops 1.0%, in permanent crops 0.01%, in pasture 46.2%; overall forest area (2005) 9.3%.

Foreign trade[8]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
N$'000,000	–1,711	–2,183	–3,481	–1,829	–1,688	–1,114
% of total	8.0%	8.8%	15.5%	7.2%	6.0%	2.6%

Imports (2006): N$21,719,000,000 (refined petroleum products 18.3%; transport equipment 16.0%; chemicals, rubber, and plastics 12.1%; food, beverages, and tobacco 11.5%; machinery and apparatus 9.8%). *Major import sources* (2004): South Africa 85.4%; U.K. 2.6%; Germany 1.9%; China 1.2%; Zimbabwe 0.8%.
Exports (2006): N$20,605,000,000 (diamonds 33.0%; fish 18.2%; other minerals [mainly gold, zinc, copper, lead, and silver] 12.4%; refined zinc 12.2%; meat preparations [mostly beef] 7.8%). *Major export destinations* (2004): South Africa 27.8%; U.K. 14.9%; Angola 13.8%; U.S. 11.0%; Spain 9.6%.

Transport and communications

Transport. Railroads: route length (2006) 1,480 mi, 2,382 km; (1995–96) passenger-km 48,300,000; (2003–04) metric ton-km 1,247,400. Roads (2004): total length 26,245 mi, 42,237 km (paved 13%). Vehicles (2002): passenger cars 82,580; trucks and buses 81,002. Air transport (2006)[9]: passenger-km 1,588,466,000; metric ton-km cargo (2005) 60,429,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	509	259	PCs	2004	220	109
Telephones				Dailies	2005	47	23
Cellular	2007	800[10]	386[10]	Internet users	2007	101	49
Landline	2007	138	67	Broadband	2007	0.3[10]	—[10]

Education and health

Educational attainment (2000)[11]. Percentage of population age 25 and over having: no formal schooling/unknown 26.5%; incomplete primary education 25.5%; complete primary 8.0%; incomplete secondary 24.9%; complete secondary 11.4%; higher 3.7%. *Literacy* (2007): total population age 15 and over literate 86.6%; males literate 86.5%; females literate 86.7%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	1,362[12]	12,191	403,412	33.1
Secondary (age 13–19)	114[13]	6,403	148,104	23.1
Higher	24[13]	898[14]	12,197	13.1[14]

Health: physicians (2004) 598 (1 per 3,201 persons); hospital beds (2004–05) 6,811[15] (1 per 283 persons); infant mortality rate (2006) 48.1; undernourished population (2002–04) 450,000 (24% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2007): 9,200 (army 97.8%, navy 2.2%).
Military expenditure as percentage of GDP (2005): 3.2%; per capita expenditure U.S.$92.

[1]An additional 6 non-voting members may be appointed. [2]Detail does not add to total given because of rounding. [3]Statistically derived midpoint of range. [4]Based on the National Household Income and Expenditure Survey 2003/04, comprising 10,920 households. [5]Weights of consumer price index components. [6]Taxes less imputed bank service charges and less subsidies. [7]Includes 220,634 unemployed. [8]Imports are f.o.b. in balance of trade and c.i.f. for commodities and trading partners. [9]Air Namibia only. [10]Subscribers. [11]Based on the Namibia Demographic and Health Survey 2000, comprising 6,392 households. [12]1998. [13]1994. [14]2003–04. [15]Public sector only.

Internet resources for further information:
- **Bank of Namibia http://www.bon.com.na**
- **National Planning Commission http://www.npc.gov.na**

Nauru

Official name: Naoero (Nauruan[1]) (Republic of Nauru).
Form of government: republic with one legislative house (Parliament [18]).
Head of state and government: President.
Capital: [2].
Official language: none[1].
Official religion: none.
Monetary unit: Australian dollar ($A); valuation (Sept. 8, 2008) 1 U.S.$ = $A 1.24; 1 £ = $A 2.19.

Area and population

Districts	area sq mi	area sq km	population 2002 census[3]
Aiwo	0.4	1.1	1,451[4]
Anabar	0.6	1.5	378
Anetan	0.4	1.0	498
Anibare	1.2	3.1	232
Baitsi	0.5	1.2	443
Boe	0.2	0.5	731
Buada	1.0	2.6	673
Denigomodu	0.3	0.9	2,273[4]
Ewa	0.5	1.2	397
Ijuw	0.4	1.1	169
Meneng	1.2	3.1	1,323
Nibok	0.6	1.6	479
Uaboe	0.3	0.8	386
Yaren	0.6	1.5	632
TOTAL	8.2	21.2	10,065[5]

Demography

Population (2008): 10,200.
Density (2008): persons per sq mi 1,244, persons per sq km 481.1.
Urban-rural (2006): urban 100%.
Sex distribution (2005): male 50.11%; female 49.89%.
Age breakdown (2005): under 15, 37.5%; 15–29, 29.5%; 30–44, 17.8%; 45–59, 11.8%; 60–74, 3.1%; 75 and over, 0.3%.
Population projection: (2010) 11,000; (2020) 13,000.
Doubling time: 38 years.
Ethnic composition (2000): Nauruan 48.0%; Kiribertese (Gilbertese) 19.3%; Chinese 13.0%; Tuvaluan 6.9%; Australian white 6.2%; other 6.6%.
Religious affiliation (2005): Protestant *c.* 49%, of which Congregational *c.* 29%; Roman Catholic *c.* 24%; Chinese folk-religionist *c.* 10%; other *c.* 17%.
Major cities: none; population of Yaren urban area (2007) 4,616.

Vital statistics

Birth rate per 1,000 population (2005): 25.1 (world avg. 20.3).
Death rate per 1,000 population (2005): 6.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 18.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 3.19.
Marriage/divorce rates per 1,000 population (1995): 5.3/n.a.
Life expectancy at birth (2005): male 59.2 years; female 66.5 years.
Major causes of death per 100,000 population (2003): diabetes mellitus 159.0; diseases of the respiratory system 149.0; diseases of the circulatory system 119.2; malignant neoplasms (cancers) 79.5; accidents 79.5.

National economy

Budget (2006). Revenue: $A 20,905,000 (grants 46.4%, property income 36.7%, sales of goods and services 10.4%, other 6.5%). Expenditures: $A 25,935,000.
Total public and private external debt (2006): U.S.$249,000,000.
Gross national income (at current market prices; 2007): U.S.$32,240,000 (U.S.$3,176 per capita).

Distribution of gross domestic product and labour force

	2006 in value $A '000,000	2006 % of total value	1997 labour force[6, 7, 8]	1997 % of labour force[6, 7, 8]
Agriculture, fishing	3.9	10.5	.	...
Mining (phosphate)	0.7	1.9	528	24.7
Public utilities	−2.8	−7.6		
Manufacturing	1.9	5.1		
Construction	2.5	6.8		
Transportation and communications	3.4	9.2	.	.
Trade, hotels	7.6	20.5	137	6.4
Finance	1.1	3.0	33	1.6
Pub. admin.	14.9	40.3	1,238	58.0
Services, Other	3.8	10.3	198	9.3
TOTAL	36.9[9]	100.0	2,134	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 1,800, vegetables 500, pig meat 75, tropical fruit, coffee, almonds, figs, and pandanus (screw pine) are also cultivated, but most foodstuffs and beverages (including water) are imported; livestock (number of live animals) 2,900 pigs, 5,000 chickens; roundwood (2006) none; fisheries production (2006) 39 (from aquaculture, none). Mining and quarrying (2007): phosphate rock (gross weight including basic slag and guano) 45,000[10]. Manufacturing: none; virtually all consumer manufactures are imported. Energy production (consumption): electricity (kW-hr; 2005) 32,000,000 (32,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (46,000); natural gas, none (none).

Population economically active (2002): 3,280[7]; activity rate of total population 32.6% (participation rates: over age 15, 76.7%; female 45.5%; unemployed 22.7%).

Price index (2002 = 100)

	2002	2003	2004	2005	2006	2007
Consumer price index	100.0	103.1	105.6	108.1	111.6	114.8

Household income and expenditure. Average household size (2004) 6.1; income per household: n.a.; sources of income: [11]; expenditure: n.a.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism, n.a.; remittances, n.a.; foreign direct investment (2004–06 avg.) 1.0; official development assistance (2006) 17. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.
Land use as % of total land area (2003): in temporary crops, n.a., in permanent crops, n.a., in pasture, n.a.; overall forest area (2005) n.a.

Foreign trade

Balance of trade (current prices)

	2003–04	2004–05	2005–06
$A '000,000	−26.2	−26.5	−30.8
% of total	74.4%	94.3%	91.1%

Imports (2005–06): $A 32,300,000 (unspecified [mostly personal material needs] 100.0%). *Major import sources* (2005): South Korea *c.* 48%; Australia *c.* 36%; U.S. *c.* 6%; Germany *c.* 5%.
Exports (2005–06): $A 1,500,000 (phosphate, virtually 100%[10, 12]). *Major export destinations* (2005): South Korea *c.* 30%; Canada *c.* 24%; other *c.* 46%.

Transport and communications

Transport. Railroads (2001): length 3 mi, 5 km; passenger traffic, n.a.; metric ton-km cargo, n.a. Roads (2004): total length 25 mi, 40 km (paved 73%). Vehicles: n.a. Air transport (2001): passenger-km 287,000,000; metric ton-km cargo 29,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	0.8	77	PCs	2005		...
Telephones				Dailies	2005	0	0
Cellular	2003	1.3[13]	130[13]	Internet users	2007	...	...
Landline	2003	1.6	160	Broadband	2007	...	...

Education and health

Educational attainment (2002). Percentage of population age 6 and over[14] having: incomplete/complete primary education 4.9%[15]; incomplete/complete secondary 88.5%; higher 3.3%; unknown 3.3%. *Literacy* (2004): total population age 15 and over literate 97%.

Education (2007)

	schools	teachers	students	student/teacher ratio
Primary (ages 6–13)	2	53	1,235	23.3
Secondary (ages 14–17)	4	43	689	16.0

Health (2004): physicians 5 (1 per 2,012 persons); hospital beds 60 (1 per 168 persons); infant mortality rate per 1,000 live births (2005) 10.0; undernourished population, n.a.

Military

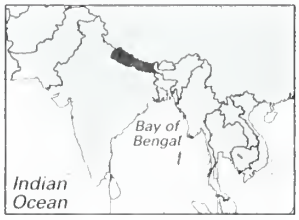
Total active duty personnel (2007): Nauru does not have any military establishment. The defense is assured by Australia, but no formal agreement exists.

[1]Nauruan is the national language; English is the language of business and government. [2]No official capital; government offices are located in Yaren district. [3]Preliminary. [4]The 2,381-person population of the Nauru Phosphate Corporation settlement, which provides housing for foreign employees is distributed to Aiwo and Denigomodu by estimate. The majority of foreign mine workers were repatriated to Kiribati and Tuvalu in 2006. [5]Includes 193 short-term visitors. [6]Employed only. [7]Nauruan only. [8]Most non-Nauruans are phosphate industry contract workers. [9]Detail does not add to total given because of rounding. [10]Phosphate extraction, the backbone of the Nauruan economy, halted in 2003 but resumed in 2006. Expect phosphate extraction for the next 5 years (on the surface) to 20 years (from the subsurface) using processing refurbishments. [11]2002 data for 1,118 Nauruans engaged in paid employment (excluding their wages/salaries): income from Nauru landowners' fund set up from the sale of phosphate 46.9%; income from the rent of land 44.8%; other 8.3%. [12]Coral gravel, a by-product of phosphate extraction, was exported in 2008. [13]Subscribers. [14]Not attending school. [15]Through grade 6.

Internet resources for further information:

- **Nauru Bureau of Statistics**
  http://www.spc.int/prism/country/nr/stats
- **Asian Development Bank Country Economic Report: Nauru**
  http://www.adb.org/Documents/CERs/NAU/CER-NAU-2007.pdf

Nepal



Official name: Sanghiya Loktantrik Ganatantra Nepal (Federal Democratic Republic of Nepal).
Form of government: multiparty republic with interim legislature (Constituent Assembly [601[1]])[2].
Chief of state: President.
Head of government: Prime Minister.
Capital: Kathmandu.
Official language: Nepali.
Official religion: none.
Monetary unit: Nepalese rupee (NRs); valuation (Sept. 8, 2008) 1 U.S.$ = NRs 71.44; 1 £ = NRs 126.21.

Area and population

Development regions	Principal centres	area sq mi	area sq km	population 2001 census
Eastern	Dhankuta	10,987	28,456	5,344,476
Central	Kathmandu	10,583	27,410	8,031,629
Western	Pokhara	11,351	29,398	4,571,013
Mid-western	Birendranagar	16,362	42,378	3,012,975
Far-western	Dipayal	7,544	19,539	2,191,330
TOTAL		56,827	147,181	23,151,423

Demography

Population (2008): 28,757,000.
Density (2008): persons per sq mi 506.0, persons per sq km 195.4.
Urban-rural (2006): urban 16.7%; rural 83.3%.
Sex distribution (2007): male 50.10%; female 49.90%.
Age breakdown (2005): under 15, 39.0%; 15–29, 27.9%; 30–44, 17.2%; 45–59, 10.2%; 60–74, 4.7%; 75–84, 0.9%; 85 and over, 0.1%.
Population projection: (2010) 29,898,000; (2020) 35,868,000.
Doubling time: 33 years.
Ethnic composition (2000): Nepalese 55.8%; Maithili 10.8%; Bhojpuri 7.9%; Tharu 4.4%; Tamang 3.6%; Newar 3.0%; Awadhi 2.7%; Magar 2.5%; Gurkha 1.7%; other 7.6%.
Religious affiliation (2001): Hindu 80.6%; Buddhist 10.7%; Muslim 4.2%; Kirat (local traditional belief) 3.6%; Christian 0.5%; other 0.4%.
Major cities (2001): Kathmandu 671,846; Biratnagar 166,674; Lalitpur 162,991; Pokhara 156,312; Birganj 112,484.

Vital statistics

Birth rate per 1,000 population (2007): 29.2 (world avg. 20.3).
Death rate per 1,000 population (2007): 8.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 20.7 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 3.10.
Life expectancy at birth (2007): male 63.3 years; female 64.1 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 472; diseases of the circulatory system 203, of which ischemic heart disease 95; accidents and injuries 86; malignant neoplasms (cancers) 63.

National economy

Budget (2006–07). Revenue: NRs 87,712,100,000 (tax revenue 81.1%, of which VAT 29.8%, customs duties 19.0%, corporate taxes 13.2%; nontax revenue 18.9%). Expenditures: NRs 125,323,600,000 (current expenditures 59.1%; capital expenditures 25.8%; other 15.1%).
Public debt (external, outstanding; July 2007): U.S.$3,263,200,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 3,680,839, sugarcane 2,599,789, potatoes 1,943,246, corn (maize) 1,819,925, wheat 1,515,139, millet 284,813, ginger 158,905, mangoes 143,000, mustard seed 141,000, tangerines 105,000, bananas 53,500, garlic 30,115; livestock (number of live animals) 7,847,624 goats, 7,044,279 cattle, 4,366,813 buffalo; roundwood (2006) 13,914,348 cu m, of which fuelwood 91%; fisheries production (2006) 45,425 (from aquaculture 56%). Mining and quarrying (2006): limestone 402,130; marble 28,110 sq m; talc 6,648. Manufacturing (value added in U.S.$'000,000; 2002): food products 83; textiles and wearing apparel 73; tobacco products 55; beverages 49; paints, soaps, and pharmaceuticals 42. Energy production (consumption): electricity (kW-hr; 2005–06) 2,777,400,000 (2,066,400,000); coal (metric tons; 2006) 11,963 ([2005] 309,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (704,000); natural gas, none (none).
Gross national income (GNI; 2007): U.S.$9,660,000,000 (U.S.$340 per capita); purchasing power parity GNI (U.S.$1,040 per capita).

Structure of gross domestic product and labour force

	2007–08 in value NRs '000,000	2007–08 % of total value	1998–99 labour force[3]	1998–99 % of labour force[3]
Agriculture	258,282	31.5	7,203,000	76.1
Mining	3,857	0.5	8,000	0.1
Manufacturing	55,900	6.8	552,000	5.8
Construction	51,044	6.2	344,000	3.7
Public utilities	15,556	1.9	26,000	0.3
Transp. and commun.	73,697	9.0	135,000	1.4
Trade, restaurants, hotels	119,109	14.5	522,000	5.5
Finance, real estate	116,190	14.1	51,000	0.5
Pub. admin., defense	15,069	1.8	70,000	0.7
Services	83,427	10.2	544,000	5.8
Other	28,684[4]	3.5[4]	8,000	0.1
TOTAL	820,814[5]	100.0	9,463,000	100.0

Population economically active (2003)[6]: total 9,981,000; activity rate of total population 38.3% (participation rates: ages 15–64, 66.3%; female 41.0%; unofficially unemployed [2004] *c.* 42%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.7	105.8	111.8	115.0	122.9	132.2	140.2

Household income and expenditure (2005–06)[7]. Average household size 5.4; income per household NRs 328,692 (U.S.$4,439); sources of income: self-employment 29.5%, wages and salaries 28.1%, remittances 16.1%, real estate 10.2%; expenditure: food and beverages 38.9%, housing and energy 24.3%, recreation and culture 8.7%, education 7.6%, clothing and footwear 5.1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 128; remittances (2007) 1,734; foreign direct disinvestment (2004–06 avg.) –2.0; official development assistance (2006) 514. Disbursements for (U.S.$'000,000): tourism (2006) 185; remittances (2007) 79.
Land use as % of total land area (2003): in temporary crops 16.5%, in permanent crops 0.9%, in pasture 12.1%; overall forest area (2005) 25.4%.

Foreign trade[8]

Balance of trade (current prices)

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07
NRs '000,000	–60,444	–74,422	–82,366	–90,768	–113,546	–130,913
% of total	39.2%	42.7%	43.3%	43.6%	48.5%	51.8%

Imports (2006–07): NRs 191,709,000,000 (basic manufactures [including fabrics, yarns, and made-up articles] 24.8%; mineral fuels [mostly refined petroleum] 19.0%; machinery and transport equipment 18.6%; chemicals and chemical products 13.5%). *Major import sources* (2006): India *c.* 48%; China *c.* 13%; U.A.E. *c.* 12%; Saudi Arabia *c.* 5%; Kuwait *c.* 4%.
Exports (2006–07): NRs 60,796,000,000 (ready-made garments 9.8%; woolen carpets 9.2%; vegetable ghee 6.8%; thread 6.7%; zinc sheets 5.9%; textiles 5.0%; jute goods 4.5%). *Major export destinations* (2006): India *c.* 58%; U.S. *c.* 14%; Germany *c.* 6%; U.K. *c.* 3%; France *c.* 2%.

Transport and communications

Transport. Railroads (2006): route length 59 km; passengers carried (2002) 1,600,000; freight handled 22,000 metric tons. Roads (2006): total length 17,433 km (paved 29%). Vehicles (2006): passenger cars 83,369; trucks and buses 49,700. Air transport: passenger-km (2003) 652,000,000; metric ton-km cargo (2005) 7,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	249	9.6	PCs	2005	132	4.9
Telephones				Dailies	2007	620[9]	22[9]
Cellular	2006	1,157[10]	42[10]	Internet users	2007	337	12
Landline	2007	766	27	Broadband	2007	14[10]	0.5[10]

Education and health

Educational attainment (2005–06)[7]. Percentage of population having: unknown through literate 15.4%; primary education 22.0%; secondary 44.0%; higher 18.6%. *Literacy* (2003–04): total population age 15 and over literate 48.0%; males literate 64.5%; females literate 33.8%.

Education (2006)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	27,901	95,503	4,515,059	47.3
Secondary (age 11–15)	14,209	46,102	1,980,521	43.0
Higher	2	..	152,041	...

Health (2006): physicians[11] 1,259 (1 per 21,737 persons); hospital beds 9,881 (1 per 2,801 persons); infant mortality rate per 1,000 live births (2007) 48.0; undernourished population (2002–04) 4,400,000 (17% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2007): 69,000 (army 100%). *Military expenditure as percentage of GDP* (2005): 2.1%; per capita expenditure U.S.$6.

[1]Includes 26 nonelected seats. [2]An interim constitution was promulgated Jan. 15, 2007. In late December 2007 the interim legislature voted to abolish the monarchy (which had been suspended from January 2007); the formal endorsement of the abolishment occurred in May 2008. [3]Employed only; excludes 1,987,000 workers ages 5–14. [4]Indirect taxes less imputed bank service charges and less subsidies. [5]Detail does not add to total given because of rounding. [6]Estimates of the ILO Employment Trends Unit. [7]Based on the Household Budget Survey 2005–06. [8]Imports c.i.f.; exports f.o.b. [9]Circulation of 15 top daily newspapers only. [10]Subscribers. [11]Public health system only.

Internet resources for further information:
- **Central Bank of Nepal http://www.nrb.org.np**
- **Central Bureau of Statistics http://www.cbs.gov.np**

Netherlands, The

Official name: Koninkrijk der Nederlanden (Kingdom of The Netherlands).
Form of government: constitutional monarchy with a parliament (States General) comprising two chambers (Senate [75]; House of Representatives [150]).
Chief of state: Monarch.
Head of government: Prime Minister.
Capital: Amsterdam.
Seat of government: The Hague.
Official language: Dutch[1].
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2008[2] estimate
Drenthe	Assen	1,035	2,680	488,135
Flevoland	Lelystad	931	2,412	378,688
Friesland	Leeuwarden	2,217	5,741	643,189
Gelderland	Arnhem	1,983	5,137	1,983,869
Groningen	Groningen	1,146	2,968	573,459
Limburg	Maastricht	853	2,209	1,123,705
Noord-Brabant	's-Hertogenbosch	1,962	5,082	2,424,827
Noord-Holland	Haarlem	1,580	4,092	2,626,163
Overijssel	Zwolle	1,321	3,421	1,119,994
Utrecht	Utrecht	559	1,449	1,201,350
Zeeland	Middelburg	1,133	2,934	380,585
Zuid-Holland	The Hague	1,314	3,403	3,461,435
TOTAL		16,034[3]	41,528[3]	16,405,399

Demography

Population (2008): 16,433,000.
Density (2008)[4]: persons per sq mi 1,260, persons per sq km 486.4.
Urban-rural (2005): urban 80.2%; rural 19.8%.
Sex distribution (2007[2]): male 49.45%; female 50.55%.
Age breakdown (2006[2]): under 15, 18.3%; 15–29, 18.1%; 30–44, 23.0%; 45–59, 21.3%; 60–74, 12.9%; 75–84, 4.9%; 85 and over, 1.5%.
Population projection: (2010) 16,551,000; (2020) 16,810,000.
Ethnic composition (by place of origin [including 2nd generation]; 2006[2]): Netherlander 80.7%; Indonesian 2.4%; Turkish 2.2%; Surinamese 2.0%; Moroccan 2.0%; other 10.7%[5].
Religious affiliation (2004): Roman Catholic *c.* 30%; Reformed/Lutheran tradition *c.* 20%; Muslim *c.* 6%; nonreligious/atheist *c.* 40%; other *c.* 4%.
Major urban agglomerations (2008[2]): Amsterdam 1,482,287; Rotterdam 1,169,800; The Hague 997,323; Utrecht 592,463; Haarlem 407,521.

Vital statistics

Birth rate per 1,000 population (2007): 11.1 (world avg. 20.3); within marriage 60.5%; outside of marriage 39.5%.
Death rate per 1,000 population (2007): 8.1 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 1.72.
Marriage/divorce rates per 1,000 population (2007): 4.4/2.0.
Life expectancy at birth (2006): male 77.6 years; female 81.9 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 268.8; malignant neoplasms (cancers) 247.4; diseases of the respiratory system 87.7; alcohol and drug overdoses 39.4.

National economy

Budget (2007). Revenue: €261,628,000,000 (social security contributions 31.3%, indirect taxes 28.3%, direct taxes 26.0%, nontax revenue 7.3%, sales tax 7.1%). Expenditures: €259,526,000,000 (current expenditure 92.3%, of which social security and welfare 45.3%; development expenditure 7.7%).
National debt (2006): U.S.$322,400,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 7,200,000, sugar beets 5,400,000, wheat 990,000, onions 925,000, tomatoes 690,000, carrots 545,000, cucumbers 445,000, apples 370,000, mushrooms 245,000, flowering bulbs and tubers 80,000 acres (32,400 hectares), of which tulips 27,200 acres (11,000 hectares), cut flowers/plants under glass 10,900 acres (4,400 hectares); livestock (number of live animals) 11,663,000 pigs, 3,763,000 cattle, 1,369,000 sheep; roundwood (2006) 1,109,054 cu m, of which fuelwood 26%; fisheries production (2006) 479,280 (from aquaculture 9%). Manufacturing (value added in €'000,000; 2002): food, beverages, and tobacco 12,936; chemicals and chemical products 7,542; printing and publishing 5,743; electric/electronic machinery 5,050; nonelectrical machinery 4,822; fabricated metal products 4,744. Energy production (consumption): electricity (kW-hr; 2005) 96,366,000,000 (95,556,000,000); coal (metric tons; 2005) negligible (13,009,000); crude petroleum (barrels; 2005) 10,578,000 (385,133,000); petroleum products (metric tons; 2005) 64,640,000 (27,433,000); natural gas (cu m; 2005) 82,707,000,000 (51,924,000,000).
Household income and expenditure (2005). Average household size (2006) 2.3; disposable income per household €34,321 (U.S.$42,683); sources of income (1996): wages 48.4%, transfers 28.5%, self-employment 11.3%; expenditure: housing and energy 22.2%, transportation and communications 15.9%, food and beverages 13.6%, recreation and culture 10.1%.
Land use as % of total land area (2003): in temporary crops 26.7%, in permanent crops 0.9%, in pasture 29.1%; overall forest area (2005) 10.8%.
Gross national income (GNI; 2007): U.S.$750,526,000,000 (U.S.$45,820 per capita); purchasing power parity GNI (U.S.$39,310 per capita).

Structure of gross domestic product and labour force

	2006 in value €'000,000	2006 % of total value	2005 labour force[6,7]	2005 % of labour force[6,7]
Agriculture, forestry, fishing	10,410	1.9	234,000	3.0
Mining	16,960	3.2	8,000	0.1
Manufacturing	63,087	11.8	1,021,000	13.1
Construction	26,278	4.9	483,000	6.2
Public utilities	7,948	1.5	44,000	0.6
Transp. and commun.	33,774	6.3	484,000	6.2
Trade, hotels	70,035	13.1	1,442,000	18.5
Finance, real estate	131,212	24.6	1,173,000	15.1
Pub. admin., defense	53,718	10.1	538,000	6.9
Services	60,188	11.3	2,035,000	26.1
Other	60,714[8]	11.4[8]	323,000	4.2
TOTAL	534,324	100.0[9]	7,784,000[9]	100.0

Population economically active (2005): total 8,308,000; activity rate of total population *c.* 51% (participation rates: ages 15–64, 75.1%; female 45.1%; unemployed [April 2005–March 2006] 6.3%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.2	107.6	109.9	111.2	113.1	114.4	116.2
Hourly earnings index	103.9	107.7	110.6	112.3	113.3	115.3	117.2

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 11,381; remittances (2007) 3,004; foreign direct investment (FDI; 2004–06 avg.) 15,983. Disbursements for (U.S.$'000,000): tourism (2006) 17,087; remittances (2007) 7,650; FDI (2004–06 avg.) 64,063.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	+27,129	+27,299	+27,413	+31,455	+30,858	+41,102
% of total	6.2%	6.2%	5.7%	5.9%	5.5%	6.3%

Imports (2006): €264,236,000,000 (machinery and apparatus 28.5%, of which office machines/computers/parts 12.5%; mineral fuels 17.8%, of which crude petroleum 8.7%; chemicals and chemical products 12.6%; food 7.0%). *Major import sources:* Germany 18.1%; Belgium 10.3%; U.S. 8.8%; China 8.7%; U.K. 6.2%.
Exports (2006): €295,094,000,000 (machinery and apparatus 26.7%, of which office machines/computers/parts 11.0%, nonelectrical machinery and equipment 6.1%; chemical products 17.0%; food 10.5%; refined petroleum 8.6%). *Major export destinations:* Germany 24.2%; Belgium 11.9%; U.K. 8.6%; France 8.2%; U.S. 5.4%.

Transport and communications

Transport. Railroads (2006): length 2,797 km; passenger-km (2004) 14,097,000,000; metric ton-km cargo (2001) 4,293,000,000. Roads (2006): total length 134,981 km (paved 90%). Vehicles (2007[2]): passenger cars 7,230,178; trucks and buses 1,064,846. Air transport (2007): passenger-km 75,012,000,000; metric ton-km cargo 4,735,500,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	10,514	648	PCs	2005	12,060	740
Telephones				Dailies	2004	4,712[11]	289[11]
Cellular	2005	15,834[12]	971[12]	Internet users	2007	15,000	914
Landline	2007	7,334	447	Broadband	2007	5,507[12]	336[12]

Education and health

Educational attainment (2004). Percentage of population ages 15–64 having: primary education 9.5%; lower secondary 9.6%; upper secondary 10.7%; vocational 44.0%; higher 25.4%, of which university 9.2%; unknown 0.8%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	7,296	...	1,597,000	...
Secondary (age 12–18)	666	...	940,000	...
Vocational	136	...	481,000	.
Higher	117	...	563,000	...

Health: physicians (2003) 50,854 (1 per 319 persons); hospital beds (2003) 81,125 (1 per 200 persons); infant mortality rate (2007) 4.1; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 45,608 (army 40.0%, navy 22.8%, air force 22.2%, paramilitary[13] 15.0%). *Military expenditure as percentage of GDP* (2005): 1.5%; per capita expenditure U.S.$523.

[1]Frisian is officially recognized in Friesland but not legally codified by the national government. [2]January 1. [3]Total area per more recent survey equals 16,040 sq mi (41,543 sq km), of which land area equals 13,044 sq mi (33,783 sq km), inland water equals 1,380 sq mi (3,574 sq km), and coastal water equals 1,616 sq mi (4,186 sq km). [4]Based on land area. [5]Includes Netherlander-EU country 5.0%. [6]Ages 15–64 only. [7]Employed only. [8]Taxes less imputed bank service charges and less subsidies. [9]Detail does not add to total given because of rounding. [10]Imports c.i.f.; exports f.o.b. [11]Circulation of daily newspapers. [12]Subscribers. [13]Military constabulary.

Internet resources for further information:
- **Statistics Netherlands http://www.cbs.nl/en-GB/default.htm**
- **Netherlands Bank http://www.dnb.nl/dnb/home?lang=en**

Netherlands Antilles

Official name: Nederlandse Antillen (Netherlands Antilles).
Political status: nonmetropolitan territory of The Netherlands with one legislative house (Island Council of Curaçao [21])[1].
Chief of state: Dutch Monarch represented by Governor.
Head of government: Prime Minister.
Capital: Willemstad.
Official language: Dutch.
Official religion: none.
Monetary unit: Netherlands Antillean guilder (NAf.); valuation (Sept. 8, 2008) 1 U.S.$ = NAf. 1.79; 1 £ = NAf. 3.16.

Area and population

Island councils	Capitals	area sq mi	area sq km	population 2007[2] estimate
Leeward Islands				
Bonaire	Kralendijk	111	288	11,537
Curaçao	Willemstad	171	444	137,094
Windward Islands				
Saba	The Bottom	5	13	1,491
Sint Eustatius, or Statia	Oranjestad	8	21	2,699
Sint Maarten (Dutch part only)	Philipsburg	13	34	38,959
TOTAL		308	800	191,780

Demography

Population (2008): 196,000.
Density (2008): persons per sq mi 636.4, persons per sq km 245.0.
Urban-rural (2003): urban 70.5%; rural 29.5%.
Sex distribution (2007[2]): male 46.53%; female 53.47%.
Age breakdown (2007[2]): under 15, 22.7%; 15–29, 18.6%; 30–44, 23.9%; 45–59, 20.8%; 60–74, 10.3%; 75–84, 2.8%; 85 and over, 0.9%.
Population projection: (2010) 201,000; (2020) 209,000.
Ethnic composition (2000): local black-other (Antillean Creole) 81.1%; Dutch 5.3%; Surinamese 2.9%; other (significantly West Indian black) 10.7%.
Religious affiliation (2001): Roman Catholic 72.0%; Protestant 16.0%; Spiritist 0.9%; Buddhist 0.5%; Jewish 0.4%; Bahāʾī 0.3%; Hindu 0.2%; Muslim 0.2%; other/unknown 9.5%.
Major locales (2001)[3]: Willemstad 93,599; Kralendijk 3,179; Philipsburg 1,227; Oranjestad 1,003; The Bottom 462.

Vital statistics

Birth rate per 1,000 population (2006): 14.8 (world avg. 20.3).
Death rate per 1,000 population (2006): 6.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 8.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.99.
Marriage/divorce rates per 1,000 population: (2006) 5.8/(2004) 2.9.
Life expectancy at birth (2006): male 73.8 years; female 78.4 years.
Major causes of death per 100,000 population (1993): infectious and parasitic diseases/diseases of the respiratory system 209.0; diseases of the circulatory system 180.2; malignant neoplasms (cancers) 117.7.

National economy

Budget (2006). Revenue: NAf. 822,600,000 (tax revenue 78.9%, of which sales tax 40.0%, import duties 17.4%; grants 10.9%; nontax revenue 10.2%). Expenditures: NAf. 910,600,000 (current expenditures 99.8%, of which transfers 38.2%, wages 32.5%, interest payments 16.1%, goods and services 12.9%; development expenditures 0.2%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): [4]; livestock (number of live animals) 13,600 goats, 9,100 sheep, 2,600 pigs, 140,000 chickens; roundwood, n.a.; fisheries production (2006) 6,247 (from aquaculture, negligible). Mining and quarrying (2006): salt 500,000, sulfur by-product 23,000. Manufacturing (2002): residual fuel oil 5,200,000; gas-diesel oils 2,620,000; asphalt 1,030,000; other manufactures include electronic parts, cigarettes, textiles, rum, and Curaçao liqucur. Energy production (consumption): electricity (kW-hr; 2005) 1,248,000,000 (1,248,000,000); coal, none (none); crude petroleum (barrels; 2005) none (83,745,000); petroleum products (metric tons; 2005) 9,413,000 (2,044,000); natural gas, none (none).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005)[5] 988; remittances (2007) 8; foreign direct investment (FDI; 2004–06 avg.) 57. Disbursements for (U.S.$'000,000): tourism (2005)[6] 109; remittances (2007) 59; FDI (2004–06 avg.) 48.
Household income and expenditure. Average household size (2005) 2.8; income per household: n.a.; sources of income: n.a.; expenditure (1996)[7, 8]: housing 26.5%, transportation and communications 19.9%, food 14.7%, household furnishings 8.8%, recreation and education 8.2%, clothing and footwear 7.5%.
Population economically active (2006): total 91,178; activity rate of total population 48.5% (participation rates [2001]: ages 15–64, 68.7%; female 49.0%; unemployed [2006] 13.2%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101 6	102.0	103 6	105.3	109 2	113.1	116.5

Gross national income (at current market prices; 2007): U.S.$3,452,000,000 (U.S.$18,017 per capita).

Structure of gross domestic product and labour force

	2004 in value NAf. '000,000	2004 % of total value	2006[9] labour force	2006[9] % of labour force
Agriculture, forestry	34.3	0.6	629	0.9
Mining				
Manufacturing	311 2	5.5	3,764	5.4
Construction	285.3	5.0	3,538	5.1
Public utilities	263.7	4 7	912	1.3
Transp. and commun.	509 3	9.0	4,638	6.7
Trade, hotels, restaurants	888 6	15.7	16,167	23.4
Finance, real estate, insurance	1,186.4	21.0	9,696	14.0
Pub. admin., defense	778.3	13.7	5,506	8.0
Services	981 9	17.3	14,452	20.9
Other	425.9[10]	7.5[10]	9,864[11]	14.3[11]
TOTAL	5,665 0[12]	100.0	69,166	100.0

Public debt (external outstanding; 2006): U.S.$459,200,000.
Land use as % of total land area (2003): in temporary crops 10.0%, in permanent crops, n.a.; in pasture, n.a.; overall forest area (2005) 1.5%.

Foreign trade[13]

Balance of trade (current prices)

	2000	2001	2002
U.S $'000,000	–845	–410	–569
% of total	17 4%	7.8%	14.3%

Imports (2002): U.S.$2,268,500,000 (crude petroleum 59.7%, refined petroleum 8.7%, food 6.4%, electrical machinery and apparatus 4.0%). *Major import sources* (2004): Venezuela 51.1%; United States 21.9%; The Netherlands 5.0%.
Exports (2002): U.S.$1,699,200,000 (refined petroleum 94.7%, food 1.2%, furniture and parts 0.8%). *Major export destinations* (2004): United States 20.4%; Panama 11.2%; Guatemala 8.8%; Haiti 7.1%; The Bahamas 5.6%.

Transport and communications

Transport. Railroads: none. Roads (2003): total length 373 mi, 600 km (paved 50%). Vehicles (2005[2]): passenger cars 64,947; trucks and buses 15,335. Air transport (2001)[14]: passenger arrivals and departures 2,131,000; freight loaded and unloaded 18,900 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1999	71	390	PCs	2006	...	...
Telephones				Dailies	2004	66[15]	349[15]
Cellular	2004	200[16]	1,092[16]	Internet users	1999	2.0	11
Landline	2004	80	437	Broadband	2006	...	...

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 0.8%; primary education 24.2%; lower secondary 42.8%; upper secondary 16.8%; higher 11.4%; unknown 4.0%. *Literacy* (2005): total population age 15 and over literate 96.9%; males literate 96.9%; females literate 97.0%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	98	1,145	22,667	19.8
Secondary (age 12–17)	53	639	9,180	14.4
Voc., teacher tr.	7	542	6,088	11.2
Higher[17, 18]	1	. .	2,032	...

Health: physicians (2001) 333 (1 per 520 persons); hospital beds (2002) 1,264 (1 per 138 persons); infant mortality rate per 1,000 live births (2006) 9.9; undernourished population (2002–04) 20,000 (13% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

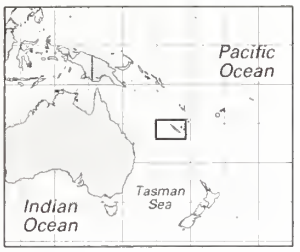
Military

Total active duty personnel (2005): more than 1,000 Dutch naval personnel are stationed in the Netherlands Antilles and Aruba.

[1]The Netherlands Antilles is to be dissolved as of 2010. Curaçao and Sint Maarten are to become separate overseas territories within The Netherlands with a status similar to Aruba. Bonaire, Saba, and Sint Eustatius will be directly integrated into The Netherlands. Curaçao's island council has jurisdiction over the other island councils until the dissolution is finalized. [2]January 1. [3]Populations of five administrative seats. [4]Mostly tomatoes, beans, cucumbers, gherkins, melons, and lettuce grown on hydroponic farms; aloes grown for export, divi-divi pods, and sour orange fruit are nonhydroponic crops. [5]Excludes Saba and Sint Eustatius. [6]Excludes Curaçao, Saba, and Sint Eustatius. [7]Curaçao only. [8]Weights of consumer price index components. [9]Curaçao and Bonaire only. [10]Taxes less subsidies. [11]Includes 9,722 unemployed. [12]Detail does not add to total given because of rounding. [13]Imports c.i.f.; exports f.o.b. [14]Curaçao and Sint Maarten airports. [15]Circulation of five Curaçao daily newspapers only. [16]Subscribers. [17]University of the Netherlands Antilles only. [18]2006–07.

Internet resources for further information:
- **Central Bank of the Netherlands Antilles http://www.centralbank.an**
- **Central Bureau of Statistics http://www.cbs.an**

New Caledonia



Official name: Nouvelle-Calédonie (New Caledonia)[1].
Political status[2]: overseas country (France) with one legislative house (Congress[3] [54]).
Chief of state: President of France.
Heads of government: High Commissioner (for France); President of the Government (for New Caledonia).
Capital: Nouméa.
Official language: none[4].
Official religion: none.
Monetary unit: CFP franc (CFPF); valuation (Sept. 8, 2008) 1 U.S.$ = CFPF 83.60; 1 £ = CFPF 147.70.

Area and population

Provinces Island(s)	Capitals	area sq mi	area sq km	population 2004 census
Loyauté (Loyalty)	Wé	765	1,981	22,080
Lifou		466	1,207	10,320
Maré		248	642	7,401
Ouvéa		51	132	4,359
Nord (Northern)	Koné	3,305	8,561	44,474
Belep		27	70	930
New Caledonia (part)		3,278	8,491	43,544
Sud (Southern)	Nouméa	3,102	8,033	164,235
New Caledonia (part)		3,043	7,881	162,395
Pins		59	152	1,840
TOTAL		7,172	18,575	230,789

Demography

Population (2008): 247,000.
Density (2008): persons per sq mi 34.4, persons per sq km 13.3.
Urban-rural (2005): urban 63.7%; rural 36.3%.
Sex distribution (2004): male 50.47%; female 49.53%.
Age breakdown (2004): under 15, 28.0%; 15–29, 24.3%; 30–44, 23.4%; 45–59, 14.9%; 60–74, 7.2%; 75–84, 1.7%; 85 and over, 0.5%.
Population projection: (2010) 254,000; (2020) 290,000.
Doubling time: 54 years.
Ethnic composition (1996): Melanesian 45.3%, of which local (Kanak) 44.1%, Vanuatuan 1.2%; European 34.1%; Wallisian or Futunan 9.0%; Indonesian 2.6%; Tahitian 2.6%; Vietnamese 1.4%; other 5.0%.
Religious affiliation (2000): Roman Catholic 54.2%; Protestant 14.0%; unaffiliated/other Christian 18.8%; Muslim 2.7%; nonreligious 5.8%; other 4.5%.
Major communes (2004): Nouméa 91,386 (urban agglomeration 146,245); Mont-Dore 24,195[5]; Dumbéa 18,602[5]; Païta 12,062[5]; Poindimié 4,824.

Vital statistics

Birth rate per 1,000 population (2007): 17.5 (world avg. 20.3); (2005) within marriage 32.0%; outside of marriage 68.0%.
Death rate per 1,000 population (2007): 4.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 12.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.20.
Marriage/divorce rates per 1,000 population: (2006) 3.5/(2004) 1.1.
Life expectancy at birth (2005): male 71.9 years; female 78.6 years.
Major causes of death per 100,000 population (2004): malignant neoplasms (cancers) 120.5; diseases of the circulatory system 110.5; accidents, poisonings, and violence 91.4; diseases of the respiratory system 49.0; diseases of the digestive system 13.9.

National economy

Budget (2007)[6]. Revenue: CFPF 152,005,000,000 (tax revenue 72.7%, of which direct taxes 42.5%, indirect taxes 30.2%; other 27.3%). Expenditures: CFPF 137,159,000,000 (current expenditure 94.8%; development expenditure 5.2%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 16,500, yams 12,500, corn (maize) 6,800, vegetables 6,400, cassava 3,200, sweet potatoes 3,200, beef 3,100, potatoes 2,400, pork 2,050; livestock (number of live animals) 115,000 cattle, 29,000 pigs, 600,000 chickens; roundwood (2006) 5,000 cu m, of which fuelwood, n.a.; fisheries production (2006) 5,456, of which tuna (2005) 2,450, shrimp (2005) 2,440 (from aquaculture [2006] 43%). Mining and quarrying (2007): nickel ore 7,508,000, of which nickel content 125,200; cobalt (2006) 1,100 (recovered). Manufacturing (metric tons; 2006): cement 125,000; ferronickel (metal content) 48,723; nickel matte (metal content) 13,655; other manufactures include beer, copra cake, and soap. Energy production (consumption): electricity (kW-hr; 2007) 1,926,000,000 (1,926,000,000); coal (metric tons; 2005) none (290,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (593,000); natural gas, none (none).
Land use as % of total land area (2003): in temporary crops 0.3%, in permanent crops 0.2%, in pasture 13.1%; overall forest area (2005) 39.2%.
Population economically active (2004): total 96,406; activity rate of total population 41.8% (participation rates: over age 14, 57.1%; female [1996] 39.7%; registered unemployed [May 2007–April 2008] 6.4%).

Price index (December 2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index[7]	102.3	104.1	105.4	106.2	107.6	110.7	111.8

Gross national income (2007): U.S.$7,994,000,000 (U.S.$33,072 per capita).

Structure of gross domestic product and labour force

	2004 in value CFPF '000,000	2004 % of total value	2006 labour force[8]	2006 % of labour force[8]
Agriculture, fishing	10,105	1.8	2,176	2.9
Mining	55,336	9.8	1,151	1.6
Public utilities	9,392	1.7	765	1.0
Manufacturing	29,530	5.2	6,645	9.0
Construction	46,496	8.2	7,054	9.6
Transp. and commun.	39,517	7.0	3,887	5.3
Trade, hotels	76,720	13.6	12,273	16.6
Finance, real estate	69,048	12.2	7,205	9.8
Pub. admin., defense	99,253	17.5	22,491	30.5
Services	84,662	15.0	10,090	13.7
Other	45,469[9]	8.0[9]	...	...
TOTAL	565,528	100.0	73,737	100.0

Public debt: n.a.
Household income and expenditure. Average household size (2004) 3.6; average annual income per household (1991) CFPF 3,361,233 (U.S.$32,879)[10]; sources of income (1991): wages and salaries 68.2%, transfer payments 13.7%, other 18.1%; expenditure (1991): food and beverages 25.9%, housing 20.4%, transportation and communications 16.1%, recreation 4.8%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 258; remittances (2007) 535; foreign direct investment (FDI; 2004–06 avg.) 34. Disbursements for (U.S.$'000,000): tourism (2006) 186; remittances (2007) 50; FDI (2004–06 avg.) 20.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFPF '000,000	–64,764	–81,112	–57,906	–66,254	–72,785	–65,351
% of total	34.2%	32.9%	22.7%	24.1%	22.1%	15.5%

Imports (2007): CFPF 244,105,000,000 (machinery and apparatus 19.6%, mineral products [mostly coal and refined petroleum] 14.6%, transportation equipment 14.5%, food 10.9%, base and fabricated metals 6.3%). *Major import sources:* EU 42.9%, of which France 26.6%; Singapore 13.6%; Australia 10.7%; China 5.5%; Philippines 4.6%.
Exports (2007): CFPF 178,754,000,000 (ferronickel/nickel matte 71.7%, nickel ore and concentrate 24.6%, shrimp 0.9%). *Major export destinations:* EU 33.3%, of which France 14.5%; Japan 22.3%; Taiwan 12.1%; China 11.2%; Australia 4.8%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 3,375 mi, 5,432 km (paved [1993] 52%). Vehicles: passenger cars (2005) 105,159; trucks and buses (1997) 23,000. Air transport (2006)[12]: passenger-km 1,432,076,000; metric ton-km cargo 20,181,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	115	498	PCs	2005	6	25
Telephones				Dailies	2005	19[13]	79[13]
Cellular	2007	176[14]	727[14]	Internet users	2006	80	332
Landline	2007	60	248	Broadband	2007	20[14]	84[14]

Education and health

Educational attainment (2004). Percentage of population age 25 and over having: no formal schooling through some primary education 38.1%; primary 9.5%; lower secondary 6.4%; upper secondary 11.8%; vocational 19.8%; higher 14.4%. *Literacy* (2002): total population age 15 and over literate 91.0%; males literate 92.0%; females literate 90.0%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	287	1,883	37,245	19.8
Secondary (age 11–17) / Vocational	93	2,727	31,987	11.7
Higher	4	111	2,926	26.4

Health: physicians (2007) 541 (1 per 448 persons); hospital beds (2006) 637[15] (1 per 374 persons); infant mortality rate per 1,000 live births (2007) 6.6; undernourished population (2002–04) 20,000 (10% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

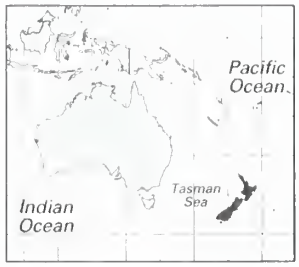
Military

Total active duty personnel (November 2007): 1,540 French troops (army 66.9%, navy 33.1%). *Military expenditure as percentage of GDP:* n.a.

[1]Locally known as Kanaky. [2]The Nouméa Accord granting New Caledonia limited autonomy was signed in May 1998; future referenda concerning possible independence are to be held between 2013 and 2018. [3]Operates in association with 3 provincial assemblies. [4]Kanak languages and French have special recognition per Nouméa Accord. [5]Within Nouméa urban agglomeration. [6]From local sources only. [7]Nouméa only. [8]Employed only. [9]Taxes and subsidies less imputed bank service charges. [10]Includes both monetary (92%) and nonmonetary (8%) income. [11]Imports c.i.f.; exports f.o.b. [12]Air Calédonie only. [13]Circulation of daily newspapers. [14]Subscribers. [15]Excludes beds in psychiatric facilities.

Internet resources for further information:
- **L'Institut d'Emission d'Outre-Mer**
  http://www.ieom.fr/publication_rapports.asp
- **Institut de la statistique et des études économiques Nouvelle-Calédonie**
  http://www.isee.nc

New Zealand



Official name: New Zealand (English); Aotearoa (Maori).
Form of government: constitutional monarchy with one legislative house (House of Representatives [122[1]]).
Chief of state: British Monarch, represented by Governor-General.
Head of government: Prime Minister.
Capital: Wellington.
Official languages: English; Maori.
Official religion: none.
Monetary unit: New Zealand dollar (NZ$); valuation (Sept. 8, 2008) 1 U.S.$ = NZ$1.51; 1 £ = NZ$2.66.

Area and population

Islands Regional Councils	area sq km	population 2006 census	Islands Regional Councils	area sq km	population 2006 census
North Island[2]	116,219	3,120,303[3]	South Island[2,4]	152,229[5]	1,022,316[3]
Auckland	6,059	1,321,074	Canterbury	44,638	541,515
Bay of Plenty	12,277	264,180	Marlborough (district)[6]	10,781	46,179
Gisborne (district)[6]	8,355	48,681	Nelson (city)[6]	444	45,372
Hawke's Bay	14,111	151,755	Otago	31,241	209,850
Manawatu-Wanganui	22,206	225,696	Southland[4]	32,079	95,247
Northland	13,789	154,392	Tasman (district)[6]	9,771	48,306
Taranaki	7,257	104,697	West Coast	23,276	35,844
Waikato	24,025	393,171	offshore islands[7]	2,244	660
Wellington	8,140	456,654	TOTAL	270,692	4,143,282[3]

Demography

Population (2008): 4,268,000.
Density (2008): persons per sq mi 40.8, persons per sq km 15.8.
Urban-rural (2007): urban 86.0%; rural 14.0%.
Sex distribution (2007[8]): male 48.96%; female 51.04%.
Age breakdown (2007[8]): under 15, 21.1%; 15–29, 20.8%; 30–44, 21.8%; 45–59, 19.5%; 60–74, 11.2%; 75 and over, 5.6%.
Population projection: (2010) 4,344,000; (2020) 4,726,000.
Ethnic composition (2006): European 67.6%, of which NZ European 59.1%; Maori (local Polynesian) 14.6%; Asian 9.2%, of which Chinese 3.7%; other Pacific peoples (mostly other Polynesian) 6.9%; other 1.7%.
Religious affiliation (2006): Christian 51.1%, of which Anglican 13.3%, Roman Catholic 12.2%, Presbyterian 9.2%, Methodist 2.9%, Maori (indigenous) Christian 1.6%; Hindu 1.6%; Buddhist 1.3%; Muslim 1.0%; nonreligious 31.1%; unknown 12.9%; other 1.0%.
Major urban agglomerations (2007): Auckland 1,294,000; Wellington 379,100; Christchurch 378,700; Hamilton 194,800; Napier 122,500.

Vital statistics

Birth rate per 1,000 population (2007): 15.4 (world avg. 20.3); within marriage 52.8%; outside of marriage 47.2%.
Death rate per 1,000 population (2007): 6.8 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 2.17.
Marriage/divorce rates per 1,000 population (2007): 5.1/2.3.
Life expectancy at birth (2004–06): male 77.9 years; female 81.9 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 267.2, of which ischemic heart disease 141.7; malignant neoplasms (cancers) 194.6; accidents 25.9; diabetes mellitus 20.5.

National economy

Budget (2004–05). Revenue: NZ$51,489,000,000 (tax revenue 91.8%, of which individual income taxes 45.7%, taxes on goods and services 26.7%; nontax revenue 8.0%; grants 0.2%). Expenditures: NZ$44,099,000,000 (social protection 35.0%; health 20.0%; education 17.9%; defense 3.0%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 505,000, barley 400,000, apples 380,000, kiwifruit 315,000, wheat 275,000, grapes 190,000, green onions 175,000; livestock (number of live animals) 40,000,000 sheep, 9,650,000 cattle; roundwood (2006) 19,254,000 cu m, of which fuelwood 0%; fisheries production (2006) 578,230 (from aquaculture 19%); aquatic plants 225 (from aquaculture, none). Mining and quarrying (2006): limestone/marl 5,032,000; silver 27,221 kg; gold 10,618 kg. Manufacturing (value added in U.S.$'000,000; 2005): food products 4,175; fabricated metals 1,350; printing and publishing 1,250; paper products 1,175; wood products (excl. furniture) 1,125. Energy production (consumption): electricity (kW-hr; 2007–08) 42,728,000,000 ([2006] 37,390,000,000); hard coal (metric tons; 2007–08) 2,178,000 ([2005] 173,000); lignite (metric tons; 2007–08) 2,855,000 ([2005] 4,038,000); crude petroleum (barrels; 2007–08) 20,607,500 ([2005] 33,537,500); petroleum products (metric tons; 2007–08) 5,187,000 ([2005] 6,266,000); natural gas (cu m; 2007–08) 4,290,200,000 ([2006] 3,700,000,000).
Land use as % of total land area (2003): in temporary crops 5.6%, in permanent crops 7.0%, in pasture 51.7%; overall forest area (2005) 31.0%.
Population economically active (2007): total 2,235,400; activity rate 52.8% (participation rates: ages 15–64, 76.9%; female 46.3%; unemployed [July 2007–June 2008] 3.6%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.6	105.4	107.2	109.7	113.0	116.8	119.6
Hourly earnings index[9]	103.1	106.9	109.4	114.6	116.8	123.0	...

Household income and expenditure (2006–07). Average household size (2007) 2.8; average annual income per household NZ$67,973 (U.S.$47,982); sources of income: wages and salaries 73.9%, transfers 12.3%, self-employment 6.2%; expenditure: housing and energy 23.4%, food 16.3%, transportation 14.2%, recreation and culture 10.1%.
Gross national income (GNI; 2007): U.S.$121,708,000,000 (U.S.$28,780 per capita); purchasing power parity GNI (U.S.$26,340 per capita).

Structure of gross domestic product and labour force

	2006 in value U.S.$'000,000	2006 % of total value	2007 labour force	2007 % of labour force
Agriculture	7,190	6.8	154,400	6.9
Mining Public utilities	3,800	3.6	5,100 8,800	0.2 0.4
Manufacturing	15,800	14.9	274,400	12.3
Construction	4,830	4.6	183,100	8.2
Transp. and commun.	7,620	7.2	115,400	5.2
Trade, hotels	15,900	15.0	485,700	21.7
Finance, real estate			320,400	14.3
Pub. admin., defense	46,900	44.2	136,100	6.1
Services			461,700	20.7
Other	3,960	3.7	90,300[10]	4.0[10]
TOTAL	106,000	100.0	2,235,400	100.0

Public debt (external, outstanding; 2007): n.a.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 4,563; remittances (2007) 650; foreign direct investment (2004–06 avg.) 4,183. Disbursements for (U.S.$'000,000): tourism (2006) 2,526; remittances (2007) 1,207; foreign direct disinvestment (2004–06 avg.) –287.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
NZ$'000,000	+705	–1,420	–1,996	–4,044	–3,526	–2,850
% of total	1.1%	2.4%	3.1%	6.2%	4.8%	3.8%

Imports (2006): NZ$40,774,000,000 (machinery and apparatus 21.4%, mineral fuels 14.9%, vehicles 11.7%, aircraft 4.2%, plastics 3.8%). *Major import sources:* Australia 20.1%; China 12.2%; U.S. 12.1%; Japan 9.1%; Germany 4.4%.
Exports (2006): NZ$34,619,000,000 (dairy products 20.6%, beef and sheep meat 12.1%, wood and paper [all forms] 9.4%, machinery and apparatus 8.6%, aluminum 4.3%, fish 3.7%, fruit 3.7%). *Major export destinations:* Australia 20.5%; U.S. 13.1%; Japan 10.3%; China 5.4%; U.K. 4.9%.

Transport and communications

Transport. Railroads (2006): route length 4,128 km; passenger-km, n.a.; metric ton-km cargo (1999–2000) 4,040,000,000. Roads (2005): total length 93,148 km (paved 64%). Vehicles (2007): passenger cars 2,775,717; trucks and buses 558,412. Air transport (2007)[12]: passenger-km 28,423,000,000; metric ton-km cargo 906,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	2,338	576	PCs	2005	2,077	507
Telephones				Dailies	2007	615[13]	147[13]
Cellular	2007	4,251[14]	1,017[14]	Internet users	2007	2,260	541
Landline	2007	1,747	418	Broadband	2007	709[14]	170[14]

Education and health

Educational attainment (2007). Percentage of population ages 15 and over having: no formal schooling to incomplete primary education 26.8%; primary 9.0%; vocational 29.8%; secondary 15.0%; higher 19.4%. *Literacy:* virtually 100%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 5–12)[15]	2,271	28,414	489,464	17.2
Secondary (age 13–17)	352	19,180	264,522	13.8
Voc., teacher tr.	24	4,714	128,621	27.3
Higher[16]	8	6,562	138,583	21.1

Health: physicians (2006) 9,547 (1 per 434 persons); hospital beds (2002) 23,825 (1 per 165 persons); infant mortality rate per 1,000 live births (2007) 5.0; undernourished population (2002–04) less than 2.5% of total population.

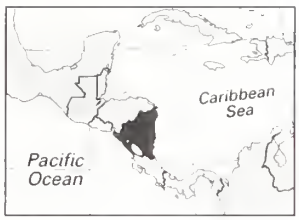
Military

Total active duty personnel (November 2007): 9,051 (army 50.6%, navy 22.5%, air force 26.9%). *Military expenditure as percentage of GDP* (2005): 1.0%; per capita expenditure U.S.$269.

[1]Statutory number is 120 seats, actual current number is 122 seats. [2]Includes nearby islands, islets, or water areas that are within regional councils. [3]Reported (not summed) total. [4]Includes Stewart Island (Rakiura). Stewart Island's area is 1,681 sq km. [5]Detail does not add to total given because of rounding. [6]A unitary authority that is administered by a city council or district council with regional powers. [7]Distant islands (including adjacent water areas) outside of regional councils. [8]January 1. [9]As of February. [10]Including 79,800 unemployed. [11]Import figures are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [12]Air New Zealand only. [13]Circulation of 12 top daily newspapers only. [14]Subscribers. [15]Includes composite schools that provide both primary and secondary education. [16]Universities only; 2003.

Internet resource for further information:
- **Statistics New Zealand/Te Tari Tatau http://www.stats.govt.nz/default.htm**

Nicaragua



Official name: República de Nicaragua (Republic of Nicaragua).
Form of government: unitary multiparty republic with one legislative house (National Assembly [92[1]]).
Head of state and government: President.
Capital: Managua.
Official language: Spanish.
Official religion: none.
Monetary unit: córdoba (C$); valuation (Sept. 8, 2008) 1 U.S.$ = C$19.54; 1 £ = C$34.52.

Area and population

Departments	Capitals	area[2] sq mi	area[2] sq km	population 2005 census[3]
Boaco	Boaco	1,613	4,177	150,636
Carazo	Jinotepe	417	1,081	166,073
Chinandega	Chinandega	1,862	4,822	378,970
Chontales	Juigalpa	2,502	6,481	153,932
Estelí	Estelí	861	2,230	201,548
Granada	Granada	402	1,040	168,186
Jinotega	Jinotega	3,561	9,222	331,335
León	León	1,984	5,138	355,779
Madriz	Somoto	659	1,708	132,459
Managua	Managua	1,338	3,465	1,262,978
Masaya	Masaya	236	611	289,988
Matagalpa	Matagalpa	2,627	6,804	469,172
Nueva Segovia	Ocotal	1,348	3,491	208,523
Río San Juan	San Carlos	2,912	7,541	95,596
Rivas	Rivas	835	2,162	156,283
Autonomous regions				
North Atlantic	Puerto Cabezas	12,782	33,106	314,130
South Atlantic	Bluefields	10,525	27,260	306,510
TOTAL LAND AREA		46,464	120,340[4]	
INLAND WATER		3,874	10,034	
TOTAL		50,337[4]	130,373[4]	5 142,098

Demography

Population (2008): 5,667,000.
Density (2008)[5]: persons per sq mi 122.0, persons per sq km 47.1.
Urban-rural (2005): urban 55.9%; rural 44.1%.
Sex distribution (2006): male 49.67%; female 50.33%.
Age breakdown (2005): under 15, 37.6%; 15–29, 29.9%; 30–44, 17.1%; 45–59, 9.3%; 60–74, 4.3%; 75–84, 1.3%; 85 and over, 0.5%.
Population projection: (2010) 5,816,000; (2020) 6,518,000.
Doubling time: 36 years.
Ethnic composition (2000): mestizo (Spanish/Indian) 63.1%; white 14.0%; black 8.0%; multiple ethnicities 5.0%; other 9.9%.
Religious affiliation (2005): Roman Catholic 58.5%; Protestant/independent Christian 23.2%, of which Evangelical 21.6%, Moravian 1.6%; nonreligious 15.7%; other 2.6%.
Major cities (2005)[6]: Managua 908,892; León 139,433; Chinandega 95,614; Masaya 92,598; Estelí 90,294.

Vital statistics

Birth rate per 1,000 population (2006): 22.4 (world avg. 20.3).
Death rate per 1,000 population (2006): 3.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 19.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.94.
Marriage/divorce rates per 1,000 population (2006): 4.2/1.1.
Life expectancy at birth (2005): male 68.3 years; female 74.4 years.
Major causes of death per 100,000 population (2002)[7]: diseases of the circulatory system 131.0; accidents, injuries, and violence 69.3; malignant neoplasms 60.6; communicable diseases 49.0; diabetes mellitus 28.1.

National economy

Budget (2004). Revenue: C$12,250,700,000 (tax revenue 96.3%, of which sales tax 38.2%, import duties 27.8%, tax on income and profits 25.9%; nontax revenue 3.7%). Expenditures: C$16,697,800,000 (current expenditure 58.4%, development expenditure 41.6%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 4,875,000, corn (maize) 569,948, rice 302,697, dry beans 189,425, peanuts (groundnuts) 116,682, cassava 115,000, sorghum 90,335, coffee 81,818, oranges 72,000, bananas 47,072; livestock (number of live animals) 3,600,000 cattle, 268,000 horses; roundwood (2006) 6,067,682 cu m, of which fuelwood 98%; fisheries production (2006) 44,500, of which lobster 3,726 (from aquaculture 25%). Mining and quarrying (2004–05): gold 123,600 troy oz. Manufacturing (value added in C$'000,000; 2003[8]): food 1,917; textiles and wearing apparel 969; beverages 713; wood products (including furniture) 503. Energy production (consumption): electricity (kW-hr; 2005) 2,866,000,000 (2,883,000,000); coal, none (none); crude petroleum (barrels; 2005) none (5,512,000); petroleum products (metric tons; 2005) 711,000 (1,234,000); natural gas, none (none).
Household income and expenditure. Average household size (2005) 4.9; expenditure (1999)[9]: food and beverages 41.8%, education 9.8%, housing 9.8%, transportation 8.5%.
Land use as % of total land area (2003): in temporary crops 15.9%, in permanent crops 1.9%, in pasture 39.7%; overall forest area (2005) 42.7%.
Population economically active (2006): total 2,204,300; activity rate of total population 39.9% (participation rates: ages 10 and over [2005] 55.0%; female [2005] 35.2%; officially unemployed 5.2%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	106.0	110.0	115.8	125.6	137.7	150.2	167.0

Gross national income (GNI: 2007): U.S.$5,519,000,000 (U.S.$980 per capita); purchasing power parity GNI (U.S.$2,420 per capita).

Structure of gross domestic product and labour force

	2006 in value C$'000	% of total value	labour force	% of labour force
Agriculture, forestry	16,063,000	17.2	609,100	27.6
Mining	1,059,400	1.1	6,700	0.3
Manufacturing	15,089,600	16.2	289,200	13.1
Construction	5,249,600	5.6	100,700	4.6
Public utilities	2,692,600	2.9	6,500	0.3
Transp. and commun.	5,364,600	5.8	89,000	4.0
Trade, restaurants	12,118,500	13.0	481,100	21.8
Finance, real estate	11,238,200	12.1	70,000	3.2
Pub. admin., defense	10,761,400	11.6	437,600	19.9
Services	6,450,600	6.9		
Other	7,047,300[10]	7.6[10]	114,500[11]	5.2[11]
TOTAL	93,134,900[4]	100.0	2,204,300[4]	100.0

Public debt (external, outstanding; 2006): U.S.$3,425,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 231; remittances (2007) 990; foreign direct investment (FDI; 2004–06 avg.) 258; official development assistance (2006) 733. Disbursements for (U.S.$'000,000): tourism (2006) 97; remittances, n.a.; FDI (2004–06 avg.) 6.

Foreign trade[12]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−1,038	−1,116	−1,266	−1,520	−1,724	−2,073
% of total	48.1%	48.0%	45.6%	47.0%	45.6%	46.5%

Imports (2006): U.S.$2,741,000,000 (chemicals and chemical products 16.7%, machinery and apparatus 15.6%, crude petroleum 13.2%, refined petroleum 10.8%, food 9.7%). *Major import sources:* U.S. 22.8%; Mexico 14.8%; China 7.6%; Venezuela 6.8%; Costa Rica 5.4%.
Exports (2006): U.S.$759,000,000 (coffee 26.4%, bovine meat 10.3%, crustaceans 9.3%, gold 7.7%, raw sugar 6.6%, peanuts [groundnuts] 5.2%). *Major export destinations:* U.S. 46.5%; Mexico 6.2%; Canada 6.0%; Spain 4.5%; Honduras 4.4%.

Transport and communications

Transport. Railroads: [13]. Roads (2004): total length 18,669 km (paved [2002] 11%). Vehicles (2004): passenger cars 94,998; trucks and buses 152,813. Air transport (2000): passenger-km 72,200,000; metric ton-km cargo (2003) 200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	648	123	PCs	2005	220	43
Telephones				Dailies	2004	91[14]	18[14]
Cellular	2007	2,123[15]	379[15]	Internet users	2006	155	28
Landline	2006	248	44	Broadband	2006	19[15]	3.6[15]

Education and health

Educational attainment (2005). Percentage of population age 10 and over having: no formal schooling 20.1%; 1–3 years 16.6%; 4–6 years 27.0%; 7–9 years 16.1%; 10–12 years 10.5%; vocational 2.3%; incomplete university 2.6%; complete university 4.4%; unknown 0.4%. *Literacy* (2005): total population age 15 and over literate 78.0%; males literate 78.1%; females literate 77.9%.

Education (2006)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	8,353	28,527	966,206	33.9
Secondary (age 13–18)	1,232	12,609	425,718	33.8
Higher	200	3,189	100,906	31.6

Health (2003): physicians 2,076 (1 per 2,538 persons); hospital beds 5,030 (1 per 1,047 persons); infant mortality rate (2005) 26.4; undernourished population (2002–04) 1,500,000 (27% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

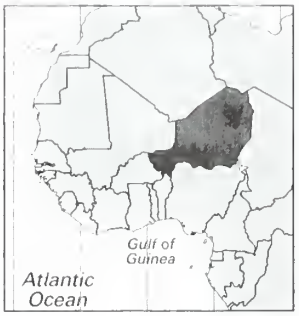
Military

Total active duty personnel (November 2007): 14,000 (army 85.7%, navy 5.7%, air force 8.6%). *Military expenditure as percentage of GDP* (2005): 0.7%; per capita expenditure U.S.$6.

[1]Includes the runner-up in the 2006 presidential election and the immediate past president. [2]Lakes and lagoons are excluded from the areas of departments and autonomous regions. [3]Unadjusted final figures. [4]Detail does not add to total given because of rounding. [5]Based on land area. [6]Populations of urban area of *municipios*. [7]Estimates. [8]At prices of 1994. [9]Weights of consumer price index components. [10]Taxes less imputed bank service charges. [11]Unemployed. [12]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [13]Public railroad service ended in January 1994; private rail service (2004) 4 mi (6 km). [14]Circulation of daily newspapers. [15]Subscribers.

Internet resources for further information:
- **Central Bank of Nicaragua http://www.bcn.goh.ni**
- **Instituto Nacional de Estadísticas y Censos http://www.inec.gob.ni**

Niger



Official name: République du Niger (Republic of Niger).
Form of government: multiparty republic with one legislative house (National Assembly [113]).
Head of state and government: President assisted by Prime Minister.
Capital: Niamey.
Official language: French.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Regions	Capitals	area sq mi	area sq km	population 2005 estimate
Agadez	Agadez	242,117	627,080	367,236
Diffa	Diffa	56,763	147,017	395,730
Dosso	Dosso	12,255	31,740	1,719,341
Maradi	Maradi	15,143	39,219	2,552,696
Tahoua	Tahoua	41,080	106,397	2,252,391
Tillabéri	Tillabéri	35,336	91,521	2,157,380
Zinder	Zinder	56,437	146,170	2,375,154
City				
Niamey	Niamey	155	402	808,313
TOTAL		459,286	1,189,546	12,628,241

Demography

Population (2008): 14,731,000[1].
Density (2008): persons per sq mi 32.1, persons per sq km 12.4.
Urban-rural (2006): urban 16.6%; rural 83.4%.
Sex distribution (2005): male 50.69%; female 49.31%.
Age breakdown (2005): under 15, 47.9%; 15–29, 24.1%; 30–44, 14.7%; 45–59, 8.5%; 60–74, 3.6%; 75–84, 0.9%; 85 and over, 0.3%.
Population projection: (2010) 15,791,000[1]; (2020) 22,222,000[1].
Doubling time: 23 years.
Ethnolinguistic composition (2001): Hausa 55.4%; Zarma-Songhai-Dendi 21.0%; Tuareg 9.3%; Fulani (Peul) 8.5%; Kanuri 4.7%; other 1.1%.
Religious affiliation (2005): Muslim *c.* 90%, of which Sunnī *c.* 85%, Shīʿī *c.* 5%; traditional beliefs *c.* 9%; other *c.* 1%.
Major cities (2001): Niamey 707,951 (urban agglomeration [2007] 915,000); Zinder 170,575; Maradi 148,017; Agadez 78,289; Tahoua 73,002; Arlit 69,435.

Vital statistics

Birth rate per 1,000 population (2006): 50.7 (world avg. 20.3).
Death rate per 1,000 population (2006): 20.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 29.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 7.46.
Marriage/divorce rates per 1,000 population (2006): n.a./n.a.
Life expectancy at birth (2006): male 43.8 years; female 43.7 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases (significantly malaria, meningitis, pneumonia, and diarrhea) 1,697; diseases of the circulatory system 121, of which cerebrovascular disease 41, ischemic heart disease 38; malignant neoplasms (cancers) 50; diseases of the respiratory system 34.

National economy

Budget (2007). Revenue: CFAF 427,600,000,000 (tax revenue 54.5%; external aid and grants 27.7%; nontax revenue 16.7%; other 1.1%). Expenditures: CFAF 446,500,000,000 (current expenditures 53.6%, capital expenditures 46.4%).
Public debt (external, outstanding; 2006): U.S.$703,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 35; remittances (2007) 66; foreign direct investment (FDI; 2004–06 avg.) 23; official development assistance (2006) 401. Disbursements for (U.S.$'000,000): tourism (2006) 31; remittances (2007) 29.
Gross national income (GNI; 2007): U.S.$3,992,000,000 (U.S.$280 per capita); purchasing power parity GNI (U.S.$630 per capita).

Structure of gross domestic product and labour force

	2006 in value CFAF '000,000	2006 % of total value	2002 labour force[2]	2002 % of labour force[2]
Agriculture, forestry, fishing	795,400	43.0	2,767,000	79.6
Mining and quarrying	40,400	2.2	10,000	0.3
Manufacturing	100,200	5.4	112,000	3.2
Construction	44,100	2.4	20,000	0.6
Public utilities	21,900	1.2	3,000	0.1
Transp. and commun.	131,700	7.1	21,000	0.6
Trade, hotels	273,000	14.7	346,000	9.9
Finance, real estate	140,100	7.6	2,000	0.1
Pub. admin., defense	..	.	...	...
Services	162,000	8.8	195,000	5.6
Other	141,200[3]	7.6[3]		
TOTAL	1,850,100[4]	100.0	3,476,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): millet 2,781,928, cowpeas 1,001,139, sorghum 975,223, dry onions 330,000, cow's milk 195,000, peanuts (groundnuts) 147,676, cabbages 120,000[5], tomatoes 105,000, cattle meat 45,000, sesame seed 35,000, goat meat 28,000; livestock (number of live animals) 7,400,000 goats, 4,750,000 sheep, 2,360,000 cattle, 430,000 camels, 106,000 horses; roundwood (2006) 9,421,000 cu m, of which fuelwood 96%; fisheries production (2006) 29,875 (from aquaculture, negligible). Mining and quarrying (2007): uranium 3,154; salt 1,300[6]; gold 2,615 kg[6]. Manufacturing (value added in CFAF '000,000; 2002): textiles 1,876; food and food products 1,695; soaps and other chemical products 1,302; furniture 1,111; printing and publishing 821. Energy production (consumption): electricity (kW-hr; 2005) 250,000,000 (470,000,000); hard coal (metric tons; 2006) 176,320 ([2005] 182,000); crude petroleum, none[7] (none); petroleum products (metric tons; 2005) none (179,000); natural gas, none (none).
Population economically active (2006): total 6,139,000; activity rate of total population 42.6% (participation rates: over age 15, 83.5%; female 41.9%; registered unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.0	106.7	105.0	105.3	113.5	113.5	113.6

Household income and expenditure. Average household size (2004) 6.2; income per household: n.a.; expenditure (2005)[8]: food, beverages, and tobacco products 53.7%, housing and rent 10.3%, transportation 9.9%, clothing and footwear 5.3%, health 4.6%.
Land use as % of total land area (2003): in temporary crops 11.4%, in permanent crops 0.01%, in pasture 18.9%; overall forest area (2005) 1.0%.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFAF '000,000	–63,900	–79,400	–80,800	–154,000	–125,700	–107,700
% of total	14.1%	16.3%	14.9%	23.4%	19.1%	14.2%

Imports (2006): CFAF 391,300,000,000 (machinery and equipment 41.4%, petroleum products 20.6%, remainder 38.0%). *Major import sources* (2005): France 15.8%; Côte d'Ivoire 9.1%; Nigeria 5.5%; China 5.5%; U.S. 5.4%; Benin 5.1%.
Exports (2006): CFAF 265,600,000,000 (uranium 30.0%; livestock [significantly cattle] 13.4%; gold 9.4%; cowpeas 7.2%; onions are another important food export). *Major export destinations* (2005): France 30.9%; Switzerland 18.6%; Nigeria 14.3%; Japan 11.8%; Ghana 3.9%.

Transport and communications

Transport. Railroads: none. Roads (2005): total length 11,447 mi, 18,423 km (paved 21%). Vehicles (2005): passenger cars 21,360; trucks and buses, n.a. Air transport (2005)[10]: passenger arrivals 50,002, passenger departures 59,824; cargo unloaded 3,085 metric tons, cargo loaded 140 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	150	13	PCs	2005	10	0.8
Telephones				Dailies	2006	5.0[11]	0.3[11]
Cellular	2007	900[12]	63[12]	Internet users	2006	40	3.1
Landline	2005	24	1.9	Broadband	2005	0.2[12]	0.02[12]

Education and health

Educational attainment (2006)[8, 13]. Percentage of population age 25 and over having: no formal schooling/unknown 86.2%; incomplete primary education 6.9%; complete primary 1.0%; incomplete secondary 3.7%; complete secondary 0.4%; higher 0.9%. *Literacy* (2006): total population age 15 and over literate 28.7%; males literate 42.9%; females literate 15.1%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	8,301	24,091	1,064,056	44.2
Secondary (age 13–19)	305	3,700	116,998	31.6
Voc., teacher tr	7	278	4,953	17.8
Higher[14]	2	339	7,990	23.6

Health (2005): physicians 452 (1 per 27,599 persons); hospital beds 1,865 (1 per 6,689 persons); infant mortality rate per 1,000 live births (2006) 118.2; undernourished population (2002–04) 3,900,000 (32% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2007): 5,300 (army 98.1%, air force 1.9%). *Military expenditure as percentage of GDP* (2006): 1.1%; per capita expenditure U.S.$2.

[1]Estimate of *UN World Population Prospects (2006 revision)*. [2]Excluding nomadic population. [3]Import taxes and duties. [4]Detail does not add to total given because of rounding. [5]Including other brassicas. [6]2006. [7]Crude petroleum production is expected to begin in 2009. [8]Niamey only. [9]Imports f.o.b. in balance of trade and commodities and c.i.f. in trading partners. [10]Niamey airport. [11]Circulation of *Le Sahel Quotidien* only. [12]Subscribers. [13]Based on a 2006 demographic and health survey of 14,945 persons age 25 and over. [14]University of Niamey and the Islamic University of Niger at Say.

Internet resources for further information:
- **Institut National de la Statistique**
  http://www.ins.net
- **La Banque de France: La Zone Franc**
  http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm

Nigeria

Official name: Federal Republic of Nigeria.
Form of government: federal republic with two legislatures (Senate [109]; House of Representatives [360]).
Head of state and government: President.
Capital: Abuja.
Official language: English.
Official religion: none.
Monetary unit: Nigerian naira (₦); valuation (Sept. 8, 2008) 1 U.S.$ = ₦117.67; 1 £ = ₦207.88.

Area and population

States	area sq km	population 2006 census[1]	States	area sq km	population 2006 census[1]
Abia	6,320	2,833,999	Kebbi	36,800	3,238,628
Adamawa	36,917	3,168,101	Kogi	29,833	3,278,487
Akwa Ibom	7,081	3,920,208	Kwara	36,825	2,371,089
Anambra	4,844	4,182,032	Lagos	3,345	9,013,534
Bauchi	45,837	4,676,465	Nassarawa	27,117	1,863,275
Bayelsa	10,773	1,703,358	Niger	76,363	3,950,249
Benue	34,059	4,219,244	Ogun	16,762	3,728,098
Borno	70,898	4,151,193	Ondo	14,606	3,441,024
Cross River	20,156[2]	2,888,966[2]	Osun	9,251	3,423,535
Delta	17,698	4,098,391	Oyo	28,454	5,591,589
Ebonyi	5,670	2,173,501	Plateau	30,913	3,178,712
Edo	17,802	3,218,332	Rivers	11,077	5,185,400
Ekiti	6,353	2,384,212	Sokoto	25,973	3,696,999
Enugu	7,161	3,257,298	Taraba	54,473	2,300,736
Gombe	18,768	2,353,879	Yobe	45,502	2,321,591
Imo	5,530	3,934,899	Zamfara	39,762	3,259,846
Jigawa	23,154	4,348,649			
Kaduna	46,053	6,066,562	Federal Capital Territory		
Kano	20,131	9,383,682	Abuja	7,315	1,405,201
Katsina	24,192	5,792,578	TOTAL	923,768[2]	140,003,542[2]

Demography

Population (2008): 146,255,000.
Density (2008): persons per sq mi 410.1, persons per sq km 158.3.
Urban-rural (2007): urban 47.7%; rural 52.3%.
Sex distribution (2006): male 51.22%; female 48.78%.
Age breakdown (2005): under 15, 44.4%; 15–29, 27.7%; 30–44, 15.0%; 45–59, 8.3%; 60–74, 3.8%; 75–84, 0.7%; 85 and over, 0.1%.
Population projection: (2010) 152,217,000; (2020) 182,344,000.
Ethnic composition (2000): Yoruba 17.5%; Hausa 17.2%; Igbo (Ibo) 13.3%; Fulani 10.7%; Ibibio 4.1%; Kanuri 3.6%; Egba 2.9%; Tiv 2.6%; Igbira 1.1%; Nupe 1.0%; Edo 1.0%; Ijo 0.8%; detribalized 0.9%; other 23.3%.
Religious affiliation (2003): Muslim 50.5%; Christian 48.2%, of which Protestant 15.0%, Roman Catholic 13.7%, other (mostly independent Christian) 19.5%; other 1.3%.
Major urban agglomerations (2007): Lagos 9,466,000; Kano 3,140,000; Ibadan 2,628,000; Kaduna 1,442,000; Benin City 1,190,000.

Vital statistics

Birth rate per 1,000 population (2007): 39.9 (world avg. 20.3).
Death rate per 1,000 population (2007): 16.8 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 5.30.
Life expectancy at birth (2007): male 46.4 years; female 47.3 years.
Adult population (ages 15–49) *living with HIV* (2007): 3.1%[3] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): HIV/AIDS *c.* 258; respiratory infections *c.* 182; malaria *c.* 181; cardiovascular diseases *c.* 167.

National economy

Budget (2007). Revenue: ₦5,715,600,000,000 (oil and gas revenue 78.1%, of which crude oil export proceeds 32.4%, oil profits tax 26.3%, crude oil sales to domestic refineries 19.2%; non-oil revenue 21.9%). Expenditures: ₦2,450,900,000,000 (current expenditure 64.8%, of which wages and salaries 35.4%, debt service 8.7%; capital expenditure 31.0%; other 4.2%).
Public debt (external, outstanding; January 2008): U.S.$3,629,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 45,750,000, yams 37,150,000, sorghum 10,500,000, sugarcane 10,290,000, oil palm fruit 8,500,000, corn (maize) 7,800,000, millet 7,700,000, taro 5,485,000, rice 4,677,400, peanuts (groundnuts) 3,835,600, sweet potatoes 3,490,000, cowpeas 3,150,000, plantains 2,800,000, cashews 660,000, cocoa beans 500,000, melon seeds 488,500, ginger 138,000, sesame seeds 100,000; livestock 28,583,000 goats, 23,993,500 sheep, 16,258,560 cattle; roundwood (2006) 71,047,309 cu m, of which fuelwood 87%; fisheries production 711,500 (from aquaculture 11%). Mining and quarrying (2006): limestone 15,300,000; marble 200,000. Manufacturing (value added in ₦'000,000; 2006): refined petroleum 40,740; cement 20,291; other unspecified (particularly food, beverages, and textiles) 432,335. Energy production (consumption): electricity (kW-hr; 2005) 20,468,000,000 (20,468,000,000); coal (metric tons; 2006) 10,000 ([2005] 8,000); crude petroleum (barrels; 2007–08) 767,080,000 ([2005] 75,388,000); petroleum products (metric tons; 2005) 4,190,000 ([2007] 6,954,000); natural gas (cu m; 2007) 57,753,700,000 (39,374,800,000).
Household income and expenditure. Avg. household size (2005): 4.7; expenditures (2003)[4]: food 63.8%, housing/energy 18.1%, transportation 4.2%.
Gross national income (GNI; 2007): U.S.$137,091,000 (U.S.$930 per capita); purchasing power parity GNI (U.S.$1,770 per capita).

Structure of gross domestic product and labour force

	2007 in value ₦'000,000	2007 % of total value	2005 labour force	2005 % of labour force
Agriculture, fishing	7,574,430	33.2	37,487,000	58.6
Mining	7,138,430	31.2	89,000	0.1
Manufacturing	619,160[5]	2.7[5]	1,173,000	1.8
Construction	349,700	1.5	353,000	0.6
Public utilities	50,810	0.2	551,000	0.9
Transp. and commun.	1,103,200	4.8	537,000	0.8
Trade, hotels	3,987,130	17.5	259,000	0.4
Finance, real estate	1,619,190	7.1	441,000	0.7
Pub. admin., defense	204,540	0.9	6,547,000	10.3
Services	202,340	0.9	16,496,000	25.8
Other	—	—	—	—
TOTAL	22,848,900[6]	100.0	63,932,000[6]	100.0

Population economically active (2003)[7]: total 45,165,000; activity rate 35.9% (participation rates: ages 15–64, 65.9%; female 35.1%; officially unemployed [2007] 14.6%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	118.9	134.2	153.0	176.0	207.4	224.5	236.6

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 21; remittances (2007) 3,329; foreign direct investment (FDI; 2004–06 avg.) 3,658; official development assistance (2006) 11,434. Disbursements for (U.S.$'000,000): tourism (2006) 1,664; remittances (2007) 18; FDI (2004–06 avg.) 230.
Land use as % of total land area (2003): in temporary crops 33.5%, in permanent crops 3.2%, in pasture 43.0%; overall forest area (2005) 12.2%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
₦'000,000	+425.6	+583.1	+1,439.2	+4,445.7	+3,912.5	+3,438.0
% of total	12.7%	16.2%	30.5%	44.2%	36.4%	26.8%

Imports (2007): ₦4,687,982,160,000 (basic manufactures 32.8%; chemicals and chemical products 24.2%; machinery and transport equipment 22.6%; food and live animals 6.2%). *Major import sources*[8]: U.S. 29.6%; Japan 22.9%; China 13.0%; India 9.5%; France 8.3%.
Exports (2007): ₦8,126,000,510,000 (crude petroleum 89.9%; natural gas 8.0%; skins 0.5%; cocoa [all forms] 0.4%). *Major export destinations*[9]: U.S. 39.5%; India 7.6%; Spain 5.2%; Italy 4.2%; France 4.2%.

Transport and communications

Transport. Railroads (2005): length (2006) 3,505 km; passenger-km 75,170,000; metric ton-km cargo 18,027,000. Roads (2005): total length 34,403 km (paved 64%[10]). Vehicles (2004): passenger cars 2,176,000. Air transport (2006): passenger-km 969,900,000[11]; metric ton-km cargo (2005) 10,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	8,393	64	PCs	2006	1,200	8.9
Telephones				Dailies	2007	1,578[12]	11[12]
Cellular	2007	40,396[13]	273[13]	Internet users	2007	10,000	68
Landline	2007	1,580	11	Broadband	2005	0.5[13]	—[13]

Education and health

Educational attainment (2003)[14]. Percentage of population age 25 and over having: no formal schooling/unknown 50.4%; primary education 20.4%; secondary 20.1%; higher 9.1%. *Literacy* (2007): total population age 15 and over literate 73.1%; males literate 79.4%; females literate 67.0%.

Education (2006)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	54,434	586,749	23,017,129	39.2
Secondary (age 12–17)	10,153	199,263	6,536,038	32.8
Higher[15]	83	23,535[16]	724,856[16]	30.8[16]

Health (2005): physicians 42,563 (1 per 3,234 persons); hospital beds 85,523 (1 per 1,609 persons); infant mortality rate per 1,000 live births (2007) 109.0; undernourished population (2002–04) 11,400,000 (9% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

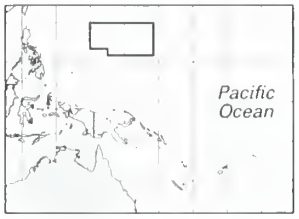
Military

Total active duty personnel (November 2007): 80,000 (army 77.5%, navy 10.0%, air force 12.5%). *Military expenditure as percentage of GDP* (2005): 0.7%; per capita expenditure U.S.$5.

[1]Preliminary figures. [2]Includes the population (32,385) and area (270 sq mi [700 sq km]) of Bakassi Peninsula, which was formally ceded by Nigeria to Cameroon in August 2006 and officially handed over in August 2008. [3]Statistically derived midpoint of range. [4]Weights of consumer price index components. [5]Manufacturing includes petroleum refining. [6]Detail does not add to total given because of rounding. [7]Estimates of the ILO Employment Trends Unit. [8]Nonpetroleum imports only (78.7% of all imports). [9]Petroleum exports only. [10]Excludes paved sections in bad condition. [11]Virgin Nigeria Airways only. [12]Circulation of 15 top daily newspapers only. [13]Subscribers. [14]Based on the 2003 Nigeria Demographic and Health Survey of 35,173 people, about two-thirds of whom live in rural areas. [15]Universities only. [16]2005.

Internet resource for further information:
- **National Bureau of Statistics http://www.nigerianstat.gov.ng/**

Northern Mariana Islands



Official name: Commonwealth of the Northern Mariana Islands.
Political status: self-governing commonwealth in association with the United States, having two legislative houses (Senate [9]; House of Representatives [20])[1].
Chief of state: President of the United States.
Head of government: Governor.
Seat of government: on Saipan[2].
Official languages: Chamorro, Carolinian, and English.
Official religion: none.
Monetary unit: dollar (U.S.$); valuation (Sept. 8, 2008) 1 U.S.$ = £0.57.

Area and population

Municipal councils	Major villages	area sq mi	area sq km	population 2005 estimate
Northern Islands[3]	..	55.3	143.2	[3]
Rota (island)	Songsong	32.8	85.0	2,490
Saipan (island)	San Antonio	46.5	120.4	60,608
Tinian[4]	San Jose	41.9	108.5	2,829
TOTAL		176.5[5]	457.1[5]	65,927

Demography

Population (2008): 63,000[6].
Density (2008): persons per sq mi 356.9, persons per sq km 137.8.
Urban-rural (2005): urban 71.4%; rural 28.6%.
Sex distribution (2006): male 44.97%; female 55.03%.
Age breakdown (2006): under 15, 25.7%; 15–29, 29.5%; 30–44, 26.2%; 45–59, 14.9%; 60–74, 3.2%; 75 and over, 0.5%.
Population projection: (2010) 63,000; (2020) 65,000.
Doubling time: 40 years.
Ethnic composition (2005)[7]: Asian 52.4%, of which Filipino 30.6%, Chinese 15.4%, Korean 2.3%; Pacific Islanders 37.2%, of which Chamorro 22.9%, Micronesian/Palauan 13.6%; white 1.7%; multiethnic 8.3%; other 0.4%.
Religious affiliation (2000): Christian 88.9%, of which Roman Catholic 72.7%, independent Christian 7.0%, Protestant 6.8%; Buddhist 5.3%; other 5.8%.
Major village groups (2005)[8]: Garapan 11,196; San Antonio 6,104; Susupe-Chalan Kanoa 5,911.

Vital statistics

Birth rate per 1,000 population (2005): 19.5 (world avg. 20.3).
Death rate per 1,000 population (2005): 2.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 17.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman, 2005): 1.27.
Life expectancy at birth (2005): male 73.3 years; female 78.6 years.
Major causes of death per 100,000 population (1998): heart diseases 51; malignant neoplasms (cancers) 40; cerebrovascular disease 22; perinatal conditions 20; accidents 18.

National economy

Budget (2006). Revenue: U.S.$192,030,000 (tax revenue 82.4%, of which personal and corporate income taxes 50.9%, excise tax 12.7%; nontax revenue 17.6%). Expenditures: U.S.$195,600,000 (2001; health 20.4%, education 20.1%, general government 15.0%, social services 12.0%, public safety 9.3%).
Public debt (external, outstanding): n.a.
Gross domestic product (2005): U.S.$1,000,000,000 (U.S.$13,350 per capita).

Structure of labour force

	2005 labour force	2005 % of labour force
Agriculture, forestry, and fishing	249	0.6
Mining and quarrying	173	0.4
Manufacturing (garments)	10,217	26.5
Manufacturing (other)	771	2.0
Construction	1,640	4.3
Public utilities	27	0.1
Transp. and commun.	885	2.3
Trade, restaurants	7,602	19.7
Finance, insurance, and real estate	821	2.1
Pub. admin., defense	3,153	8.2
Services	8,083	21.0
Other	4,912[9]	12.7
TOTAL	38,533[10]	100.0[11]

Production (metric tons except as noted). Agriculture, forestry, fishing (2002): bananas 98, cucumbers 97, sweet potatoes 78, cabbages 76, taro 73, eggplant 45, yams 45; livestock (number of live animals) 2,242 pigs, 1,319 cattle, 14,190 chickens; roundwood, n.a.; fisheries production (2006) 183 (from aquaculture, none). Mining and quarrying: negligible amount of quarrying for building material. Manufacturing (value of sales in U.S.$'000,000; 2002): garments (2006) 492; bricks, tiles, and cement 12; printing and related activities 5; food products 3. Energy production (consumption): electricity, n.a. (n.a.); coal, none (none); crude petroleum, none (none); petroleum products, n.a. (n.a.); natural gas, none (none).
Population economically active (2005): total 38,533; activity rate of total population 58.4% (participation rates: ages 16 and over, 79.2%; female 54.0%; unemployed 8.3%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	99.2	99.4	98.4	99.3	99.8	104.9	111.7

Household income and expenditure. Average household size (2005) 4.1; average income per household (2004) U.S.$25,172; sources of income (2004): wages and salaries 85.7%, transfer payments 9.3%, self-employment 2.4%, other 2.6%; expenditure (2003)[12]: transportation 33.5%, housing and energy 27.7%, food 19.0%, education and communications 5.7%, recreation 2.4%, medical care 2.4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2002) 225; remittances (2007) 93.6; foreign direct investment, n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.
Land use as % of total land area (2000): in temporary crops *c.* 13%, in permanent crops *c.* 4%, in pasture *c.* 11%; overall forest area (2005) *c.* 72%.

Foreign trade

Balance of trade (current prices)

	2005	2006	2007
U.S.$'000,000	...	..	..
% of total	...	..	..

Imports (1997): U.S.$836,200,000 (clothing and accessories 37.0%, foodstuffs 9.6%, petroleum and petroleum products 8.2%, transport equipment and parts 5.0%, construction materials 4.2%). *Major import sources:* Guam 35.6%, Hong Kong 24.0%, Japan 14.1%, South Korea 9.6%, United States 7.6%.
Exports (2007): U.S.$319,200,000[13] (garments and accessories 99.2%, of which women's/girls' blouses, pullovers, sweatshirts 60.5%; remainder 0.8%). *Major export destinations:* nearly all to the United States.

Transport and communications

Transport. Railroads: none. Roads (2003): total length *c.* 225 mi, *c.* 360 km (paved, nearly 100%). Vehicles (2002): passenger cars 11,983; trucks and buses 4,858. Air transport (1999)[14]: aircraft landings 23,853; boarding passengers 562,364.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1999	4.1	59	PCs	2005	...	...
Telephones				Dailies	2004	13[15]	169[15]
Cellular	2004	20[16]	266[16]	Internet users	2005	...	...
Landline	2007	29	343	Broadband	2005	...	...

Education and health

Educational attainment (2005). Percentage of population age 25 and over having: no formal schooling 0.4%; incomplete/complete primary education 8.1%; some secondary 10.9%; completed secondary 43.4%; some postsecondary 21.3%; completed undergraduate 13.4%; advanced degree 2.5%. *Literacy* (2000): *c.* 100%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	39	717	12,880	18.0
Secondary (age 12–17)				
Higher[17]	1	504	2,383	4.7

Health (2004): physicians 40[18] (1 per 1,956 persons); hospital beds 86[18] (1 per 885 persons); infant mortality rate per 1,000 live births (2005) 7.1; undernourished population, n.a.

Military

The United States is responsible for military defense; headquarters of the U.S. Pacific Command are in Hawaii.

[1]In November 2008 residents elected their first nonvoting delegate to the U.S. Congress. [2]Executive and legislative branches meet at Capital Hill; the judiciary meets at Susupe. [3]Comprises the islands of Agrihan, Pagan, and Alamagan, as well as seven other uninhabited islands; the Northern Islands are administered as part of Saipan municipal council because of the forced removal of the population owing to volcanic activity. [4]Comprises Tinian island and Aguijan island. [5]Area measured at high tide; at low tide, total dry land area is 184.0 square mi (476.6 square km). [6]Estimate of the Secretariat of the Pacific Community (2008 release). [7]Includes aliens. [8]All villages are unincorporated census-designated places. [9]Includes 1,744 not adequately defined and 1,869 unemployed. [10]Of which ethnic Chamorro 16.6%, other (significantly Filipino and Chinese) 83.4%. [11]Detail does not add to total given because of rounding. [12]Weights of consumer price index components. [13]To U.S. only. [14]Saipan International Airport only. [15]Circulation of daily newspapers. [16]Subscribers. [17]Northern Marianas College: 2000–01. [18]Saipan Commonwealth Health Center only.

Internet resource for further information:
- **CNMI: Central Statistics Division**
  http://www.commerce.gov.mp

Norway

Official name: Kongeriket Norge (Kingdom of Norway).
Form of government: constitutional monarchy with one legislative house (Storting, or Parliament [169]).
Chief of state: King.
Head of government: Prime Minister.
Capital: Oslo.
Official languages: Norwegian; Sami (locally).
Official religion: Evangelical Lutheran.
Monetary unit: Norwegian krone (pl. kroner; NOK); valuation (Sept. 8, 2008) 1 U.S.$ = NOK 5.62; 1 £ = NOK 9.93.

Area and population

Mainland counties	area[1] sq km	population 2008 estimate	Mainland counties	area[1] sq km	population 2008 estimate
Akershus	4,918	523,272	Sor-Trondelag	18,848	284,773
Aust-Agder	9,157	106,842	Telemark	15,299	167,102
Buskerud	14,910	253,006	Troms	25,877	155,061
Finnmark	48,618	72,560	Vest-Agder	7,276	166,976
Hedmark	27,397	189,586	Vestfold	2,224	227,798
Hordaland	15,460	465,817	SUBTOTAL	323,802[2]	4,769,073
More og Romsdal	15,121	247,933			
Nord-Trondelag	22,412	130,192			
Nordland	38,456	235,124	Overseas Arctic territories		
Oppland	25,192	183,851	Jan Mayen	377[3]	[4]
Oslo	454	568,809	Svalbard	61,020[2, 3]	[4]
Østfold	4,182	267,039	SUBTOTAL	61,397	—
Rogaland	9,378	416,943	TOTAL	385,199	4,769,073
Sogn og Fjordane	18,623	106,389			

Demography

Population (2008): 4,762,000.
Density (2008)[5]: persons per sq mi 37.5, persons per sq km 14.5.
Urban-rural (2005): urban 77.4%; rural 22.6%.
Sex distribution (2008[6]): male 49.81%; female 50.19%.
Age breakdown (2008[6]): under 15, 19.2%; 15–29, 18.9%; 30–44, 21.8%; 45–59, 19.6%; 60–74, 13.0%; 75–84, 5.3%; 85 and over, 2.2%.
Population projection: (2010) 4,856,000; (2020) 5,172,000.
Ethnic composition (2000): Norwegian 93.8%; Vietnamese 2.4%; Swedish 0.5%; Punjabi 0.4%; Urdu 0.3%; U.S. white 0.3%; Lapp 0.3%; other 2.0%.
Religious affiliation (2004[6]): Evangelical Lutheran 85.7%; other Christian 4.5%; Muslim 1.8%; other/nonreligious 8.0%.
Major cities (2008[6])[7]: Oslo 560,484 (urban agglomeration 856,915); Bergen 247,746; Trondheim 165,191; Stavanger 119,586; Bærum 108,144.

Vital statistics

Birth rate per 1,000 population (2007): 12.4 (world avg. 20.3); within marriage 45.5%; outside of marriage 54.5%.
Death rate per 1,000 population (2007): 8.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 3.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.90.
Marriage/divorce rates per 1,000 population (2007): 5.0/2.2.
Life expectancy at birth (2007): male 78.2 years; female 82.7 years.
Major causes of death per 100,000 population (2004): circulatory diseases 345.5; malignant neoplasms (cancers) 228.5; respiratory diseases 76.1; violence 55.7.

National economy

Budget (2005). Revenue: NOK 1,066,860,000,000 (tax on income 41.1%, social security 16.2%, value-added taxes 14.8%). Expenditures: NOK 763,318,000,000 (social security and welfare 40.5%, health 17.2%, education 14.0%, general public service 9.7%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): barley 580,000, wheat 380,000, potatoes 380,000, oats 260,000; livestock (number of live animals) 2,400,000 sheep, 930,000 cattle; roundwood (2006) 8,593,987 cu m, of which fuelwood 14%; fisheries production 2,964,293 (from aquaculture 24%); aquatic plants production 145,429 (from aquaculture, none). Mining and quarrying (2006): ilmenite concentrate 850,000, iron ore (metal content) 400,000, cobalt (refined metal) 4,927. Manufacturing (value added in U.S.$'000,000; 2004): food products 3,382; chemicals and chemical products 2,238; ships and oil platforms 2,224; nonelectrical machinery 1,739; publishing 1,651; base nonferrous metals 1,339. Energy production (consumption): electricity (kW-hr; 2005) 138,108,000,000 (126,065,000,000); coal (metric tons; 2005) 1,471,000[8] (795,000); crude petroleum (barrels; 2005) 986,700,000 (130,990,000); petroleum products (metric tons; 2005) 20,340,000 (10,435,000); natural gas (cu m; 2005) 88,041,000,000 (5,923,000,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 3,613; remittances (2007) 613; foreign direct investment (FDI; 2004–06 avg.) 4,947. Disbursements for (U.S.$'000,000): tourism (2006) 11,586; remittances (2007) 3,791; FDI (2004–06 avg.) 12,230.
Population economically active (2006): total 2,446,000; activity rate of total population 52.5% (participation rates: ages 15–64, 80.8%; female 47.1%; unemployed 3.4%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.0	104.3	106.9	107.4	109.1	111.6	112.4
Monthly earnings index	104.5	110.0	115.2	120.0	124.1	129.2	136.5

Gross national income (GNI; 2007): U.S.$360,036,000,000 (U.S.$76,450 per capita); purchasing power parity GNI (U.S.$53,320 per capita).

Structure of gross domestic product and labour force

	2005 in value NOK '000,000	2005 % of total value	2006 labour force	2006 % of labour force
Agriculture, fishing	26,839	1.4	77,000	3.1
Mining	3,537	0.2	4,000	0.2
Crude petroleum and natural gas	445,261	23.4	31,000	1.3
Manufacturing	164,955	8.7	271,000	11.1
Construction	75,685	4.0	167,000	6.8
Public utilities	39,916	2.1	16,000	0.7
Transp. and commun.	132,237	6.9	156,000	6.4
Trade, hotels	164,307	8.6	421,000	17.2
Finance	147,975	7.8	311,000	12.7
Pub. admin., defense	76,111	4.0	143,000	5.8
Services	448,520	23.5	764,000	31.2
Other	178,499[9]	9.4[9]	85,000[10]	3.5[10]
TOTAL	1,903,842	100.0	2,446,000	100.0

Public debt (2003): U.S.$79,880,000,000.
Household income and expenditure. Average household size (2001) 2.3; average annual net income per household (2004) NOK 359,300 (U.S.$53,302); sources of income (2004): wages and salaries 63.3%, transfers 22.1%, self-employment 6.0%; expenditure (2003–05): housing 20.7%, transportation 18.1%, recreation and culture 12.3%, food 10.5%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
NOK '000,000	+196,702	+197,741	+226,591	+303,850	+368,385	+339,539
% of total	26.2%	26.1%	26.0%	30.1%	30.9%	26.7%

Imports (2006): NOK 411,624,000,000 (machinery and apparatus 25.5%, of which nonelectrical machinery and equipment 11.8%; base and fabricated metals 10.7%; road vehicles 10.2%; chemicals and chemical products 9.1%; metal ore and metal scrap 5.3%). *Major import sources:* Sweden 15.0%; Germany 13.5%; Denmark 6.9%; U.K. 6.4%; China 5.7%.
Exports (2006): NOK 780,009,000,000 (crude petroleum 42.5%, natural gas 18.0%, machinery and apparatus 5.8%, refined petroleum 4.6%, aluminum 4.2%, fish 3.6%). *Major export destinations:* U.K. 26.0%; Germany 11.8%; The Netherlands 10.1%; France 8.1%; Sweden 6.1%.

Transport and communications

Transport. Railroads (2006): route length (2007[6]) 4,087 km; passenger-km 2,827,000,000; (2001) metric ton-km cargo 3,351,000,000. Roads (2007[6]): total length 92,946 km (paved [2002] 78%). Vehicles: passenger cars (2008[6]) 2,153,730; trucks and buses (2006[6]) 431,257. Air transport (2004)[12]: passenger-km 13,229,000,000; metric ton-km cargo 177,522,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	7,110	1,557	PCs	2004	2,630	578
Telephones				Dailies	2004	2,405[13]	524[13]
Cellular	2007	5,192[14]	1,105[14]	Internet users	2007	3,800	809
Landline	2007	1,988	423	Broadband	2007	1,436[14]	305[14]

Education and health

Educational attainment (2007). Percentage of population age 16 and over having: primary and lower secondary education 29.6%; higher secondary 41.3%; higher 24.8%; unknown 4.3%. *Literacy* (2000): virtually 100% literate.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	3,209	65,376	617,577	10.0
Secondary (age 13–18) and vocational	462	26,618	218,089	8.2
Higher	70	15,866	209,759	13.2

Health (2006): physicians 15,443 (1 per 302 persons); hospital beds 16,303 (1 per 286 persons); infant mortality rate (2007) 3.1; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 15,800 (army 42.4%, navy 25.9%, air force 31.7%). *Military expenditure as percentage of GDP* (2005): 1.7%; per capita expenditure U.S.$1,058.

[1]Excludes areas of the uninhabited overseas Antarctic territories of Bouvet Island (58 sq km) and Peter I Island (249 sq km). [2]Includes area of freshwater lakes. [3]Includes area of glaciers. [4]Persons on Jan Mayen and Svalbard are normally registered as residents on the mainland. The population of Jan Mayen on Jan. 1, 2004, was 18; the population of Svalbard on Jan. 1, 2007, was 2,338, including Norwegian settlements 1,781, the Russian settlement 550, the Polish settlement 7. [5]Population density calculated with reference to 328,657 sq km area free of mainland freshwater lakes (19,522 sq km), Svalbard freshwater lakes (395 sq km), Svalbard glaciers (36,500 sq km), and Jan Mayen glaciers (125 sq km). [6]January 1. [7]Population of municipalities. [8]Production is in Svalbard. [9]Includes taxes less imputed bank service charges and statistical discrepancy. [10]Includes 84,000 unemployed. [11]Imports c.i.f.; exports f.o.b. [12]SAS (Norwegian part), Braathens, Norwegian, and Widerøe only. [13]Circulation of daily newspapers. [14]Subscribers.

Internet resource for further information:
• **Statistics Norway http://www.ssb.no/english**

Oman

Official name: Salṭanat 'Umān (Sultanate of Oman).
Form of government: monarchy with two advisory bodies (State Council [70]; Consultative Council [84]).
Head of state and government: Sultan.
Capital: Muscat[1].
Official language: Arabic.
Official religion: Islam.
Monetary unit: rial Omani (RO); valuation (Sept. 8, 2008) 1 RO = U.S.$2.60 = £1.47.

Area and population

Regions	Capitals	area[2] sq mi	area[2] sq km	population 2007 estimate[3]
Al-Batinah	Ar-Rustāq, Suhār	4,850	12,500	735,669
Ad-Dākhilīyah	Nizwā	12,300	31,900	299,126
Ash-Sharqīyah	Ibrā; Sūr	14,200	36,800	355,382
Al-Wusta	Haymā', Ṣayy	30,750	79,700	27,338
Az-Zāhirah	'Ibrī	17,000[4]	44,000[4]	148,520
Governorates				
Al-Buraymi[5]	Al-Buraymī	[4]	[4]	97,974
Masqat	Muscat (Masqat)	1,350	3,500	785,515
Musandam	Khasab	700	1,800	33,860
Zufār (Dhofar)	Salālah	38,350	99,300	260,115
TOTAL		119,500	309,500	2,743,499[6]

Demography

Population (2008): 2,651,000[7].
Density (2008): persons per sq mi 22.2, persons per sq km 8.6.
Urban-rural (2005): urban 71.5%; rural 28.5%.
Sex distribution (2007): male 59.13%; female 40.87%.
Age breakdown (2007): under 15, 28.8%; 15–29, 34.2%; 30–44, 24.9%; 45–59, 9.1%; 60–74, 2.5%; 75 and over, 0.5%.
Population projection: (2010) 2,767,000; (2020) 3,339,000.
Doubling time: 32 years.
Ethnic composition (2000): Omani Arab 48.1%; Indo-Pakistani 31.7%, of which Balochi 15.0%, Bengali 4.4%, Tamil 2.5%; other Arab 7.2%; Persian 2.8%; Zanzibari (blacks originally from Zanzibar) 2.5%; other 7.7%.
Religious affiliation (2005): Muslim *c.* 89%, of which Ibāḍiyah *c.* 75%, Sunnī *c.* 8%, Shī'ī *c.* 6%; Hindu *c.* 5%; Christian *c.* 5%; other *c.* 1%.
Major cities (2007)[8]: As-Sīb 268,259[9]; Maṭraḥ 203,159[9]; Bawshar 193,778[9]; Salālah 185,780; Suḥār 119,983; Muscat 28,987 (urban agglomeration 785,515).

Vital statistics

Birth rate per 1,000 population (2007): 25.0 (world avg. 20.3).
Death rate per 1,000 population (2007): 3.1 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 21.9 (world avg. 11.7).
Marriage/divorce rates per 1,000 population (2005): n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2005): 5.84.
Life expectancy at birth (2007): male 70.4 years; female 73.6 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 126, of which ischemic heart disease 63; infectious and parasitic diseases 39; malignant neoplasms (cancers) 37; accidents and injuries 35; diabetes mellitus 17.

National economy

Budget (2006). Revenue: RO 5,027,200,000 (oil revenue 64.2%; natural gas revenue 12.2%; tax revenue 7.2%; other 16.4%). Expenditures: RO 4,936,100,000 (current expenditure 71.5%, of which defense 31.4%, education 11.3%, social security and welfare 6.8%, health 4.0%, interest payments 1.1%; capital expenditure 24.3%; other 4.2%).
Public debt (external, outstanding; 2006): U.S.$819,000,000.
Gross national income (2007): U.S.$38,325,000,000 (U.S.$14,768 per capita); purchasing power parity GNI, n.a.

Structure of gross national product and labour force

	2006 in value RO '000,000	2006 % of total value	2003 labour force[10]	2003 % of labour force[10]
Agriculture, fishing	171.9	1.2	58,114	7.9
Oil and natural gas	6,638.7[11]	48.4[11]	20,115	2.7
Other mining	23.7	0.2		
Manufacturing	1,421.7[11]	10.4[11]	59,492	8.1
Construction	349.5	2.5	118,257	16.0
Public utilities	151.3	1.1	4,045	0.5
Transp. and commun.	857.8	6.3	27,674	3.8
Trade, restaurants, hotels	1,582.1	11.5	109,157	14.8
Finance, real estate	801.3	5.8	25,200	3.4
Pub. admin., defense	858.9	6.3	162,742	22.1
Services	1,064.7	7.8	137,420	18.7
Other	−211.9[12]	−1.5[12]	14,408	2.0
TOTAL	13,709.7	100.0	736,624	100.0

Household income and expenditure. Average household size (2003) 6.8; expenditure (2000)[13]: food and nonalcoholic beverages 29.9%, transportation/communications 22.2%, housing 15.3%, clothing/footwear 7.2%, energy 6.0%.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): dates 260,000, vegetables and melons 206,700, goat milk 85,000, tomatoes 41,000, bananas 26,000, goat meat 23,500, camel meat 6,800; livestock (number of live animals) 1,600,000 goats, 360,000 sheep, 310,000 cattle, 120,000 camels; roundwood, n.a.; fisheries production (2006) 154,078 (from aquaculture, negligible). Mining and quarrying (2007): limestone 4,438,000; marble 964,100; chromite (gross weight) 407,700; gypsum 187,200. Manufacturing (value added in U.S.$'000,000; 2004): petroleum products 1,168; cement, bricks, and ceramics 232; food products 152; chemicals and chemical products 84; fabricated metals 54; furniture 44; beverages 34. Energy production (consumption): electricity (kW-hr; 2007) 14,443,000,000 (11,191,000,000); coal, none (none); crude petroleum (barrels; 2007) 259,000,000 ([2005] 32,000,000); petroleum products (metric tons; 2005) 3,987,000 (3,562,000); natural gas (cu m; 2005) 18,968,000,000 (8,368,000,000).
Population economically active (2003)[10]: total 736,624; activity rate of total population 31.5% (participation rates: over age 15, n.a.; female 15.4%; unemployed [2004] 15%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	99.2	98.9	99.1	99.8	101.7	105.0	111.2

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 538; remittances (2007) 43; foreign direct investment (FDI; 2004–06 avg.) 694; official development assistance (2006) 35. Disbursements for (U.S.$'000,000): tourism (2006) 686; remittances (2007) 2,788; FDI (2004–06 avg.) 204.
Land use as % of total land area (2003): in temporary crops 0.1%, in permanent crops 0.1%, in pasture 3.2%; overall forest area (2005) 0.01%.

Foreign trade[14]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
RO '000,000	+1,986	+2,162	+1,832	+3,793	+4,109	+3,350
% of total	30.1%	30.0%	21.7%	35.8%	32.9%	21.4%

Imports (2007): RO 6,144,000,000 (motor vehicles and parts 24.1%; nonelectrical machinery and equipment 17.8%; food and live animals 8.3%; iron and steel 8.2%; chemicals and chemical products 6.4%). *Major import sources:* U.A.E. 26.5%; Japan 15.8%; India 6.5%; U.S. 5.8%; Germany 5.3%.
Exports (2007): RO 9,494,000,000 (domestic exports 89.4%, of which crude petroleum 58.5%, liquefied natural gas 12.4%, refined petroleum 4.9%; reexports 10.6%, of which motor vehicles and parts 8.3%). *Major export destinations* (2005): China *c.* 28%; South Korea *c.* 25%; Thailand *c.* 16%; U.A.E. *c.* 9%; Iran *c.* 5%.

Transport and communications

Transport. Railroads: none. Roads (2005[15]): total length 24,927 mi, 40,116 km (paved 37%). Vehicles (2003): passenger cars 324,085; trucks and buses 116,438. Air transport (2006)[16]: passenger-km 1,749,000,000; metric ton-km cargo 11,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,557	633	PCs	2005	130	51
Telephones				Dailies	2004	108[17]	45[17]
Cellular	2007	2,500[18]	963[18]	Internet users	2007	340	131
Landline	2007	268	103	Broadband	2007	19[18]	7.3[18]

Education and health

Educational attainment (2003). Percentage of population age 10 and over having: no formal schooling (illiterate) 15.9%; no formal schooling (literate) 22.3%; primary 35.3%; secondary 17.0%; higher technical 3.3%; higher undergraduate 5.2%; higher graduate 0.7%; other 0.3%. *Literacy* (2003): percentage of total population age 15 and over literate 75.8%; males literate 83.0%; females literate 67.2%.

Education (2004–05)[19]

	schools	teachers	students	student/teacher ratio
Primary (age 6–15)	1,038	27,825	443,393	15.9
Secondary (age 16–17)		6,729	129,471	19.2
Voc., teacher tr.[20]	34	1,608	23,286	14.5
Higher[21]	1	955	12,855	13.5

Health (2007): physicians 4,909 (1 per 529 persons); hospital beds 5,403 (1 per 480 persons); infant mortality rate per 1,000 live births 10.1; undernourished population, n.a.

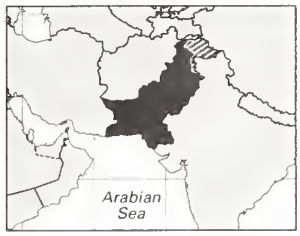
Military

Total active duty personnel (November 2007): 42,600 (army 58.7%, navy 9.9%, air force 11.7%, royal household/foreign troops 19.7%). *Military expenditure as percentage of GDP* (2005): 11.9%; per capita expenditure U.S.$1,516.

[1]Many ministries are located in adjacent Bawshar. [2]Approximate; no comprehensive survey of surface area has ever been carried out in Oman. [3]Official figures released October 2008. [4]Az-Zāhirah includes Al-Buraymī. [5]Created in October 2006. [6]Includes 820,802 expatriates. [7]Estimate of *UN World Population Prospects (2006 Revision).* [8]Populations of districts (2nd-order administrative subdivisions). [9]Within Muscat urban agglomeration. [10]Employed only; includes 424,178 expatriate workers and 312,446 Omani workers. [11]Manufacturing includes petroleum products; Oil and natural gas excludes petroleum products. [12]Import taxes less imputed bank service charges. [13]Weights of consumer price index components. [14]Imports c.i.f.; exports f.o.b. [15]January 1. [16]Data for Oman Air only. [17]Circulation of daily newspapers. [18]Subscribers. [19]Excludes private schools. [20]Includes the College of Sharia and Jurisprudence. [21]Sultan Qaboos University.

Internet resources for further information:
- **Ministry of National Economy http://www.moneoman.gov.om/index.asp**
- **Central Bank of Oman http://www.cbo-oman.org**

Pakistan



Official name: Islam-i Jamhuriya-e Pakistan (Islamic Republic of Pakistan).
Form of government: federal republic with two legislative houses (Senate [100]; National Assembly [342]).
Chiefs of state and government: President assisted by Prime Minister.
Capital: Islamabad.
Official language: Urdu.
Official religion: Islam.
Monetary unit: Pakistani rupee (PKR); valuation (Sept. 8, 2008) 1 U.S.$ = PKR 76.37; 1 £ = PKR 134.92.

Area and population

Provinces	Capitals	area[1] sq mi	area[1] sq km	population 2006 estimate[2]
Balochistan	Quetta	134,051	347,190	8,004,000
North-West Frontier	Peshawar	28,773	74,521	21,392,000
Punjab	Lahore	79,284	205,345	86,255,000
Sind (Sindh)	Karachi	54,407	140,914	35,864,000
Federally Administered Tribal Areas	admin. centre is Peshawar	10,509	27,220	3,621,000
Federal Capital Area				
Islamabad	—	350	906	1,124,000
TOTAL		307,374	796,096	156,260,000

Demography

Population (2008)[2]: 161,910,000.
Density (2008)[1, 2]: persons per sq mi 526.8, persons per sq km 203.4.
Urban-rural (2007): urban 36.0%; rural 64.0%.
Sex distribution (2007): male 51.89%; female 48.11%.
Age breakdown (2005): under 15, 37.2%; 15–29, 29.9%; 30–44, 16.8%; 45–59, 10.2%; 60–74, 4.7%; 75–84, 1.0%; 85 and over, 0.2%.
Population projection[2]: (2010) 167,765,000; (2020) 200,370,000.
Ethnic composition (2000): Punjabi 52.6%; Pashtun 13.2%; Sindhi 11.7%; Urdu-speaking muhajirs 7.5%; Balochi 4.3%; other 10.7%.
Religious affiliation (2000): Muslim 96.1%[3]; Christian 2.5%; Hindu 1.2%; others (including Ahmadiyah) 0.2%.
Major urban agglomerations (2007): Karachi 12,130,000; Lahore 6,577,000; Faisalabad 2,617,000; Rawalpindi 1,858,000; Multan 1,522,000; Gujranwala 1,513,000; Hyderabad 1,459,000; Peshawar 1,303,000.

Vital statistics

Birth rate per 1,000 population (2007): 25.5 (world avg. 20.3).
Death rate per 1,000 population (2007): 7.9 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 3.13.
Life expectancy at birth (2007): male 64.3 years; female 64.4 years.
Major cause of death per 100,000 population (2003): childhood diseases 126.7; infectious and parasitic diseases 104.0; diseases of the circulatory system 96.4; diseases of the respiratory system 67.0; accidents and violence 42.6.

National economy

Budget (2007–08)[4]. Revenue: PKR 1,368,139,000,000 (tax revenue 75.3%, of which income/corporate profits 28.4%, sales tax 27.4%, customs 11.3%; non-tax revenue 24.7%). Expenditures: PKR 1,353,660,000,000 (general public service 47.4%; defense 20.3%; economic affairs 5.8%; public order and police 1.8%; education 1.8%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 54,752,000, wheat 23,520,000, rice 8,300,000, seed cotton 6,500,000, corn (maize) 3,240,000, potatoes 2,622,300, mangoes 2,250,000, onions 2,100,000, chickpeas 842,000, sunflower seeds 560,000, dates 510,000; livestock (number of live animals) 53,800,000 goats, 29,600,000 cattle, 27,300,000 buffalo, 26,500,000 sheep, 900,000 camels; roundwood (2006) 28,994,193 cu m, of which fuelwood 90%; fisheries production (2007–08) 640,000 (from aquaculture [2006] 20%). Mining and quarrying (2007–08): limestone 30,825,000; rock salt 1,872,000; gypsum 682,000; kaolin (2006) 38,000. Manufacturing (value of production in PKR '000,000,000; 2000–01): textiles 321; food products 189; refined petroleum and coke 94; industrial chemicals 71; ginning and baling of fibre 56; transport equipment 47; pharmaceuticals 47. Energy production (consumption): electricity (kW-hr; 2007–08) 109,021,000,000 ([2006–07] 72,712,000,000); coal (metric tons; 2007–08) 3,482,000 ([2006–07] 7,894,000); crude petroleum (barrels; 2007–08) 25,610,000 ([2005] 89,000,000); petroleum products (metric tons; 2005) 10,189,000 ([2006–07] 16,847,000); natural gas (cu m; 2007–08) 40,981,000,000 ([2006–07] 34,601,000,000).
Land use as % of total land area (2003): in temporary crops 28.0%, in permanent crops 0.8%, in pasture 6.5%; overall forest area (2005) 2.5%.
Population economically active (2007): total 50,331,000[5]; activity rate of total population 31.8% (participation rates: ages 15–64, 53.7%; female 20.7%; officially unemployed 5.3%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.1	106.5	109.6	117.8	128.5	138.7	149.2

Gross national income (GNI, 2007): U.S.$141,009,000,000 (U.S.$870 per capita); purchasing power parity GNI (U.S.$2,570 per capita).

Structure of gross domestic product and labour force

	2007–08 in value PKR '000,000	2007–08 % of total value	2007 labour force[5]	2007 % of labour force[5]
Agriculture, forestry, fishing	2,016,950	19.3	20,780,000	41.3
Mining, quarrying	306,696	2.9	52,000	0.1
Manufacturing	1,892,778	18.1	6,454,000	12.8
Construction	277,141	2.6	3,127,000	6.2
Public utilities	158,617	1.5	360,000	0.7
Transp. and commun.	1,174,090	11.2	2,569,000	5.1
Trade, hotels	1,760,491	16.8	6,872,000	13.7
Finance, real estate	818,458	7.8	544,000	1.1
Pub. admin., defense	577,554	5.5	6,868,000	13.6
Services	923,324	8.8		
Other	572,095[6]	5.5[6]	2,705,000[7]	5.4[7]
TOTAL	10,478,194	100.0	50,331,000	100.0

Public debt (external, outstanding; June 2008): U.S.$40,243,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 255; remittances (2007–08 avg.) 6,449; foreign direct investment (FDI; 2004–08 avg.) 4,420; official development assistance (2006) 2,147. Disbursements for (U.S.$'000,000): tourism (2006) 1,545; remittances (2007) 3.0; FDI (2004–06 avg.) 69.
Household income and expenditure (2005–06). Average household size (2006–07) 6.5; income per household PKR 147,912 (U.S.$2,472); sources of income: self-employment 39.7%, wages and salaries 35.3%, real estate 13.7%, transfer payments 10.5%; expenditure: food and beverages 43.1%, housing and energy 23.1%, transportation and communications 6.2%, clothing 5.7%.

Foreign trade

Balance of trade (current prices)

	2003–04	2004–05	2005–06	2006–07	2007–08
U.S.$'000,000	–1,208	–4,514	–8,441	–9,711	–15,295
% of total	4.6%	13.5%	20.3%	21.9%	27.5%

Imports (2007–08): U.S.$35,417,333,000 (refined petroleum 17.4%; machinery and apparatus 16.2%; chemicals and chemical products 14.4%; crude petroleum 12.2%; food 10.0%). *Major import sources:* U.A.E. 14.5%; Saudi Arabia 10.2%; China 8.6%; Kuwait 6.9%; Singapore 4.8%.
Exports (2007–08): U.S.$20,122,394,000 (textiles 49.8%, of which woven cotton fabric 11.5%, knitwear 10.5%, bedding 6.9%, ready-made garments 5.5%, cotton yarn 5.3%; rice 5.6%; petroleum products 3.7%). *Major export destinations:* U.S. 18.6%; U.A.E. 8.6%; U.K. 5.3%; Afghanistan 5.1%; Germany 4.1%.

Transport and communications

Transport. Railroads (2007): length (2005–06) 11,515 km; passenger-km 25,821,000,000; metric ton-km cargo 5,876,000,000. Roads (2007–08): total length 164,572 mi, 264,853 km (paved 67%). Vehicles (2006): passenger cars 1,418,790; trucks and buses 352,172. Air transport (2007–08)[8]: passenger-km 12,772,500,000; metric ton-km cargo 325,700,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2006	7,972	51	PCs	2005	803	5.2
Telephones				Dailies	2007	9,935[9]	61[9]
Cellular	2007	78,853[10]	481[10]	Internet users	2007	17,500	107
Landline	2007	4,940	30	Broadband	2007	129[10]	0.8[10]

Education and health

Educational attainment: n.a. *Literacy* (2006–07): total population age 15 and over literate 52%; males literate 65%; females literate 38%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 5–9)	159,300	448,300	24,585,000	54.8
Secondary (age 10–14)	64,400	682,300	7,675,000	11.2
Voc., teacher tr.	652	8,798	161,047	18.3
Higher	1,712	62,060	1,601,268	25.8

Health: physicians (2008[11]) 127,859 (1 per 1,280 persons); hospital beds (2007[11]) 103,285 (1 per 1,585 persons); infant mortality rate (2007) 68.0; undernourished population (2002–04) 37,500,000 (24% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2007): 619,000[12] (army 88.8%, navy 3.9%, air force 7.3%). *Military expenditure as percentage of GDP* (2005): 3.5%; per capita expenditure U.S.$29.

[1]Excludes 33,125 sq mi (85,793 sq km) area of Pakistani-administered Jammu and Kashmir (comprising both Azad Kashmir [AK; 5,134 sq mi (13,297 sq km)] and the Northern Areas [NA; 27,991 sq mi (72,496 sq km)]). [2]Excludes Afghan refugees and the populations of AK (2008; 3,799,000) and NA (2008; 996,000). [3]Mostly Sunnī, with Shī'ī constituting about 17% of total population. [4]Budgeted. [5]Excludes armed forces. [6]Indirect taxes less subsidies. [7]Includes 25,000 inadequately defined and 2,680,000 unemployed. [8]Pakistan International Airlines only. [9]Circulation of daily newspapers. [10]Subscribers. [11]January 1. [12]Excludes c. 304,000 in paramilitary (mostly national guard and frontier corps).

Internet resources for further information:
- **Economic Survey, Ministry of Finance http://www.finance.gov.pk/finance_economic_survey.aspx**
- **Statistics Division: Government of Pakistan http://www.statpak.gov.pk**
- **State Bank of Pakistan http://www.sbp.org.pk**

Palau

Official name: Beluu er a Belau (Palauan); Republic of Palau (English).
Form of government: nonparty republic with two legislative houses (Senate [13]; House of Delegates [16]).
Head of state and government: President.
Capital: Melekeok[1].
Official languages[2]: Palauan; English.
Official religion: none.
Monetary unit: U.S. dollar (U.S.$); valuation (Sept. 8, 2008) 1 U.S.$ = £0.57.

Area and population

States	area sq mi	area sq km	population 2005 census
Aimeliik	20	52	270
Airai	17	44	2,723
Angaur	3	8	320
Hatohobei	1	3	44
Kayangel	1	3	188
Koror	7	18	12,676
Melekeok	11	28	391
Ngaraard	14	36	581
Ngarchelong	4	10	488
Ngardmau	18	47	166
Ngaremlengui	25	65	317
Ngatpang	18	47	464
Ngchesar	16	41	254
Ngiwal	10	26	223
Peleliu	5	13	702
Sonsorol	1	3	100
Other			
Rock Islands	18	47	—
TOTAL	188[3]	488[3]	19,907

Demography

Population (2008): 20,300.
Density (2008): persons per sq mi 108.0, persons per sq km 41.6.
Urban-rural (2005): urban 70.0%; rural 30.0%.
Sex distribution (2006): male 53.72%; female 46.28%.
Age breakdown (2006): under 15, 23.4%; 15–29, 21.6%; 30–44, 28.4%; 45–59, 18.3%; 60–74, 5.9%; 75 and over, 2.4%.
Population projection: (2010) 21,000; (2020) 22,000.
Ethnic composition (2005)[4]: Palauan 65.2%; Asian 30.3%, of which Filipino 21.6%, Vietnamese 2.3%; other Micronesian 3.1%; white 1.1%; other 0.3%.
Religious affiliation (2005)[4]: Roman Catholic 51.0%; Protestant 26.7%; Modekngei (marginal Christian sect) 8.9%; other Christian 1.8%; other 11.6%.
Major towns (2005): Koror 10,743; Meyuns 1,153; Kloulklubed 680.

Vital statistics

Birth rate per 1,000 population (2006): 12.9 (world avg. 20.3).
Death rate per 1,000 population (2006): 7.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 5.7 (world avg. 11.7).
Marriage/divorce rates per 1,000 population (2006): n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2005): 1.80.
Life expectancy at birth (2005): male 68.0 years; female 72.0 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 244, of which ischemic heart disease 82, cerebrovascular disease 78; infectious and parasitic diseases 138; malignant neoplasms (cancers) 61; diseases of the respiratory system 45; injuries and accidents 34.

National economy

Budget (2005–06). Revenue: U.S.$83,671,000 (grants from the U.S. 53.7%; tax revenue 34.9%; nontax revenue 7.9%; trust fund revenue 3.5%). Expenditures: U.S.$87,586,000 (current expenditure 74.1%; capital expenditure 25.9%).
Public debt (gross external debt; 2006–07): U.S.$22,857,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (value of sales in U.S.$; 2001): eggs (2003) 638,750, cabbages 116,948, cucumbers 44,009, green onions 23,043, eggplants 18,938, cassava 15,150, bean sprouts 14,274, taro 13,122; livestock (number of live animals; 2001) 702 pigs, 21,189 poultry; roundwood, n.a.; fisheries production (2006) 972 (from aquaculture 1%). Mining and quarrying: n.a. Manufacturing: includes handicrafts and small items. Energy production (consumption): electricity (kW-hr; 2005) 128,000,000 ([2006] 114,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (37,000); natural gas, none (none).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 90; remittances (2006) n.a.; foreign direct investment (FDI; 2004–06 avg.) 3; official development assistance (2006) 37. Disbursements for (U.S.$'000,000): tourism (2006) 1.4; remittances (2006) n.a.
Land use as % of total land area (2003): in temporary crops *c.* 9%, in permanent crops *c.* 4%, in pasture *c.* 7%; overall forest area (2005) *c.* 88%.
Population economically active (2005): total 10,203; activity rate of total population 51.3% (participation rates: over age 15, 69.1%; female 39.1%; unemployed 4.2%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	98.2	97.0	97.9	102.7	106.7	111.5	115.1

Gross national income (GNI; 2007): U.S.$167,000,000 (U.S.$8,210 per capita).

Structure of gross domestic product and labour force

	2007 in value U.S.$'000	2007 % of total value	2005 labour force	2005 % of labour force
Agriculture	2,097	1.3	451	4.4
Fisheries	3,500	2.1	310	3.0
Mining	180	0.1	...	..
Manufacturing	822	0.5	259	2.5
Public utilities	7,027	4.3	[5]	[5]
Construction	25,099	15.3	1,365	13.4
Transportation and communications	12,655	7.7	769[5]	7.5[5]
Trade, hotels	50,382	30.7	1,670	16.4
Finance, real estate	13,337	8.1	182	1.8
Public administration, defense	32,340	19.7	1,734	17.0
Services	12,568	7.6	3,037	29.8
Other	4,280[6]	2.6[6]	426[7]	4.2[7]
TOTAL	164,289[3]	100.0	10,203	100.0

Household income and expenditure. Average household size (2005) 3.9; annual average income per household (2006) U.S.$19,759; sources of income (2006): wages and salaries 57.8%, imputed rent 18.2%, social security 9.6%, customs 3.9%, other 10.5%; expenditure (2006): imputed rent 18.6%, housing and energy 16.9%, food 16.4%, transportation 10.8%, health, personal care, and education 6.0%, cash gifts given 4.4%, alcohol, tobacco, and betel nut 3.4%, other 23.5%.

Foreign trade

Balance of trade (current prices)

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07
U.S.$'000	–76,367	–79,833	–101,398	–91,765	–101,690	–81,206
% of total	65.2%	82.6%	89.6%	85.7%	78.9%	80.1%

Imports (2006–07): U.S.$91,287,000 (mineral fuels and lubricants 37.5%; machinery and transport equipment 17.6%; beverages and tobacco products 14.9%; food and live animals 9.4%; chemicals and chemical products 8.7%).
Major import sources (2006–07): U.S. 33.2%; Singapore 24.8%; Guam 11.2%; Japan 9.6%; The Philippines 7.6%; Taiwan 5.9%.
Exports (2006–07): U.S.$10,081,000 (mostly high-grade tuna and garments).
Major export destinations (2003): Japan 86.7%; Vietnam 5.9%; Zambia 4.6%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 38 mi, 61 km (paved 59%). Vehicles (2004): passenger cars and trucks 7,247. Air transport (2003): passenger arrivals 80,017, passenger departures 78,608.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1997	11	606	PCs	2006	...	...
Telephones				Dailies	2004	0	0
Cellular	2006	8.3[8]	414[8]	Internet users	2003	3.2	156
Landline	2006	8.0	399	Broadband	2006	...	...

Education and health

Educational attainment (2005). Percentage of population age 25 and over having: no formal schooling 1.9%; incomplete primary education 9.0%; complete primary 3.9%; incomplete secondary 14.9%; complete secondary 42.2%; some postsecondary 10.0%; vocational 4.1%; higher 14.0%. *Literacy* (2005): total population age 15 and over literate 99.7%; males literate 99.6%; females literate 99.8%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13)	22	282	2,971	10.5
Secondary (age 14–18)	6	97	1,139	11.7
Higher[9, 10]	1	40	705	17.6

Health (2004): physicians 21 (1 per 942 persons); hospital beds 135 (1 per 147 persons); infant mortality rate per 1,000 live births (2006) 7.7; undernourished population, n.a.

Military

The United States is responsible for the external security of Palau, as specified in the Compact of Free Association of Oct. 1, 1994.

[1]Formal transfer of capital to Melekeok on Babelthuap from Koror took place Oct. 1, 2006. [2]Sonsorolese-Tobian is also, according to official sources, considered an official language. [3]Detail does not add to total given because of rounding. [4]Population age 18 and over only. [5]Transportation and communications includes Public utilities. [6]Import duties less imputed bank service charges. [7]Unemployed. [8]Subscribers. [9]Palau Community College. [10]2003–04.

Internet resources for further information:
- **Department of the Interior: Office of Insular Affairs**
  http://www.doi.gov/oia
- **Palau Office of Planning and Statistics**
  http://www.palaugov.net/stats

Panama

Official name: República de Panamá (Republic of Panama).
Form of government: multiparty republic with one legislative house (Legislative Assembly [78]).
Head of state and government: President assisted by Vice Presidents.
Capital: Panama City.
Official language: Spanish.
Official religion: none.
Monetary unit: balboa (B); valuation (Sept. 8, 2008) 1 U.S.$ = B 1.00; 1 £ = B 1.77.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2006 estimate
Bocas del Toro	Bocas del Toro	1,793	4,644	108,026
Chiriquí	David	2,543	6,585	409,483
Coclé	Penonomé	1,911	4,950	227,047
Colón	Colón	1,880	4,868	235,299
Darién	La Palma	4,593	11,897	44,575
Herrera	Chitré	912	2,363	110,600
Los Santos	Las Tablas	1,469	3,805	89,426
Panamá	Panama City	4,506	11,671	1,653,220
Veraguas	Santiago	4,130	10,697	224,186
Indigenous districts				
Emberá	Unión Chocoe	1,693	4,384	9,359
Kuna Yala (San Blas)	El Porvenir	904	2,341	36,848
Ngöbe Buglé	Llano Tugri	2,690	6,968	135,890
TOTAL		29,024	75,173[1]	3,283,959

Demography

Population (2008): 3,310,000[2].
Density (2008): persons per sq mi 114.0, persons per sq km 44.0.
Urban-rural (2005): urban 70.8%; rural 29.2%.
Sex distribution (2005): male 50.54%; female 49.46%.
Age breakdown (2005): under 15, 30.5%; 15–29, 26.3%; 30–44, 21.4%; 45–59, 12.8%; 60–74, 6.6%; 75 and over, 2.4%.
Population projection: (2010) 3,411,000; (2020) 3,894,000.
Ethnic composition (2000): mestizo 58.1%; black and mulatto 14.0%; white 8.6%; Amerindian 6.7%; Asian 5.5%; other 7.1%.
Religious affiliation (2000): Roman Catholic 70.6%; Protestant/independent Christian 14.0%; Muslim 4.4%; Bahāī 1.2%; Buddhist 0.8%; traditional beliefs 0.7%; nonreligious 2.5%; other 5.8%.
Major cities (2000): Panama City 415,964 (urban agglomeration [2005] 1,216,000); San Miguelito 293,745[3]; David 77,734[4]; Arraiján 63,753[4].

Vital statistics

Birth rate per 1,000 population (2007): 20.2 (world avg. 20.3); (2006) within marriage 17.3%; outside of marriage 82.7%.
Death rate per 1,000 population (2007): 4.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 15.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.40.
Marriage/divorce rates per 1,000 population (2006): 3.3/0.9.
Life expectancy at birth (2005): male 72.7 years; female 77.9 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 122.2; malignant neoplasms (cancers) 74.6; accidents and violence 44.7; diseases of the respiratory system 41.2.

National economy

Budget (2004). Revenue: B 2,042,000,000 (tax revenue 59.2%, of which income taxes 23.9%, taxes on domestic transactions 20.9%; other current revenue 39.9%, of which revenue from Panama Canal 9.0%). Expenditures: B 2,810,000,000 (current expenditure 83.8%, of which wages and salaries 27.2%, transfers 26.3%, debt service 21.1%; development expenditure 16.2%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 1,800,000, bananas 440,000, rice 280,000, canteloupes and other melons 130,000, plantains 95,200, corn (maize) 73,000, oil palm fruit 70,000, oranges 42,000, coffee 14,300, tobacco 2,800; livestock (number of live animals) 1,650,000 cattle, 300,000 pigs, 190,000 horses; roundwood (2006) 1,348,827 cu m, of which fuelwood 88%; fisheries production (2006) 235,569 (from aquaculture 4%). Mining and quarrying (2005): limestone 270,000; marine salt 18,000. Manufacturing (value added in B '000,000; 2004): food and food products 410; beverages 167; cement, bricks, and ceramics 70; printing and publishing 63; fabricated metal products 60. Energy production (consumption): electricity (kW-hr; 2005) 5,850,000,000 (5,799,000,000); coal, none (none); crude petroleum, none (negligible); petroleum products (metric tons; 2005) negligible (1,782,000); natural gas, none (none).
Household income and expenditure. Average household size (2004) 4.1; average annual income per household (1990) B 5,450 (U.S.$5,450); sources of income, n.a.; expenditure (2001): food *c.* 22%, energy *c.* 18%, health care *c.* 14%, education *c.* 4%, other *c.* 42%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 960; remittances (2007) 173; foreign direct investment (FDI: 2004–06 avg.) 1,530; official development assistance (2006) 30. Disbursements for (U.S.$'000,000): tourism (2006) 271; remittances (2007) 151; FDI (2004–06 avg.) 1,492.
Population economically active (2006): total 1,332,059; activity rate of total population 39.8% (participation rates: ages 15–64, 66.9%; female 37.1%; unemployed 9.1%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	100.3	101.3	101.4	101.8	105.1	107.3	111.8

Gross national income (GNI; 2007): U.S.$18,423,000,000 (U.S.$5,510 per capita); purchasing power parity GNI (U.S.$10,030 per capita).

Structure of gross domestic product and labour force

	2006 in value B '000,000[5]	% of total value[5]	labour force	% of labour force
Agriculture, fishing	1,027.4	6.8	193,078	14.5
Mining	158.2	1.1	2,310	0.2
Manufacturing	1,066.6	7.0	105,200	7.9
Construction	698.1	4.6	102,799	7.7
Public utilities	446.6	2.9	8,452	0.6
Transp. and commun.	2,885.4	19.1	90,787	6.8
Trade, restaurants	2,701.4	17.8	294,042	22.1
Finance, real estate	3,539.2	23.4	89,020	6.7
Pub. admin.	1,231.8	8.1	70,291	5.3
Services	799.7	5.3	253,896	19.0
Other	587.5[6]	3.9[6]	122,184[7]	9.2[7]
TOTAL	15,141.9	100.0	1,332,059	100.0

Public debt (external, outstanding; 2006): U.S.$7,774,000,000.
Land use as % of total land area (2003): in temporary crops 7.4%, in permanent crops 2.0%, in pasture 20.6%; overall forest area (2005) 57.7%.

Foreign trade[8, 9]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−2,129	−2,236	−2,325	−2,702	−3,191	−3,742
% of total	55.4%	58.3%	59.3%	60.3%	62.3%	63.3%

Imports (2006): U.S.$4,828,000,000 (machinery and apparatus 18.3%, refined petroleum 15.9%, road vehicles 10.8%, food 9.6%, iron and steel 4.7%). *Major import sources:* U.S. 27.0%; free zones 15.6%; Netherlands Antilles 10.1%; Costa Rica 5.1%; Japan 4.7%.
Exports (2006): U.S.$1,086,000,000 (food and live animals 77.0%, of which fish 25.9% [including tuna 8.0%, salmon 5.5%], melons and papayas 15.3%, bananas 10.1%, crustaceans 5.7%; remainder 23.0%). *Major export destinations:* U.S. 39.0%; Spain 7.7%; The Netherlands 6.3%; Sweden 5.2%.

Transport and communications

Transport. Railroads (2005): route length 355 km; (2002) passenger-km 35,693,000,000[10]; (2002) metric ton-km cargo 20,665,000,000[11]. Roads (2006[12]): total length 11,984 km (paved 72%). Vehicles (2005): passenger cars 269,704; trucks and buses 78,699. Panama Canal traffic (2006–07): oceangoing transits 13,223; cargo 211,572,000 metric tons. Air transport (2007)[13]: passenger-km 7,944,000,000; metric ton-km cargo (2005) 37,226,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	620	195	PCs	2005	147	47
Telephones				Dailies	2005	164[14]	52[14]
Cellular	2007	2,392[15]	715[15]	Internet users	2007	525	157
Landline	2007	492	147	Broadband	2007	35[15]	10[15]

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling 8.9%; primary 36.4%; secondary 33.9%; undergraduate 14.4%; graduate 1.5%; other/unknown 4.9%. *Literacy* (2005): total population age 15 and over literate 93.0%; males 93.6%; females 92.4%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	3,194	17,751	430,152	24.2
Secondary (age 12–18)	518	16,392	256,224	15.6
Voc., teacher tr.[16]	105	2,548	53,976	21.2
Higher[16]	65	9,422	120,850	12.8

Health (2004): physicians 4,321 (1 per 715 persons); hospital beds 7,564 (1 per 408 persons); infant mortality rate per 1,000 live births (2007) 14.7; undernourished population (2002–04) 700,000 (23% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

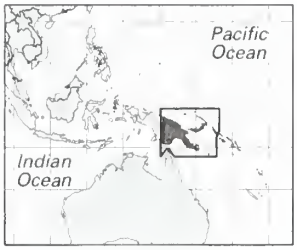
Military

Total active duty personnel (November 2007): none[17]. *Paramilitary expenditure as percentage of GDP* (2005): 1.1%; per capita expenditure U.S.$50.

[1]Summed total of both first- and second-order administrative subdivisions; reported total is 75,123 sq km. [2]Estimate of U.S. Bureau of the Census International Database (June 2008 update). [3]District adjacent to Panama City within Panama City urban agglomeration. [4]Population of *cabecera.* [5]At purchaser's prices of 1996. [6]Taxes and import duties less imputed bank service charges and less subsidies. [7]Includes 121,360 unemployed. [8]Imports c.i.f.; exports f.o.b. [9]Excludes trade passing through Colón Free Zone (2006 imports c.i.f. U.S.$6,818,000,000; 2006 reexports f.o.b. U.S.$7,666,000,000, of which textiles and clothing 25.0%, machinery and apparatus 23.7%). [10]Data for 76 km Panama Canal Railway, which reopened in 2001, and National Railway of Chiriquí. [11]Data for Panama Canal Railway. [12]January 1. [13]COPA only. [14]Circulation of daily newspapers. [15]Subscribers. [16]2002. [17]Military abolished 1990; 12,000-member paramilitary includes air and maritime units.

Internet resource for further information:
- **Dirección de Estadística y Censo http://www.contraloria.gob.pa/dec**

Papua New Guinea



Official name: Independent State of Papua New Guinea.
Form of government: constitutional monarchy with one legislative house (National Parliament [109]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Port Moresby.
Official language: English[1].
Official religion: none.
Monetary unit: kina (K); valuation (Sept. 8, 2008) 1 U.S.$ = K 2.56; 1 £ = K 4.52.

Area and population

Regions/ Provinces	area sq km	population 2000 census	Regions/ Provinces	area sq km	population 2000 census
Highlands	62,400	1,973,996	East Sepik	42,800	343,181
Eastern Highlands	11,200	432,972	Madang	29,000	365,106
Enga	12,800	295,031	Morobe	34,500	539,404
Simbu (Chimbu)	6,100	259,703	Sandaun (West Sepik)	36,300	185,741
Southern Highlands	23,800	546,265	Papua (Southern Coastal)	200,340	1,041,820
Western Highlands	8,500	440,025	Central	29,500	183,983
Islands	57,500	741,538	Gulf	34,500	106,898
Bougainville (autonomous region)[2]	9,300	175,160	Milne Bay	14,000	210,412
East New Britain	15,500	220,133	National Capital District	240	254,158
Manus	2,100	43,387	Oro (Northern)	22,800	133,065
New Ireland	9,600	118,350	Western	99,300	153,304
West New Britain	21,000	184,508	TOTAL	462,840	5,190,786[3]
Momase (Northern Coastal)	142,600	1,433,432			

Demography

Population (2008): 6,474,000.
Density (2008): persons per sq mi 36.2, persons per sq km 14.0.
Urban-rural (2005): urban 13.4%; rural 86.6%.
Sex distribution (2005): male 50.79%; female 49.21%.
Age breakdown (2005): under 15, 40.6%; 15–29, 27.3%; 30–44, 18.9%; 45–59, 9.3%; 60–74, 3.3%; 75–84, 0.5%; 85 and over, 0.1%.
Population projection: (2010) 6,762,000; (2020) 8,309,000.
Doubling time: 32 years.
Ethnic composition (1983)[4]: New Guinea Papuan 84.0%; New Guinea Melanesian 15.0%; other 1.0%.
Religious affiliation (2005): Protestant/independent Christian 44%; Roman Catholic 22%; traditional beliefs 34%[5].
Major cities (2004): Port Moresby 337,900; Lae 109,800; Madang 36,000; Wewak 28,600; Arawa (on Bougainville) 20,800; Goroka 17,900.

Vital statistics

Birth rate per 1,000 population (2005): 31.8 (world avg. 20.3).
Death rate per 1,000 population (2005): 9.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 22.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 4.05.
Life expectancy at birth (2005): male 54.3 years; female 60.2 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases *c.* 249, of which tuberculosis *c.* 54; cardiovascular diseases *c.* 153, of which ischemic heart disease *c.* 71; perinatal conditions *c.* 85; respiratory infections *c.* 65; accidents *c.* 53.

National economy

Budget (2007). Revenue: K 7,167,000,000 (tax revenue 79.4%, of which taxes on minerals and petroleum 33.6%, indirect taxes 18.2%, personal income taxes 13.9%; grants 14.1%; nontax revenue 6.5%). Expenditures: K 6,845,000,000 (current expenditure 52.2%, of which transfer to provincial governments 10.9%, interest payments 5.4%; development expenditure 47.8%).
Public debt (external, outstanding; June 2008): U.S.$1,101,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): oil palm fruit 1,400,000, bananas 870,000, coconuts 677,000, sweet potatoes 520,000, game meat (2005) 330,000, yams 290,000, taro 260,000, green corn (maize) 235,000, coffee 75,400, cacao 50,300, tea 9,000, natural rubber 4,700; livestock (number of live animals) 1,800,000 pigs; roundwood (2006) 7,241,000 cu m, of which fuelwood 76%; fisheries production (2006) 274,680 (from aquaculture, negligible). Mining and quarrying (2007): copper (metal content) 169,184; gold 65,000 kg; silver 51,300 kg. Manufacturing (value of exports in U.S.$'000; 2005): forest products 153,000; palm oil 126,100; coconut oil 30,200; copra 5,600; refined petroleum, n.a. Energy production (consumption): electricity (kW-hr; 2005) 3,500,000,000 (3,500,000,000); coal (metric tons; 2004) none (1,000); crude petroleum (barrels; 2005) 15,837,000 (3,124,000); natural gas (cu m; 2005) 128,135,000 (128,135,000); petroleum products (metric tons; 2005) 420,000 (1,386,000).
Population economically active (2000): total 2,413,357; activity rate 46.5% (participation rates: ages 15–64, 73.2%; female 47.9%; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	109.3	122.2	140.2	143.2	145.6	149.8	150.6

Gross national income (GNI; 2007): U.S.$5,400,000,000 (U.S.$850 per capita); purchasing power parity GNI (U.S.$2,060 per capita).

Structure of gross domestic product and labour force

	2007 in value K '000,000	2007 % of total value	2000 labour force	2000 % of labour force
Agriculture, fishing	6,343	34.2	1,696,271	70.3
Mining and quarrying	4,928	26.6	9,282	0.4
Manufacturing	1,071	5.8	25,557	1.1
Construction	1,720	9.3	48,312	2.0
Public utilities	320	1.7	2,208	0.1
Transp. and commun.	396	2.1	24,513	1.0
Trade, hotels	1,136	6.1	357,581	14.8
Finance, real estate	543	2.9	31,129	1.3
Pub. admin., defense }	1,630	8.8	32,043	1.3
Services }			86,391	3.6
Other	465[6]	2.5[6]	100,070	4.1
TOTAL	18,551[7]	100.0	2,413,357	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 3.6; remittances (2007) 13; foreign direct investment (FDI; 2004–06 avg.) 31; official development assistance (2006) 279. Disbursements for (U.S.$'000,000): tourism (2005) 56; remittances (2007) 135; FDI (2004–06 avg.) 2.
Land use as % of total land area (2003): in temporary crops 0.5%, in permanent crops 1.4%, in pasture 0.4%; overall forest area (2005) 65.0%.

Foreign trade[8]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
K '000,000	+2,190	+3,611	+3,530	+5,435	+6,668	+6,350
% of total	20.7%	29.9%	27.4%	36.6%	35.5%	29.8%

Imports (2003): K 4,628,000,000 (nonelectrical machinery 18.5%; food products 14.8%, of which cereals 7.3%; refined petroleum 12.9%; transport equipment 8.8%; chemicals and chemical products 8.4%; fabricated metals 6.3%). *Major import sources* (2007): Australia 41.9%; U.S. 19.6%; Singapore 15.1%; Japan 4.3%; China 3.0%.
Exports (2007): K 13,847,000,000 (copper 30.1%; gold 26.5%; crude petroleum 21.5%; palm oil 4.9%; logs 4.1%; refined petroleum 3.6%; coffee 2.9%; cocoa 1.9%). *Major export destinations* (2007): Australia 40.4%; Japan 16.9%; Germany 8.3%; Philippines 7.7%; China 3.4%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 19,600 km (paved 4%). Vehicles (2002): passenger cars 24,900; trucks and buses 87,800. Air transport: passenger-km (2006)[9] 748,000,000; metric ton-km cargo 22,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	130	22	PCs	2005	391	64
Telephones				Dailies	2004	51[10]	8.6[10]
Cellular	2007	300[11]	47[11]	Internet users	2006	110	18
Landline	2007	60	9.5	Broadband	2006	—	—

Education and health

Educational attainment (1990). Percentage of population age 25 and over having: no formal schooling 82.6%; some primary education 8.2%; completed primary 5.0%; some secondary 4.2%. *Literacy* (2003): total population age 15 and over literate 57.3%; males literate 63.4%; females literate 50.9%.

Education (2002–03)

	schools	teachers	students	student/ teacher ratio
Primary (age 7–12)	3,055[12]	18,630	660,425	35.4
Secondary (age 13–16)	161[12]	7,058	168,052	23.8
Voc., teacher tr.	13[12]	1,111	16,599	14.9
Higher[13]	5	1,037	7,853	7.6

Health (2005): physicians 750 (1 per 7,849 persons); hospital beds (2000) 14,516 (1 per 371 persons); infant mortality rate 63.0; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 3,100 (army 80.6%, maritime element [coastal patrol] 12.9%, air force 6.5%). *Military expenditure as percentage of GDP* (2005): 0.6%; per capita expenditure U.S.$5.

[1]The national languages are English, Tok Pisin (English Creole), and Motu. [2]Bougainville formally attained autonomy within Papua New Guinea (PNG) on June 15, 2005. A referendum on possible future independence is to be held in 10 to 15 years. [3]Unadjusted total; census total adjusted for undercount equals *c.* 5,398,000. [4]PNG has about 1,200 ethnic communities, more than half of which number less than 1,000 people. New Guinea Papuans are predominantly descendants of original arrivals; New Guinea Melanesians are more racially mixed with other Pacific peoples. [5]According to the 2000 census PNG is 96% Christian. In actuality, many citizens combine Christian faith with some traditional indigenous practices. [6]Import duties less imputed bank service charges and less subsidies. [7]Detail does not add to total given because of rounding. [8]Imports f.o.b. in balance of trade and trading partners and c.i.f. in commodities. [9]Air Niugini only. [10]Circulation of daily newspapers. [11]Subscribers. [12]2001–02. [13]Universities only; 2005.

Internet resources for further information:
- **Bank of Papua New Guinea http://www.bankpng.gov.pg**
- **National Statistical Office of Papua New Guinea http://www.nso.gov.pg**

Paraguay

Official name: República del Paraguay (Spanish); Tetã Paraguáype (Guaraní) (Republic of Paraguay).
Form of government: multiparty republic with two legislative houses (Chamber of Senators [45[1]]; Chamber of Deputies [80]).
Head of state and government: President.
Capital: Asunción.
Official languages: Spanish; Guaraní.
Official religion: none[2].
Monetary unit: guaraní (plural guaraníes; Ø); valuation (Sept. 8, 2008) 1 U.S.$ = Ø3,980; 1 £ = Ø7,031.

Area and population

Departments	area sq km	population 2006 estimate	Departments	area sq km	population 2006 estimate
Alto Paraguay	82,349	11,634	Itapúa	16,525	510,891
Alto Paraná	14,895	686,789	Misiones	9,556	112,541
Amambay	12,933	123,367	Ñeembucú	12,147	82,517
Boquerón	91,669	51,398	Paraguarí	8,705	237,471
Caaguazú	11,474	472,085	Presidente Hayes	72,907	96,313
Caazapá	9,496	149,777	San Pedro	20,002	348,702
Canindeyú	14,667	167,621			
Central	2,465	1,791,765	**Capital district**		
Concepción	18,051	189,892	Asunción	117	519,361
Cordillera	4,948	263,587	TOTAL	406,752	6,009,143[3]
Guairá	3,846	193,430			

Demography

Population (2008): 6,238,000.
Density (2008): persons per sq mi 39.7, persons per sq km 15.3.
Urban-rural (2006): urban 57.1%; rural 42.9%.
Sex distribution (2006): male 50.57%; female 49.43%.
Age breakdown (2006): under 15, 35.4%; 15–29, 28.8%; 30–44, 17.4%; 45–59, 11.4%; 60–74, 5.2%; 75 and over, 1.8%.
Population projection: (2010) 6,460,000; (2020) 7,533,000.
Doubling time: 35 years.
Ethnic composition (2000): mixed (white/Amerindian) 85.6%; white 9.3%, of which German 4.4%, Latin American 3.4%; Amerindian 1.8%; other 3.3%.
Religious affiliation (2002): Roman Catholic 89.6%; Protestant (including all Evangelicals) 6.2%; other Christian 1.1%; nonreligious/atheist 1.1%; traditional beliefs 0.6%; other/unknown 1.4%.
Major urban areas (2002)[4]: Asunción (2006) 519,361 (urban agglomeration [2007] 1,870,000); Ciudad del Este 222,274; San Lorenzo 204,356[5]; Luque 170,986[5]; Capiatá 154,274[5].

Vital statistics

Birth rate per 1,000 population (2005): 25.8 (world avg. 20.3).
Death rate per 1,000 population (2005): 5.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 20.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 3.30.
Marriage/divorce rates per 1,000 population (2005): 3.4/n.a.
Life expectancy at birth (2005): male 69.2 years; female 73.4 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 90.8; malignant neoplasms (cancers) 50.0; accidents 44.2; diseases of the respiratory system 26.5; infectious and parasitic diseases 17.6.

National economy

Budget (2006–07): Revenue: Ø10,174,723,000,000 (tax revenue 65.2%, of which VAT 28.5%, income tax 10.9%, taxes on international trade 8.5%; nontax revenue including grants 34.8%). Expenditures: Ø9,682,282,000,000 (current expenditure 77.3%, of which wages and salaries 42.9%; capital expenditure 22.7%).
Public debt (external, outstanding; December 2007): U.S.$2,197,000,000.
Population economically active (2006): total 2,735,646; activity rate 46.0% (participation rates: ages 15–64 [2002], 61.4%; female 38.5%; unemployed 11.1%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	107.3	118.5	135.4	141.3	150.9	165.4	178.8
Earnings index[7]	111.2	122.1	143.3	144.5	157.5	176.5	185.9

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 5,100,000, soybeans 3,900,000, sugarcane 3,400,000, corn (maize) 1,003,000, wheat 675,000, cow's milk 375,000, cattle meat 220,000, oranges 190,000, seed cotton 185,000, oil palm fruit 130,000, rapeseed 100,000, pig meat 99,000, maté 87,500, dry beans 78,000, sesame seed 53,000; livestock (number of live animals; 2007) 10,000,000 cattle, 1,600,000 pigs, 17,000,000 chickens; roundwood (2006) 10,193,000 cu m, of which fuelwood 60%; fisheries production (2006) 22,100 (from aquaculture 10%). Mining and quarrying (2006): dimension stone 70,000; kaolin 66,000. Manufacturing (value added in U.S.$'000,000; 2002): food products 253; chemicals and chemical products 77; beverages 67; tobacco products 40; plastic products 36; printing and publishing 31; textiles and wearing apparel 24; leather and hides 19. Energy production (consumption): electricity (kW-hr; 2005) 51,156,000,000[8] (7,375,000,000); coal, none (none); crude petroleum (barrels; 2005) none (249,000); petroleum products (metric tons; 2005) 33,000 (1,157,000); natural gas, none (none).
Gross national income (GNI; 2007): U.S.$10,225,000,000 (U.S.$1,670 per capita); purchasing power parity GNI (U.S.$4,380 per capita).

Structure of gross domestic product and labour force

	2006 in value G'000,000,000	2006 % of total value	2005 labour force	2005 % of labour force
Agriculture, forestry, fishing	10,560.0	20.2	847,161	32.4
Mining	65.7	0.1	5,711	0.2
Manufacturing	7,141.2	13.7	248,035	9.5
Construction	2,457.5	4.7	140,872	5.4
Public utilities	1,024 7	2.0	17,263	0.6
Transp. and commun.	3,959.2	7.6	95,622	3.6
Trade, hotels	11,423.3	21.8	583,346	22.3
Finance, real estate	1,999.9	3.8	98,969	3.8
Pub. admin., defense	4,827.2	9 2	580,729	22.2
Services	4,125.3	7.9		
Other	4,686.1[9]	9.0[9]	—	—
TOTAL	52,270.1	100.0	2,617,708	100.0

Household income and expenditure. Average household size (2007) 4.3.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 91; remittances (2007) 450; foreign direct investment (FDI; 2004–06 avg.) 89; official development assistance (2006) 56. Disbursements for (U.S.$'000,000): tourism (2006) 91; remittances (2007) n.a.; FDI (2004–06 avg.) 9.
Land use as % of total land area (2003): in temporary crops 7.2%, in permanent crops 0.2%, in pasture 54.6%; overall forest area (2005) 46.5%.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–560	–624	–1,031	–1,564	–3,348	–3,502
% of total	22.8%	20.1%	24.1%	31 7%	46.8%	38.6%

Imports (2006): U.S.$5,254,271,000 (machinery and apparatus 35.9%; mineral fuels 13.2%; transport equipment 11.5%; chemicals and chemical products 6.3%; food, beverages, and tobacco products 6.1%). *Major import sources* China 27.0%; Brazil 20.0%; Argentina 13.6%; Japan 8.3%; U.S. 6.4%.
Exports (2006): U.S.$1,906,367,000[10] (soybeans 23.0%; meat 22.3%; cereals 11.4%; flour 7.5%; vegetable oils 6.2%; wood 5.2%). *Major export destinations:* Uruguay 22.0%; Brazil 17.2%; Russia 11.9%; Argentina 8.8%; Chile 6.9%.

Transport and communications

Transport. Railroads (2006): operational route length 36 km; passenger-km, n.a.; metric ton-km cargo, n.a. Roads (1999): total length 29,500 km (paved 51%). Vehicles (2005): passenger cars 360,070; trucks 81,207. Air transport (2005)[11]: passenger-km 501,000,000; metric ton-km cargo, none.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,300	224	PCs	2005	460	78
Telephones				Dailies	2004	145[12]	25[12]
Cellular	2007	4,330[13]	707[13]	Internet users	2007	280	46
Landline	2007	454	74	Broadband	2007	49[13]	8 0[13]

Education and health

Educational attainment (2003). Percentage of population age 15 and over having: no formal schooling 4.1%; incomplete primary education 30.2%; complete primary 30.8%; secondary 26.9%; higher 8.0%. *Literacy* (2005): percentage of total population age 15 and over literate 94.9%; males 95.9%; females 93.9%.

Education (2005)

	schools	teachers	students	student/ teacher ratio
Primary (age 7–12)	8,156	33,434	930,918	27.8
Secondary (age 13–18)[14]	2,816	44,440	526,001	11 8
Higher	111[15]	1,135[15]	149,120	...

Health (2005): physicians 5,517 (1 per 873 persons); hospital beds 5,843 (1 per 1,010 persons); infant mortality rate per 1,000 live births 33.8; undernourished population (2002–04) 900,000 (15% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2007): 10,650 (army 71.4%, navy 18.3%, air force 10.3%). *Military expenditure as percentage of GDP* (2005): 0.7%; per capita expenditure U.S.$9.

[1]Excludes 2 former presidents serving as senators-for-life in December 2008. [2]Roman Catholicism, although not official, enjoys special recognition in the constitution. [3]Detail does not add to total given because of a statistical discrepancy. [4]Unadjusted final census figures. [5]Within Asunción urban agglomeration. [6]Civil registry records only. [7]Minimum wage. [8]Paraguay is the world's second largest net exporter of electricity. [9]Taxes on products. [10]Electricity exports are excluded; contracted value of electricity sold (2006): to Brazil U.S.$210,000,000; to Argentina, n.a. [11]Transportes Aéreos del Mercosur only. [12]Circulation of daily newspapers. [13]Subscribers. [14]Includes vocational and teacher training. [15]1999.

Internet resources for further information:
- **Banco Central del Paraguay http://www.bcp.gov.py**
- **Dirección General Estadística, Encuestas y Censos http://www.dgeec.gov.py**

Peru

Official name: República del Perú (Spanish) (Republic of Peru).
Form of government: unitary multiparty republic with one legislative house (Congress [120]).
Head of state and government: President, assisted by Prime Minister.
Capital: Lima.
Official languages: Spanish; Quechua (locally); Aymara (locally).
Official religion: Roman Catholicism.
Monetary unit: nuevo sol (S/.); valuation (Sept. 8, 2008) 1 U.S.$ = S/. 2.97; 1 £ = S/. 5.25.

Area and population

Departments	area sq km	population 2007 census	Departments	area sq km	population 2007 census
Amazonas	39,249	375,993	Lambayeque	14,213	1,112,868
Ancash	35,915	1,063,459	Lima	34,802	8,445,211
Apurímac	20,896	404,190	Loreto	368,852	891,732
Arequipa	63,345	1,152,303	Madre de Dios	85,301	109,555
Ayacucho	43,815	612,489	Moquegua	15,734	161,533
Cajamarca	33,318	1,387,809	Pasco	25,320	280,449
Callao	147	876,877	Piura	35,892	1,676,315
Cusco	71,986	1,171,403	Puno	71,999[1]	1,268,441
Huancavelica	22,131	454,797	San Martín	51,253	728,808
Huánuco	36,849	762,223	Tacna	16,076	288,781
Ica	21,328	711,932	Tumbes	4,669	200,306
Junín	44,197	1,232,611	Ucayali	102,411	432,159
La Libertad	25,500	1,617,050	TOTAL	1,285,198[1]	27,419,294[2]

Demography

Population (2008): 28,534,000.
Density (2008): persons per sq mi 57.5, persons per sq km 22.2.
Urban-rural (2007): urban 75.9%; rural 24.1%.
Sex distribution (2007)[3]: male 49.70%; female 50.30%.
Age breakdown (2005)[3]: under 15, 31.1%; 15–29, 28.0%; 30–44, 20.0%; 45–59, 12.1%; 60–74, 6.3%; 75–84, 1.9%; 85 and over, 0.6%.
Population projection: (2010) 29,244,000; (2020) 32,493,000.
Doubling time: 50 years.
Ethnic composition (2000): Quechua 47.0%; mestizo 31.9%; white 12.0%; Aymara 5.4%; Japanese 0.5%; other 3.2%.
Religious affiliation (2005): Roman Catholic *c.* 85%, of which practicing weekly *c.* 15%; Protestant *c.* 7%; independent Christian *c.* 4%; other *c.* 4%.
Major cities (2007): metropolitan Lima 8,472,935; Arequipa 749,291; Trujillo 682,834; Chiclayo 524,442; Piura 377,496.

Vital statistics

Birth rate per 1,000 population (2007): 20.2 (world avg. 20.3).
Death rate per 1,000 population (2007): 6.2 (world avg. 8.6).
Marriage/divorce rates per 1,000 population (2004): 1.0/0.1.
Total fertility rate (avg. births per childbearing woman; 2007): 2.46.
Life expectancy at birth (2007): male 68.3 years; female 72.0 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 113; malignant neoplasms (cancers) 112; accidents, poisoning, and violence 60; diseases of the respiratory system 27; diabetes mellitus 14.

National economy

Budget (2005). Revenue: S/. 41,432,000,000 (tax revenue 85.8%, of which VAT 44.6%, corporate taxes 14.8%; nontax revenue 14.2%). Expenditures: S/. 43,534,000,000 (current expenditure 77.1%, of which transfers 30.1%; debt service 11.7%; capital expenditure 11.2%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007)[4]: sugarcane 8,246,406, potatoes 3,388,147, rice 2,455,809, plantains 1,837,384, corn (maize) 1,361,656, asparagus 283,473, quinoa 34,000; livestock (number of live animals) 15,000,000 sheep, 5,300,000 cattle, (2005) 4,500,000 llamas and alpacas; roundwood (2006) 9,258,000 cu m, of which fuelwood 81%; fisheries production (2006) 7,045,884 (from aquaculture, negligible). Mining and quarrying (2006): iron ore 4,785,000[5]; zinc 1,201,786[5]; copper 1,049,933[5]; lead 313,322[5]; molybdenum 17,209[5]; silver 3,471[5]; gold 202,834 kg. Manufacturing (value in S/. '000,000; 2005): food and food products 11,854; textiles and wearing apparel 5,310; chemicals and chemical products 4,212; base metals 4,007; cement, bricks, and ceramics 2,859; refined petroleum products 2,431; printing and publishing 1,652. Energy production (consumption): electricity (kWhr; 2005) 25,660,000,000 (25,660,000,000); coal (metric tons; 2005) 43,000 (1,075,000); crude petroleum (barrels; 2005) 28,828,000 (59,710,000); petroleum products (metric tons; 2005) 9,010,000 (6,598,000); natural gas (cu m; 2005) 1,965,000,000 (1,965,000,000).
Household income and expenditure. Average household size (2005) 4.3[3]; income per household (1988) U.S.$2,173; sources of income (1991): self-employment 67.1%, wages 23.3%, transfers 7.6%; expenditure (1990): food 29.4%, recreation and education 13.2%, household durables 10.1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,381; remittances (2007) 2,100; foreign direct investment (FDI; 2004–06 avg.) 2,548; official development assistance (2006) 468. Disbursements for (U.S.$'000,000): tourism (2006) 760; remittances (2007) 133; FDI (2004–06 avg.) 220.
Population economically active (2002)[6]: total 12,892,000; activity rate of total population 48.2% (participation rates: ages 15–64, 72.6%; female 42.0%; urban unemployed [2005] 9.6%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.0	102.2	104.5	108.3	110.1	112.3	114.3
Monthly earnings index[7]	99.1	103.3	104.6	106.1	105.6		...

Gross national income (GNI; 2007): U.S.$96,241,000,000 (U.S.$3,450 per capita); purchasing power parity GNI (U.S.$7,240 per capita).

Structure of gross domestic product and labour force

	2005		2001	
	in value S/ '000	% of total value	labour force[8]	% of labour force[8]
Agriculture, forestry, fishing	17,149,037	6.6	667,800	8.1
Mining and quarrying	24,653,231	9.4	45,900	0.6
Manufacturing	38,867,607	14.9	956,400	11.6
Construction	13,713,538	5.2	341,300	4.1
Public utilities	5,636,922	2.1	20,400	0.2
Transp. and commun.	19,953,484	7.6	641,000	7.7
Trade, hotels	42,136,769	16.1	2,718,300	32.9
Finance, real estate	41,875,326	16.0	390,500	4.7
Pub. admin., defense	19,249,091	7.4	298,100	3.6
Services	15,096,515	5.8	1,540,200	18.6
Other	23,300,964[9]	8.9[9]	651,500[10]	7.9[10]
TOTAL	261,632,484	100.0	8,271,400	100.0

Public debt (external, outstanding; 2006): U.S.$21,825,000,000.
Land use as % of total land area (2003): in temporary crops 2.9%, in permanent crops 0.5%, in pasture 13.2%; overall forest area (2005) 53.7%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+274	+846	+2,805	+4,503	+8,852	+8,099
% of total	1.8%	4.9%	12.5%	15.7%	22.9%	17.1%

Imports (2006): U.S.$15,312,000,000 (machinery and apparatus 24.5%, chemicals and chemical products 15.2%, crude petroleum 14.3%, food 8.2%, base and fabricated metals 8.2%). *Major import sources:* U.S. 16.4%; Brazil 10.4%; China 10.3%; Ecuador 7.1%; Colombia 6.2%.
Exports (2006): U.S.$23,765,000,000 (ores/concentrates 26.7%, of which copper 12.1%, zinc 7.4%, molybdenum 3.6%; gold 16.8%; food 13.8%, of which fish meal 5.0%; refined copper 12.9%; petroleum 7.9%; apparel/clothing accessories 5.1%). *Major export destinations:* U.S. 24.0%; China 9.5%; Switzerland 7.1%; Canada 6.8%; Chile 6.0%.

Transport and communications

Transport. Railroads (2005): length 3,462 km; (2002) passenger-km 98,000,000; (2002) metric ton-km cargo 1,008,000,000. Roads (2004): total length 78,829 km (paved 14%). Vehicles (2004): passenger cars 824,613; trucks and buses 462,803. Air transport (2007): passenger-km 4,440,000,000; metric ton-km cargo 117,072,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	4,592	172	PCs	2005	2,800	103
Telephones				Dailies	2005	946[12]	35[12]
Cellular	2007	15,417[13]	553[13]	Internet users	2007	7,636	274
Landline	2007	2,673	96	Broadband	2007	570[13]	20[13]

Education and health

Educational attainment (2005)[3]. Percentage of population age 15 and over having: no formal schooling 11.8%; less than complete primary education 24.3%; complete primary 11.5%; incomplete secondary 15.3%; complete secondary 19.0%; higher 18.1%. *Literacy* (2005): total population age 15 and over literate 91.6%; males 95.6%; females 87.7%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	33,734[14]	185,829	4,133,386	22.2
Secondary (age 12–16)	9,168[14]	143,942	2,383,129	16.6
Voc., teacher tr.	...	16,894	278,751	16.5
Higher	2,161[15]	56,070[14]	896,501	...

Health (2004): physicians 41,266 (1 per 651 persons); hospital beds (2005) 42,159 (1 per 647 persons); infant mortality rate (2007) 30.5; undernourished population (2002–04) 3,300,000 (12% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

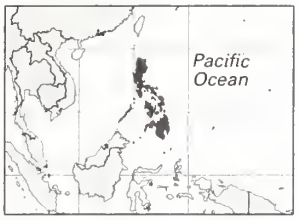
Military

Total active duty personnel (November 2007): 114,000 (army 64.9%, navy 20.2%, air force 14.9%). *Military expenditure as percentage of GDP* (2005): 1.4%; per capita expenditure U.S.$39.

[1]Includes the 4,996 sq km area of the Peruvian part of Lake Titicaca. [2]Unadjusted figure; adjusted census total equals 28,220,764. [3]Based on preliminary census total. [4]In 2007 Peru ranked second in the world in coca production with 116,800 metric tons produced. [5]Metal content. [6]Official estimate. [7]Private sector only, Lima metropolitan area. [8]Excludes rural areas. [9]Import duties and other taxes on products. [10]Unemployed. [11]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [12]Circulation of daily newspapers. [13]Subscribers. [14]2002. [15]2000.

Internet resources for further information:
- **Instituto Nacional de Estadística e Informática (Spanish) http://www.inei.gob.pe**
- **Banco Central de Reserva del Peru http://www.bcrp.gob.pe**

Philippines



Official name: Republika ng Pilipinas (Filipino); Republic of the Philippines.
Form of government: unitary republic with two legislative houses (Senate [24]; House of Representatives [240]).
Chief of state and head of government: President.
Capital: Manila[1].
Official languages: Filipino; English.
Official religion: none.
Monetary unit: piso[2] (₱); valuation (Sept. 8, 2008) 1 U.S.$ = ₱ 46.83; 1 £ = ₱ 82.73.

Area and population

Regions	area sq km	population 2007 census	Regions	area sq km	population 2007 census
Bicol	18,035	5,109,798	MIMAROPA	29,199	2,559,791
Cagayan Valley	30,149	3,051,487	National Capital	633	11,553,427
CALABARZON	16,052	11,743,110	Northern Mindanao	15,617	3,952,437
Caraga	19,324	2,293,480	SOCCSKSARGEN	15,890	3,829,081
Central Luzon	19,579	9,720,982	Western Visayas	20,158	6,843,643
Central Visayas	15,582	6,398,628	Zamboanga Peninsula	18,154	3,230,094
Cordillera Administrative	16,745	1,520,743	**Autonomous region**		
Davao	27,172	4,156,653	Muslim Mindanao	19,196	4,120,795
Eastern Visayas	21,988	3,912,936	TOTAL	316,294[3,4]	88,574,614[5]
Ilocos	12,821	4,545,906			

Demography

Population (2008): 90,227,000.
Density (2008)[6]: persons per sq mi 779.0, persons per sq km 300.8.
Urban-rural (2007): urban 64.0%; rural 36.0%.
Sex distribution (2005): male 50.35%; female 49.65%.
Age breakdown (2005): under 15, 35.1%; 15–29, 28.8%; 30–44, 19.0%; 45–59, 11.0%; 60–74, 5.0%; 75–84, 1.0%; 85 and over, 0.1%.
Population projection: (2010) 93,599,000; (2020) 109,447,000.
Ethnic composition (2000): Tagalog 20.9%; Visayan (Cebu) 19.0%; Ilocano 11.1%; Hiligaynon (Visaya) 9.4%; Waray-Waray (Binisaya) 4.7%; Central Bikol (Naga) 4.6%; Filipino mestizo 3.5%; Pampango 3.1%; other 23.7%.
Religious affiliation (2005): Roman Catholic 64.9%; independent Christian 17.7%[7]; Muslim 5.1%; Protestant 5.0%; traditional beliefs 2.2%; other 5.1%.
Major cities (2007): Quezon City 2,679,450[8]; Manila 1,660,714 (National Capital Region 11,553,427); Caloocan 1,378,856[8]; Davao 1,363,337; Cebu City 798,809; Zamboanga 774,407; Pasig 617,301[8]; Taguig 613,343[8].

Vital statistics

Birth rate per 1,000 population (2005): 24.1 (world avg. 20.3).
Death rate per 1,000 population (2005): 5.6 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2005): 3.41.
Life expectancy at birth (2005): male 67.0 years; female 72.9 years.
Marriage/divorce rates per 1,000 population (2003): 7.3/[9].
Major causes of death per 100,000 population (2004): circulatory diseases 148.4; respiratory diseases 61.8; malignant neoplasms (cancers) 49.0; accidents and violence 41.3; tuberculosis 31.3.

National economy

Budget (2005)[10]. Revenue: ₱ 757,945,000,000 (income taxes 47.1%, taxes on international trade 19.6%, general sales tax 16.1%, nontax revenues 11.8%). Expenditures: ₱ 899,990,000,000 (debt service 33.5%, local government allotments 16.8%, education/culture 15.1%, transportation and communications 6.1%, public order 6.0%, defense 4.9%, agriculture 2.9%, health 1.4%).
Public debt (external, outstanding; September 2007): U.S.$37,082,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 25,300,000, rice 16,000,000, coconuts 15,580,000, bananas 7,000,000, corn (maize) 6,730,000, vegetables 5,747,000, pineapples 1,900,000, pig meat 1,501,000; livestock (number of live animals) 13,250,000 pigs, 3,365,000 buffalo, 136,000,000 chickens; roundwood (2006) 15,748,000 cu m, of which fuelwood 81%; fisheries production (2006) 2,942,000 (from aquaculture 21%); aquatic plants production 1,469,000 (from aquaculture 100%). Mining and quarrying (2005): chromite 36,070; nickel 22,560[11]; copper 16,320[11]; gold 37,490 kg. Manufacturing (value added in U.S.$'000,000; 2003): petroleum products 1,980; electronic products 1,696; food products 1,338; paints/soaps/pharmaceuticals 983; beverages 813; motor vehicles 559. Energy production (consumption): electricity (kW-hr; 2005) 56,549,000,000 (56,549,000,000); hard coal (metric tons; 2005) 178,000 (3,566,000); lignite (metric tons; 2005) 2,986,000 (6,254,000); crude petroleum (barrels; 2005) 211,000 (79,500,000); petroleum products (metric tons; 2005) 9,909,000 (13,573,000); natural gas (cu m; 2005) 3,269,000,000 (3,269,000,000).
Household income and expenditure (2000). Average household size (2004) 5.0; income per family (2006) ₱ 173,000 (U.S.$3,371); sources of income (2000): wages 52.1%, self-employment 25.1%, receipts from abroad 11.1%; expenditure (2005): food and nonalcoholic beverages 46.5%, household furnishings 12.1%, transportation and communications 9.9%, energy 4.9%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 3,501; remittances (2007) 17,217; foreign direct investment (FDI; 2004–06 avg.) 1,629. Disbursements for (U.S.$'000,000): tourism (2006) 1,232; remittances (2007) 20; FDI (2004–06 avg.) 290.
Gross national income (GNI; 2007): U.S.$142,623,000,000 (U.S.$1,620 per capita); purchasing power parity GNI (U.S.$3,730 per capita).

Structure of gross domestic product and labour force

	2006 in value ₱ '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	855,452	14.2	11,841,000	32.7
Mining	75,557	1.3	134,000	0.4
Manufacturing	1,381,171	22.9	3,070,000	8.5
Construction	235,189	3.9	1,691,000	4.7
Public utilities	216,062	3.6	114,000	0.3
Transp. and commun.	446,224	7.4	2,470,000	6.8
Trade, hotels, restaurants	877,544	14.5	7,270,000	20.1
Finance, real estate	662,629	11.0	1,153,000	3.2
Pub. admin., defense	452,642	7.5	1,552,000	4.3
Services	830,152	13.8	3,962,000	11.0
Others	—	—	2,908,000[12]	8.0[12]
TOTAL	6,032,624[13]	100.0[13]	36,165,000	100.0

Population economically active (2007): total 36,434,000; activity rate *c.* 41% (participation rates: ages 15 and over, 63.6%; female [2006] 39.4%; unemployed [April 2007–March 2008] 7.2%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	106.8	110.0	113.8	120.6	129.8	137.9	141.8

Land use as % of total land area (2003): in temporary crops 19.1%, in permanent crops 16.8%, in pasture 5.0%; overall forest area (2005) 24.0%.

Foreign trade[14]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S $'000,000	–5,884	–6,345	–6,422	–8,232	–6,668	–7,270
% of total	7.7%	8.1%	7.5%	9.1%	6.6%	6.7%

Imports (2006): U.S.$54,078,000,000 (electronic components 33.6%, petroleum 14.1%, chemical products 7.4%, parts for office machines/computers 6.6%, food 5.9%). *Major import sources:* U.S. 16.2%; Japan 14.2%; Singapore 8.4%; Taiwan 7.9%; China 7.2%; South Korea 6.2%.
Exports (2006): U.S.$47,410,000,000 (microcircuits/transistors 35.8%, computers/office machines/parts 17.2%, apparel and clothing accessories 5.5%, food 3.8%). *Major export destinations:* U.S. 18.3%; Japan 16.7%; The Netherlands 10.1%; China 9.8%; Hong Kong 7.8%; Singapore 7.4%.

Transport and communications

Transport. Railroads (2004): route length 897 km; passenger-km 83,400,000; metric ton-km cargo (2000) 660,000,000. Roads (2003): total length 200,037 km (paved 10%). Vehicles (2006): passenger cars 767,000; trucks and buses 240,000. Air transport (2006)[15]: passenger-km 13,513,000,000; metric ton-km cargo 257,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	14,770	182	PCs	2005	4,521	54
Telephones				Dailies	2003	5,902[16]	73[16]
Cellular	2007	51,795[17]	586[17]	Internet users	2007	5,300	60
Landline	2006	3,633	43	Broadband	2007	968[17]	11[17]

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling 3.8%; primary education 38.5%; incomplete secondary 12.5%; complete secondary 17.2%; technical 5.9%; incomplete undergraduate 11.8%; complete undergraduate 7.3%; graduate 0.7%; unknown 2.3%. *Literacy* (2003): total population age 15 and over literate 92.6%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	37,159	340,231	12,062,000	35.5
Secondary (age 13–16)	5,026	123,074	5,026,000	40.8
Higher[18]	1,626	109,979	2,427,211	22.1

Health: physicians (2005) 98,210 (1 per 865 persons); hospital beds (2006) 106,316 (1 per 815 persons); infant mortality rate (2007) 21.9; undernourished population (2002–04) 14,600,000 (18% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2007): 106,000 (army 62.3%, navy 22.6%, air force 15.1%). *Military expenditure as percentage of GDP* (2005): 0.9%; per capita expenditure U.S.$10.

[1]Other government offices and ministries are located in Quezon City and other Manila suburbs. [2]Piso in Filipino; peso in English and Spanish. [3]Sum of regional areas, including coastal water; actual reported total area is 300,000 sq km. [4]Land area excluding inland water is 298,170 sq km. [5]Reported total; summed total of 88,542,991 excludes 29,344 persons residing in a disputed area between the National Capital Region and CALABARZON and 2,279 Filipinos residing in embassies abroad. [6]Based on actual reported total area. [7]Includes indigenous Catholics and Protestants. [8]Within the National Capital Region. [9]Divorce was illegal in mid-2008. [10]General budget. [11]Metal content. [12]Unemployed. [13]Detail does not add to total given because of rounding. [14]Imports c.i.f.; exports f.o.b. [15]Philippines Airlines only. [16]Circulation of daily newspapers. [17]Subscribers. [18]2002–03.

Internet resources for further information:
- **National Statistics Office http://www.census.gov.ph**
- **Bangko Sentral ng Pilipinas http://www.bsp.gov.ph**

Poland

Official name: Rzeczpospolita Polska (Republic of Poland).
Form of government: unitary multiparty republic with two legislative houses (Senate [100]; Sejm [460]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Warsaw.
Official language: Polish.
Official religion: none[1].
Monetary unit: zloty (zł); valuation (Sept. 8, 2008) 1 U.S.$ = zł 2.43; 1 £ = zł 4.28.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2008[2] estimate
Dolnośląskie	Wrocław	7,702	19,947	2,876,800
Kujawsko-Pomorskie	Bydgoszcz/Toruń	6,939	17,972	2,066,400
Łódzkie	Łódź	7,034	18,219	2,551,600
Lubelskie	Lublin	9,700	25,122	2,163,400
Lubuskie	Gorzów Wielkopolski/ Zielona Góra	5,401	13,988	1,008,700
Małopolskie	Kraków	5,862	15,183	3,282,400
Mazowieckie	Warsaw (Warszawa)	13,729	35,558	5,195,000
Opolskie	Opole	3,634	9,412	1,034,700
Podkarpackie	Rzeszów	6,890	17,845	2,097,300
Podlaskie	Białystok	7,794	20,187	1,191,900
Pomorskie	Gdańsk	7,070	18,310	2,215,100
Śląskie	Katowice	4,762	12,334	4,649,000
Świętokrzyskie	Kielce	4,521	11,710	1,273,600
Warmińsko-Mazurskie	Olsztyn	9,333	24,173	1,426,400
Wielkopolskie	Poznań	11,516	29,827	3,391,300
Zachodniopomorskie	Szczecin	8,839	22,892	1,692,400
TOTAL		120,726	312,679	38,115,900[3]

Demography

Population (2008): 38,111,000.
Density (2008): persons per sq mi 315.7, persons per sq km 121.9.
Urban-rural (2008[2]): urban 61.1%; rural 38.9%.
Sex distribution (2008[2]): male 48.32%; female 51.68%.
Age breakdown (2008[2]): under 16, 17.0%; 16–29, 22.6%; 30–44, 20.3%; 45–59, 22.3%; 60–74, 11.9%; 75–84, 4.9%; 85 and over, 1.0%.
Population projection: (2010) 38,111,000; (2020) 38,111,000.
Ethnic composition (2000): Polish 90.0%; Ukrainian 4.0%; German 4.0%; Belarusian 0.5%; Kashubian 0.4%; other 1.1%.
Religious affiliation (end of 2006): Roman Catholic 88.8%; other Catholic 0.3%; Polish Orthodox 1.3%; Protestant 0.4%; Jehovah's Witness 0.3%; other (mostly nonreligious) 8.9%.
Major cities (2008[4]): Warsaw 1,706,624; Kraków 756,583; Łódź 753,192; Wrocław 632,930; Poznań 560,932; Gdańsk 455,717; Szczecin 407,785.

Vital statistics

Birth rate per 1,000 population (2007): 10.2 (world avg. 20.3); (2006) within marriage 81.1%; outside of marriage 18.9%.
Death rate per 1,000 population (2007): 9.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 0.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.31.
Marriage/divorce rates per 1,000 population (2007): 5.9/1.7.
Life expectancy at birth (2007): male 71.0 years; female 79.7 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 442.0; malignant neoplasms (cancers) 240.3; accidents, poisoning, and violence 66.1; diseases of the respiratory system 48.4.

National economy

Budget (2007). Revenue: zł 236,367,500,000 (VAT 40.8%; excise tax 20.7%; income tax 15.0%; corporate taxes 10.4%). Expenditures: zł 252,323,900,000 (social security and welfare 21.5%; transfers 14.6%; public debt 10.9%; wages and salaries 10.7%).
Gross national income (GNI; 2007): U.S.$374,633,000,000 (U.S.$9,840 per capita); purchasing power parity GNI (U.S.$15,330 per capita).

Structure of gross domestic product and labour force

	2006 in value zł '000,000	2006 % of total value	2007 labour force	2007 % of labour force
Agriculture, forestry, fishing	39,930	3.8	2,247,000	13.3
Mining	22,485	2.1	248,000	1.5
Manufacturing	174,906	16.5	3,162,000	18.8
Public utilities	32,512	3.1	218,000	1.3
Construction	59,777	5.6	1,054,000	6.2
Transp. and commun.	68,481	6.5	973,000	5.8
Trade, restaurants, hotels	186,816	17.6	2,555,000	15.1
Finance, real estate	170,577	16.1	1,316,000	7.8
Pub. admin., defense	55,292	5.2	937,000	5.6
Services	120,403	11.4	2,526,000	15.0
Other	128,852[5]	12.1[5]	1,624,000[6]	9.6[6]
TOTAL	1,060,031	100.0	16,860,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 11,221,100, sugar beets 11,057,800, wheat 8,378,600, triticale 4,201,600, barley 4,065,800, rye 3,194,100, rapeseed 2,112,600, apples 1,039,100, carrots and turnips 902,100, sour cherries 195,000, currants 139,900; livestock (number of live animals) 18,128,510 pigs, 5,696,200 cattle, 1,450,000 beehives; roundwood (2006) 32,384,000 cu m, of which fuelwood 11%; fisheries production (2006) 180,265 (from aquaculture 20%). Mining and quarrying (2006): sulfur (2007–08) 860,200; copper ore (metal content of concentrate) 570,000; silver (recoverable metal content) 1,300. Manufacturing (value of sales in zł '000,000; 2007): food products 153,080; transport equipment 93,977; fabricated metal products 61,857; chemical products 50,328; mineral fuels 46,357. Energy production (consumption): electricity ('000,000 kW-hr; 2007–08) 158,162 ([2006] 135,333); hard coal ('000 metric tons; 2007–08) 84,998 ([2006] 86,130); lignite ('000 metric tons; 2007–08) 58,189 ([2006] 60,801); crude petroleum (barrels; 2007) 5,311,000 ([2006] 148,730,900); petroleum products (metric tons; 2007–08) 27,680,000 ([2006] 21,354,000); natural gas (cu m; 2007–08) 5,506,000,000 ([2006] 16,521,000,000).
Public debt (external, outstanding; 2008[4]): U.S.$49,742,000,000.
Population economically active (2007): total 16,860,000; activity rate of total population 44.2% (participation rates: ages 15–64, 63.2%; female 45.2%; unemployed [October 2007–September 2008] 10.3%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.5	107.5	108.3	112.2	114.6	115.9	118.6
Monthly earnings index	108.0	110.8	115.4	120.1	124.7	130.8	142.0

Household income and expenditure (2007). Average household size 3.0; average disposable annual income zł 10,734 (U.S.$3,878); sources of income: wages 50.3%, transfers 30.5%, self-employment 8.9%; expenditure: food, beverages, and tobacco 29.3%, housing and energy 18.4%, transportation 9.3%, recreation 7.6%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 7,239; remittances (2007) 10,671; foreign direct investment (FDI; 2004–06 avg.) 12,138. Disbursements for (U.S.$'000,000): tourism (2006) 5,760; remittances (2007) 1,279; FDI (2004–06 avg.) 2,694.
Land use as % of total land area (2003): in temporary crops 41.1%, in permanent crops 1.0%, in pasture 10.7%; overall forest area (2005) 30.0%.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
zł '000,000	–57,478	–56,189	–53,494	–39,411	–50,251	–70,273
% of total	14.7%	11.9%	8.9%	6.4%	6.8%	8.3%

Imports (2007): zł 456,828,439,700 (chemical products 13.0%; electrical equipment 12.9%; base and fabricated metals 12.3%; machinery and apparatus 11.7%; transportation equipment 11.0%; mineral fuels 9.9%). *Major import sources:* Germany 24.1%; Russia 8.7%; China 7.1%; Italy 6.9%; France 5.1%.
Exports (2007): zł 386,555,639,200 (transportation equipment 16.4%; electrical equipment 13.6%; base and fabricated metals 12.7%; machinery and apparatus 10.9%; food products 8.1%; chemical products 7.3%; furniture 5.6%). *Major export destinations:* Germany 25.9%; Italy 6.6%; France 6.1%; U.K. 5.9%; Czech Republic 5.5%.

Transport and communications

Transport. Railroads (2007): length (2008[4]) 20,107 km; passenger-km 19,859,000,000; metric ton-km cargo 54,253,000,000. Roads (2008[4])[8]: total length 383,100 km (paved 68%). Vehicles (2008[4]): passenger cars 14,588,700; trucks and buses 2,608,100. Air transport (2007): passenger-km 11,291,000,000; metric ton-km cargo 98,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2008[4]	7,563[9]	198[9]	PCs	2004	7,362	191
Telephones				Dailies	2007	4,122[10]	108[10]
Cellular	2008[4]	41,510[9]	1,089[9]	Internet users	2007	16,000	420
Landline	2008[4]	10,243	269	Broadband	2006	2,911[9]	76[9]

Education and health

Educational attainment (2007[4]). Percentage of population age 13 and over having: no formal schooling/incomplete primary education 2.5%; complete primary 20.9%; lower secondary/vocational 28.2%; upper secondary and post-secondary 33.1%; university 15.3%. *Literacy* (2003): 99.8%.

Education (2007–08)

	schools	teachers	students	student/ teacher ratio
Primary (age 7–12)	14,330	183,900	2,375,200	12.9
Secondary (age 13–18)	10,797	174,000	2,279,000	13.1
Voc., teacher tr.	4,696	63,400	806,100	12.7
Higher	455	97,600	1,937,400	19.9

Health (2007): physicians 77,479[4] (1 per 492 persons); hospital beds 234,691[4] (1 per 163 persons); infant mortality rate per 1,000 live births 5.9; undernourished population (2002–04) less than 2.5% of total population.

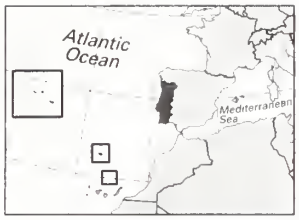
Military

Total active duty personnel (November 2007): 127,266 (army 62.1%, navy 9.1%, air force 22.4%, centrally controlled staff 6.4%). *Military expenditure as percentage of GDP* (2005): 1.9%; per capita expenditure U.S.$154.

[1]Roman Catholicism has special recognition per 1997 concordat with Vatican City. [2]July 1. [3]Detail does not add to total given because of rounding. [4]January 1. [5]Taxes less subsidies. [6]Includes 1,619,000 unemployed. [7]Imports c.i.f.; exports f.o.b. [8]Public roads only. [9]Subscribers. [10]Circulation of 25 top daily newspapers only.

Internet resource for further information:
- **Central Statistical Office**
  http://www.stat.gov.pl/gus/index_ENG_HTML.htm

Portugal



Official name: República Portuguesa (Portuguese Republic).
Form of government: republic with one legislative house (Assembly of the Republic [230]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Lisbon.
Official language: Portuguese.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

		area		population
		sq mi	sq km	2007[2] estimate
Continental Portugal[1]				
Regions	**Principal cities**			10,110,271
Alentejo	Évora	12,182	31,552	764,285
Algarve	Faro	1,929	4,996	421,528
Centre (Centro)	Coimbra	10,887	28,198	2,385,891
Lisbon and Tagus Valley (Lisboa e Vale do Tejo)	Lisbon	1,133	2,935	2,794,226
North (Norte)	Porto	8,219	21,286	3,744,341
Insular Portugal				
Autonomous regions				488,824
Azores (Açores)	Ponta Delgado	897	2,322	243,018
Madeira	Funchal	309	801	245,806
TOTAL		35,556	92,090	10,599,095

Demography

Population (2008): 10,649,000.
Density (2008): persons per sq mi 299.5, persons per sq km 115.6.
Urban-rural (2005): urban 57.6%; rural 42.4%.
Sex distribution (2005): male 48.40%; female 51.60%.
Age breakdown (2005): under 15, 15.7%; 15–29, 20.4%; 30–44, 22.6%; 45–59, 19.2%; 60–74, 14.8%; 75–84, 5.9%; 85 and over, 1.4%.
Population projection: (2010) 10,713,000; (2020) 10,778,000.
Ethnic composition (2000): Portuguese 91.9%; mixed race people from Angola, Mozambique, and Cape Verde 1.6%; Brazilian 1.4%; Marrano 1.2%; other European 1.2%; Han Chinese 0.9%; other 1.8%.
Religious affiliation (2000): Christian 92.4%, of which Roman Catholic 87.4%, independent Christian 2.7%, Protestant 1.3%, other Christian 1.0%; nonreligious/atheist 6.5%; Buddhist 0.6%; other 0.5%.
Major cities (2001): Lisbon 564,657 (urban agglom. [2005] 2,761,000); Porto 263,131 (urban agglom. [2005] 1,309,000); Braga 164,192; Coimbra 148,443; Funchal 103,961.

Vital statistics

Birth rate per 1,000 population (2007): 9.7 (world avg. 20.3); within marriage 66.4%; outside of marriage 33.6%.
Death rate per 1,000 population (2007): 9.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): –0.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.30.
Marriage/divorce rates per 1,000 population (2007): 4.4/2.4.
Life expectancy at birth (2007): male 75.2 years; female 81.6 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 348.1; malignant neoplasms (cancers) 215.4; diseases of the respiratory system 107.1; diseases of the digestive system 44.0.

National economy

Budget (2004). Revenue: €59,636,000,000 (social contributions 30.9%, indirect taxes 28.4%, direct taxes 21.0%). Expenditures: €63,511,000,000 (current expenditure 90.0%, development expenditure 10.0%).
Public debt (2007): U.S.$158,000,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): grapes 1,050,000, tomatoes 1,000,000, corn (maize) 646,500, potatoes 638,900, olives 375,000, oranges 200,500, apples 198,200, cork (2008) 165,000; livestock (number of live animals) 3,549,000 sheep, 2,295,450 pigs, 1,407,270 cattle, 37,000,000 chickens; roundwood (2006) 10,804,638 cu m, of which fuelwood 5%; fisheries production (2006) 235,853 (from aquaculture 3%). Mining and quarrying (2006): marble (2005) 752,000; kaolin (2005) 164,072; copper (metal content) 78,660; tungsten (metal content) 780. Manufacturing (value added in U.S.$'000,000; 2003): food products 2,148; cement, tiles, and ceramics 1,611; fabricated metals 1,536; wearing apparel 1,527; printing and publishing 1,225; textiles 1,131. Energy production (consumption): electricity (kW-hr; 2005) 46,575,000,000 (53,399,000,000); coal (metric tons; 2005) none (5,476,000); crude petroleum (barrels; 2005) none (96,324,000); petroleum products (metric tons; 2005) 11,682,000 (12,600,000); natural gas (cu m; 2005) none (4,471,000,000).
Population economically active (2006): total 5,587,300; activity rate of total population 52.5% (participation rates: ages 15–64, 73.9%; female 46.6%; unemployed 7.7%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.4	108.1	111.6	114.3	116.9	120.1	123.5

Gross national income (GNI; 2007): U.S.$201,079,000,000 (U.S.$18,950 per capita); purchasing power parity GNI (U.S.$20,890 per capita).

Structure of gross domestic product and labour force

	2006			
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	3,716	2.4	603,900	10.8
Mining	21,083	13.6	17,600	0.3
Manufacturing			980,500	17.5
Construction	8,488	5.5	553,000	9.9
Public utilities	3,779	2.4	26,100	0.5
Trade, hotels	23,854	15.4	1,031,200	18.5
Finance, real estate	19,731	12.7	384,600	6.9
Transp. and commun	8,762	5.6	239,600	4.3
Services	44,655	28.7	968,700	17.3
Pub. admin., defense			351,400	6.3
Other	21,221[3]	13.7[3]	430,700[4]	7.7[4]
TOTAL	155,289	100.0	5,587,300	100.0

Household income and expenditure. Average household size (2004) 3.0; average annual household income (2001) €15,512 (U.S.$13,881); sources of income (1995): wages and salaries 44.4%, self-employment 23.4%, transfers 22.2%; expenditure (2003): food and nonalcoholic beverages 18.7%, transportation 16.3%, housing and energy 10.7%, restaurants and hotels 10.0%, clothing and footwear 7.1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 8,388; remittances (2007) 3,750; foreign direct investment (FDI; 2004–06 avg.) 4,554. Disbursements for (U.S.$'000,000): tourism (2006) 3,298; remittances (2007) 1,386; FDI (2004–06 avg.) 4,477.
Land use as % of total land area (2003): in temporary crops 17.6%, in permanent crops 8.4%, in pasture 15.6%; overall forest area (2005) 41.3%.

Foreign trade[5]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	–13,566	–9,044	–13,011	–17,066	–18,601	–18,971
% of total	20.0%	14.3%	19.7%	24.8%	21.2%	20.6%

Imports (2006): €53,162,000,000 (machinery and apparatus 18.7%; chemicals and chemical products 10.9%; road vehicles 10.3%; crude petroleum 9.5%; food 9.3%). *Major import sources:* Spain 28.9%; Germany 13.1%; France 8.1%; Italy 5.6%; The Netherlands 4.4%.
Exports (2006): €34,561,000,000 (machinery, equipment, electronics 18.6%; road vehicles/parts 12.5%; base and fabricated metals 7.4%; apparel/clothing accessories 6.8%; chemicals and chemical products 6.5%; food 4.5%; textile yarn, fabrics, made-up articles 3.9%; footwear 3.5%). *Major export destinations:* Spain 26.5%; Germany 12.8%; France 12.0%; U.K. 6.6%; U.S. 6.1%.

Transport and communications

Transport. Railroads (2004): length 2,836 km; passenger-km 3,217,000,000; metric ton-km cargo 2,588,000,000. Roads (2004): total length 78,470 km (paved 86%). Vehicles (2003): passenger cars 4,918,310; trucks and buses 372,179. Air transport (2007): passenger-km 20,592,000,000; metric ton-km cargo 321,396,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	4,312	413	PCs	2005	1,406	133
Telephones				Dailies	2004	680[6]	85[6]
Cellular	2007	13,413[7]	1,263[7]	Internet users	2007	3,549	334
Landline	2007	4,139	390	Broadband	2007	1,608[7]	151[7]

Education and health

Educational attainment (2002). Percentage of population age 25–64 having: no formal schooling through complete primary 67%; complete lower secondary 13%; complete upper secondary 11%; higher 9%. *Literacy* (2002): total population age 15 and over literate 92.5%; males literate 95.2%; females literate 90.3%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)[8]	8,823	65,761	707,279	10.8
Secondary (age 12–17)[8, 9]	2,113	79,455	661,922	8.3
Higher	333	36,802[10]	367,934	...

Health: physicians (2007) 37,904 (1 per 280 persons); hospital beds (2006) 36,563 (1 per 290 persons); infant mortality rate per 1,000 live births (2007) 3.4; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 42,910 (army 62.2%, navy 21.2%, air force 16.6%); U.S. troops (November 2007) 865[11]. *Military expenditure as percentage of GDP* (2005): 2.3%; per capita expenditure U.S.$398.

[1]For statistical classification only; the actual first order administration of continental Portugal is based on 18 districts. [2]January 1. [3]Taxes less statistical discrepancy. [4]Includes 2,900 inadequately defined and 427,800 unemployed. [5]Imports c.i.f.; exports f.o.b. [6]Circulation of daily newspapers. [7]Subscribers. [8]Continental Portugal only. [9]Includes 3rd cycle of basic education. [10]End of 2004. [11]Mostly air force personnel stationed at Lajes, Azores.

Internet resources for further information:
- **Instituto Nacional de Estatística http://www.ine.pt**
- **Banco de Portugal http://www.bportugal.pt/default_e.htm**

Puerto Rico

Official name: Estado Libre Asociado de Puerto Rico (Spanish); Commonwealth of Puerto Rico.
Political status: self governing commonwealth in association with the United States, having two legislative houses (Senate [27[1]]; House of Representatives [51[1]]).
Chief of state: President of the United States.
Head of government: Governor.
Capital: San Juan.
Official languages: Spanish; English.
Monetary unit: U.S. dollar (U.S.$); valuation (Sept. 8, 2008) 1 £ = U.S.$1.77.

Population (2006 estimate)

Municipalities	population	Municipalities	population	Municipalities	population
Adjuntas	18,583	Fajardo	41,986	Naguabo	24,209
Aguada	45,165	Florida	15,203	Naranjito	29,918
Aguadilla	66,926	Guánica	22,735	Orocovis	24,654
Aguas Buenas	31,053	Guayama	45,205	Patillas	20,026
Aibonito	27,146	Guayanilla	23,653	Peñuelas	29,045
Añasco	29,888	Guaynabo	102,525	Ponce	181,267
Arecibo	102,216	Gurabo	42,142	Quebradillas	27,612
Arroyo	19,038	Hatillo	42,483	Rincón	16,155
Barceloneta	23,028	Hormigueros	17,414	Río Grande	55,894
Barranquitas	30,254	Humacao	60,569	Sabana Grande	27,404
Bayamón	221,546	Isabela	47,301	Salinas	31,985
Cabo Rojo	52,123	Jayuya	18,194	San Germán	37,485
Caguas	142,769	Juana Díaz	52,770	San Juan	426,618
Camuy	38,803	Juncos	40,129	San Lorenzo	43,921
Canóvanas	46,781	Lajas	27,583	San Sebastián	47,145
Carolina	187,578	Lares	37,164	Santa Isabel	22,763
Cataño	27,036	Las Marías	11,948	Toa Alta	77,599
Cayey	47,378	Las Piedras	38,631	Toa Baja	95,000
Ceiba	17,991	Loíza	33,634	Trujillo Alto	84,396
Ciales	20,581	Luquillo	20,452	Utuado	34,799
Cidra	47,294	Manatí	48,996	Vega Alta	39,372
Coamo	39,265	Maricao	6,300	Vega Baja	64,379
Comerío	19,460	Maunabo	12,679	Vieques (island)	9,205
Corozal	38,625	Mayagüez	94,478	Villalba	29,762
Culebra (island)	2,077	Moca	43,664	Yabucoa	40,332
Dorado	36,002	Morovis	32,379	Yauco	48,008
				TOTAL	3,927,776

Demography

Area: 3,515 sq mi, 9,104 sq km.
Population (2008): 3,958,000.
Density (2008): persons per sq mi 1,126, persons per sq km 434.8.
Urban-rural (2005): urban 97.6%; rural 2.4%.
Sex distribution (2007): male 48.00%; female 52.00%.
Age breakdown (2007): under 15, 20.9%; 15–29, 22.0%; 30–44, 20.3%; 45–59, 18.5%; 60–74, 12.6%; 75 and over, 5.7%.
Population projection: (2010) 3,986,000; (2020) 4,080,000.
Ethnic composition (2000): local white 72.1%; black 15.0%; mulatto 10.0%; U.S. white 2.2%; other 0.7%.
Religious affiliation (2000): Roman Catholic *c.* 74%; Protestant *c.* 13%; independent Christian *c.* 6%; Jehovah's Witness *c.* 2%; nonreligious/atheist *c.* 2%; Spiritist *c.* 1%; other *c.* 2%.
Major metropolitan areas (2006): San Juan 2,590,824; Aguadilla 333,408; Ponce 263,799; San Germán 144,595; Yauco 123,441; Mayagüez 111,892.

Vital statistics

Birth rate per 1,000 population (2007): 12.7 (world avg. 20.3).
Death rate per 1,000 population (2007): 7.8 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 1.76.
Marriage/divorce rates per 1,000 population: (2005) 6.0/(2006) 3.9[2].
Life expectancy at birth (2007): male 74.5 years; female 82.6 years.
Major causes of death per 100,000 population (2004): circulatory diseases 230.9; malignant neoplasms (cancers) 124.0; diabetes mellitus 66.0; Alzheimer's disease 31.1; accidents 28.1; pneumonia and influenza 26.4.

National economy

Budget. Revenue (2005–06): U.S.$14,155,000,000 (tax revenue 58.0%, of which income taxes 43.7%, excise taxes 14.2%; federal grants 32.9%; charges for services 5.9%). Expenditures (2005–06): U.S.$15,957,000,000 (education 25.7%; public housing/welfare 19.6%; general government services 15.6%; public safety 13.2%; health 9.0%; interest on debt 5.2%).
Public debt (December 2007): U.S.$42,818,000,000.
Production (in metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 350,000, plantains 80,000, bananas 53,500, chicken meat 50,000, oranges 19,500, tomatoes 18,800, pig meat 11,000, cattle meat 9,800, coffee 8,100; livestock (number of live animals) 380,000 cattle, 50,000 pigs, 13,000,000 chickens; roundwood, n.a.; fisheries production (2006) 2,308 (from aquaculture 12%). Mining (2005): crushed stone 7,830,000. Manufacturing (value added in U.S.$'000,000; 2004): chemical products (nearly all drugs and medicine) 20,276; nonelectrical machinery 3,271; professional and scientific equipment 3,211; electrical machinery 1,754; nonalcoholic beverages 1,594. Energy production (consumption): electricity (kW-hr; 2006) 24,900,000,000 ([2007–08] 19,602,000,000); coal, none (none); crude petroleum (barrels; 2005) none (70,800,000); petroleum products (metric tons; 2002) 3,001,000 (6,610,000); natural gas (cu m; 2005) none (694,000,000).
Gross national income (2007): U.S.$60,107,000,000 (U.S.$15,062 per capita).

Structure of gross domestic product and labour force

	2006			
	in value U.S.$'000,000	% of total value	labour force	% of labour force
Agriculture	333.0	0.4	22,000	1.5
Manufacturing	36,555.8	42.3	136,000	9.6
Mining	1,820.9	2.1	1,000	0.1
Construction			87,000	6.1
Public utilities	5,507.9	6.4	16,000	1.1
Transp. and commun.			43,000	3.0
Trade	10,716.5	12.4	271,000	19.1
Finance, real estate	14,733.1	17.0	47,000	3.3
Pub. admin., defense	8,424.2	9.7	278,000	19.6
Services	8,163.8	9.4	354,000	24.9
Other	208.8	0.2	165,000[3]	11.6[3]
TOTAL	86,464.0	100.0[4]	1,420,000	100.0[4]

Population economically active (2005): total 1,410,000[5]; activity rate 36.0%[5] (participation rates: ages 16–64, 56.1%[5]; female 43.7%[5]; unemployed [September 2007–August 2008] 11.0%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	107.1	113.7	122.5	137.2	156.2	179.0	191.2

Household income and expenditure (2002). Average family size 3.6; average annual income per family (2005) U.S.$41,258; sources of income: wages and salaries 49.7%, transfers 30.6%, rent 7.7%, self-employment 6.1%, other 5.9%; expenditure (2005): food and beverages 17.1%, health care 16.7%, housing 15.3%, transportation 13.4%, household furnishings 11.5%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 3,369; remittances, n.a.; foreign direct investment (2004–06 avg.) 26. Disbursements for (U.S.$'000,000): tourism (2006) 1,205; remittances, n.a.
Land use as % of total land area (2003): in temporary crops 7.8%, in permanent crops 4.7%, in pasture 12.6%; overall forest area (2005) 46.0%.

Foreign trade

Balance of trade (current prices)

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07
U.S.$'000,000	+18,188	+21,426	+16,183	+17,638	+17,489	+14,745
% of total	23.8%	24.1%	17.2%	18.5%	17.0%	14.0%

Imports (2006–07): U.S.$45,266,000,000 (imports for pharmaceutical industry 36.4%, petroleum and coal products 9.2%, base chemicals 9.2%, computers/electronics/electrical equipment [including parts] 8.8%, food 5.4%). *Major import sources* (2006): U.S. 55.0%; Ireland 23.7%; Japan 5.4%.
Exports (2006–07): U.S.$60,011,000,000 (pharmaceuticals and medicine 60.9%, computers/office machines/parts 6.7%, food 6.3%). *Major export destinations* (2006): U.S. 90.3%; U.K. 1.6%; The Netherlands 1.4%.

Transport and communications

Transport. Railroads (2004)[6]: length 59 mi, 96 km. Roads (2005): total length 15,990 mi, 25,735 km (paved 95%). Vehicles (2006): passenger cars 2,341,820; trucks and buses 104,344. Air transport (2006): passenger arrivals and departures 11,450,700; cargo loaded and unloaded 352,396 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	1,290	338	PCs	2005	33	8.3
Telephones				Dailies	2004	541[7]	139[7]
Cellular	2005	3,354[8]	848[8]	Internet users	2007	1,000	254
Landline	2005	1,038	262	Broadband	2006	118[8]	30[8]

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling to lower secondary education 25.4%; some upper secondary to some higher 56.3%; undergraduate or graduate degree 18.3%.
Literacy (2002): total population age 15 and over literate 94.1%.

Education (2005–06)[9]

	schools	teachers	students	student/teacher ratio
Primary (age 5–12)	1,523	42,036	563,490	13.4
Secondary (age 13–18)				
Higher[10]	171[11]	14,557[12]	67,990	..

Health: physicians (2001) 7,623 (1 per 504 persons); hospital beds (2002) 12,351 (1 per 312 persons); infant mortality rate (2007) 8.8; undernourished population, n.a.

Military

Total active duty U.S. personnel (March 2008): 137[13, 14].

[1]Number of members per constitution. [2]Data are probably for local population only. [3]Unemployed. [4]Detail does not add to total given because of rounding. [5]Excludes armed forces. [6]Privately owned railway for sugarcane transport only. [7]Circulation of daily newspapers. [8]Subscribers. [9]Public schools only. [10]Excludes vocational and adult education. [11]2006–07. [12]Full-time only. [13]The U.S. naval base at Ceiba was closed in March 2004. [14]Puerto Rican paramilitary forces (national guard; 2007): 11,000.

Internet resources for further information:
- **Junta de Planificación http://www.jp.gobierno.pr**
- **Government Development Bank for Puerto Rico http://www.gdb-pur.com/home.en.htm**

Qatar

Official name: Dawlat Qaṭar (State of Qatar).
Form of government: constitutional emirate with one advisory body (Advisory Council [35[1]]).
Head of state and government: Emir assisted by Prime Minister.
Capital: Doha.
Official language: Arabic.
Official religion: Islam.
Monetary unit: Qatari riyal (QR); valuation (Sept. 8, 2008) 1 U.S.$ = QR 3.64; 1 £ = QR 6.43.

Area and population

Municipalities	Capitals	area sq mi	area sq km	population 2006 estimate
Ad-Dawhah (Doha)	—	61	159	370,656
Al-Ghuwayriyah	Al-Ghuwayriyah	241	623	2,332
Jarayān al-Bāṭinah	Jarayān al-Bāṭinah	922	2,389	7,554
Al-Jumayliyah	Al-Jumayliyah	1,008	2,612	10,565
Al-Khawr	Al-Khawr	386	1,001	37,600
Ar-Rayyān	Ar-Rayyān	345	893	317,227
Ash-Shamāl	Madinat ash-Shamāl	348	902	5,253
Umm Sa'īd	Umm Sa'id	259	670	14,828
Umm Ṣalāl	Umm Ṣalāl Muhammad	181	470	37,334
Al-Wakrah	Al-Wakrah	431	1,116	34,716
TOTAL		4,184[2]	10,836[2]	838,065[3]

Demography

Population (2008): 1,448,000.
Density (2008): persons per sq mi 346.1, persons per sq km 133.6.
Urban-rural (2005): urban 95.4%; rural 4.6%.
Sex distribution (2007): male 75.60%; female 24.40%.
Age breakdown (2005): under 15, 21.8%; 15–29, 25.5%; 30–44, 33.7%; 45–59, 16.3%; 60–74, 2.4%; 75 and over, 0.3%.
Population projection: (2010) 1,712,000; (2020) 2,281,000.
Doubling time: 61 years.
Ethnic composition (2000): Arab 52.5%, of which Palestinian 13.4%, Qatari 13.3%, Lebanese 10.4%, Syrian 9.4%; Persian 16.5%; Indo-Pakistani 15.2%; black African 9.5%; other 6.3%.
Religious affiliation (2000): Muslim *c.* 83%, of which Sunnī *c.* 73%, Shī'ī *c.* 10%; Christian *c.* 10%, of which Roman Catholic *c.* 6%; Hindu *c.* 3%; Buddhist *c.* 2%; nonreligious *c.* 2%.
Major cities (2004): Ad-Dawḥah (Doha) 339,847; Ar-Rayyān 258,193; Al-Wakrah 26,993; Umm Ṣalāl Muḥammad 25,413; Al-Khawr 18,036.

Vital statistics

Birth rate per 1,000 population (2007): 12.8 (world avg. 20.3).
Death rate per 1,000 population (2007): 1.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 11.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.80.
Marriage/divorce rates per 1,000 population (2006): 2.6/0.8.
Life expectancy at birth (2005): male 74.4 years; female 75.8 years.
Major causes of death per 100,000 population (2004): accidents and violence 36.9; diseases of the circulatory system 33.8; malignant neoplasms (cancers) 18.1; endocrine, metabolic, and nutritional disorders 12.2; diseases of the respiratory system 11.4; ill-defined conditions 34.8.

National economy

Budget (2005–06). Revenue: QR 64,984,000,000 (oil and natural gas revenue 67.1%, investment income 21.9%, other 11.0%). Expenditures: QR 50,833,000,000 (current expenditure 64.4%; capital expenditure 35.6%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): dates 21,000, tomatoes 5,400, barley 5,000, cantaloupes and other melons 4,300, eggplants 3,200, dry onions 3,000; livestock (number of live animals) 160,000 goats, 120,000 sheep, 14,000 camels, 8,000 cattle, 4,500,000 chickens; roundwood, none; fisheries production (2006) 16,412 (from aquaculture, negligible). Mining and quarrying (2006): limestone 1,100,000; gypsum, sand and gravel, and clay are also produced. Manufacturing (value added in QR '000,000; 2005): refined petroleum products 4,502; chemicals and chemical products 2,168; base metals 1,959; bricks, cement, and ceramics 892; fabricated metals 469; wearing apparel 442. Energy production (consumption): electricity (kW-hr; 2005) 14,396,000,000 (14,396,000,000); coal, none (none); crude petroleum (barrels; 2006) 272,600,000 ([2005] 40,121,000); petroleum products (metric tons; 2005) 7,046,000 (2,564,000); natural gas (cu m; 2005) 45,764,000,000 (16,074,000,000).
Household income and expenditure. Average household size (2004) 7.4; income per household: n.a.; sources of income, n.a.; expenditure (2001): housing 17.8%, food and beverages 16.3%, transportation 15.8%, household furnishings 8.6%, clothing and footwear 7.1%, education 5.5%, communications 5.5%.
Population economically active (2004): total 444,133; activity rate of total population 59.7% (participation rates: ages 15 and over, 77.1%; female 15.1%; unemployed 1.5%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.5	101.7	104.0	111.1	120.9	135.2	153.8

Gross national income (2007): U.S.$61,194,000,000 (U.S.$72,795 per capita).

Structure of gross domestic product and labour force

	2006 in value QR '000,000	2006 % of total value	2004 labour force	2004 % of labour force
Agriculture, fishing	233	0.1	12,025	2.7
Oil, natural gas sector, other mining	118,707	61.9	17,997	4.1
Manufacturing	14,098[4]	7.3[4]	40,039	9.0
Construction	10,291	5.4	117,049	26.4
Public utilities	2,424	1.3	4,364	1.0
Transp. and commun	5,612	2.9	15,218	3.4
Trade, hotels	7,616	4.0	64,718	14.6
Finance, real estate	15,760	8.2	16,625	3.7
Pub. admin., defense	17,928	9.3	53,438	12.0
Services	4,495	2.3	94,917	21.4
Other	–5,255[5]	–2.7[5]	7,743[6]	1.7[6]
TOTAL	191,909	100.0	444,133[7]	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 374; remittances, n.a.; foreign direct investment (FDI; 2004–06 avg.) 1,379. Disbursements for (U.S.$'000,000): tourism (2006) 3,993; remittances (2006–07) *c.* 5,000; FDI (2004–06 avg.) 308.
Land use as % of total land area (2003): in temporary crops 1.6%, in permanent crops 0.3%, in pasture 4.5%; overall forest area (2005) negligible.

Foreign trade[8]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+6,948	+4,179	+8,485	+12,681	+15,702	+17,611
% of total	48.0%	34.0%	46.4%	51.4%	43.8%	34.9%

Imports (2006): U.S.$16,440,000,000 (nonelectrical machinery and equipment 23.5%; iron and steel 13.7%; electrical machinery and apparatus [including parts] 8.6%; road vehicles 6.8%; chemicals and chemical products 5.1%; fabricated metals 4.9%). *Major import sources:* Japan 12.0%; U.S. 9.9%; Germany 9.3%; Italy 9.3%; U.A.E. 6.0%; China 5.8%.
Exports (2006): U.S.$34,051,000,000 (crude petroleum 46.9%; liquefied natural gas 34.8%; refined petroleum 4.6%; liquefied propane and butane 3.4%; polyethylene 3.3%; urea 2.0%). *Major export destinations:* Japan 41.5%; South Korea 13.9%; Singapore 9.5%; India 4.9%; U.A.E. 4.3%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 764 mi, 1,230 km (paved 90%). Vehicles (2004): passenger cars 265,609; trucks and buses 114,115. Air transport (2007)[9]: passenger-km 32,329,000,000; metric ton-km cargo 1,328,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	315	412	PCs	2005	145	182
Telephones				Dailies	2005	143[10]	180[10]
Cellular	2007	1,264[11]	1,504[11]	Internet users	2007	351	418
Landline	2007	237	282	Broadband	2007	70[11]	83[11]

Education and health

Educational attainment (2004). Percentage of population age 10 and over having: no formal education 34.8%, of which illiterate 10.2%; primary 13.0%; preparatory (lower secondary) 16.2%; secondary 20.0%; postsecondary 15.9%; other 0.1%. *Literacy* (2004): total population age 15 and over literate 89.0%; males literate 89.1%; females literate 88.6%.

Education (2005)[12]

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	99	3,738	33,127	8.9
Secondary (age 12–17)	93	3,449	34,465	10.0
Higher[13]	1	664	11,034	16.6

Health (2007): physicians 1,775[14] (1 per 691 persons); hospital beds 1,651[14] (1 per 743 persons); infant mortality rate per 1,000 live births 7.5; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 11,800 (army 72.0%, navy 15.3%, air force 12.7%); U.S. troops (November 2007) 512. *Military expenditure as percentage of GDP* (2005): 6.2%; per capita expenditure U.S.$2,751.

[1]All seats are appointed by the emir. [2]Detail does not add to total given because of rounding. [3]Official population estimate for 2006 was later revised to 1,041,733. [4]Excludes oil- and natural gas–related manufacturing. [5]Less imputed bank service charges. [6]Including 6,572 unemployed. [7]Of which Qatari, 50,282. [8]Imports c.i.f.; exports f.o.b. [9]Qatar Airways. [10]Circulation of daily newspapers. [11]Subscribers. [12]Public schools only; number of students in private schools (2003–04) 55,608, of which foreign schools 37,631. [13]University of Qatar. [14]Public sector only.

Internet resources for further information:
- **Qatar Statistics Authority http://www.qsa.gov.qa/eng/index.htm**
- **Qatar Central Bank http://www.qcb.gov.qa**

Réunion

Official name: Département de la Réunion (Department of Réunion).
Political status: overseas department (France) with two legislative houses (General Council [49]; Regional Council [45]).
Chief of state: President of France.
Heads of government: Prefect (for France); President of General Council (for Réunion); President of Regional Council (for Réunion).
Capital: Saint-Denis.
Official language: French.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Arrondissements	Capitals	area sq mi	area sq km	population 2003 estimate
Saint-Benoit	Saint-Benoit	285	737	109,071
Saint-Denis	Saint-Denis	163	421	249,696
Saint-Paul	Saint-Paul	180	467	148,813
Saint-Pierre	Saint-Pierre	341	883	244,723
TOTAL		968[1,2]	2,507[1,2]	752,303

Demography

Population (2008): 807,000.
Density (2008): persons per sq mi 833.7, persons per sq km 321.9.
Urban-rural (2005): urban 92.4%; rural 7.6%.
Sex distribution (2005[3]): male 49.13%; female 50.87%.
Age breakdown (2005): under 15, 27.3%; 15–29, 23.7%; 30–44, 24.1%; 45–59, 15.1%; 60–74, 7.3%; 75–84, 2.0%; 85 and over, 0.5%.
Population projection: (2010) 825,000; (2020) 914,000.
Doubling time: 52 years.
Ethnic composition (2000): mixed race (black-white-South Asian) 42.6%; local white 25.6%; South Asian 23.0%, of which Tamil 20.0%; Chinese 3.4%; East African 3.4%; Malagasy 1.4%; other 0.6%.
Religious affiliation (2000): Christian 87.8%, of which Roman Catholic 81.8%, Pentecostal 4.2%; Hindu 4.5%; Muslim 4.2%; nonreligious 1.7%; other 1.8%.
Major cities (2004): Saint-Denis 133,600[4] (agglomeration [2003] 178,000); Saint-Paul 92,500[4]; Saint-Pierre 74,000[4] (agglomeration 140,600); Le Tampon 66,600[4, 5]; Saint-Louis (1999) 43,519[4].

Vital statistics

Birth rate per 1,000 population (2006): 18.3 (world avg. 20.3); within marriage 32.0%; outside of marriage 68.0%.
Death rate per 1,000 population (2005): 5.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 13.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.42.
Marriage/divorce rates per 1,000 population: (2005) 3.9/(2004) 2.0.
Life expectancy at birth (2005): male 72.3 years; female 80.1 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 164.5; malignant neoplasms (cancers) 111.7; accidents, suicide, and violence 54.5; diseases of the respiratory system 41.1.

National economy

Budget (2003). Revenue: €750,000,000 (receipts from the French central government and local administrative bodies 50.0%; indirect taxes 20.0%; direct taxes 9.2%; loans 7.3%; subsidies 6.7%). Expenditures: €729,000,000 (current expenditures 68.6%, development expenditures 31.4%).
Public debt (external, outstanding): n.a.
Gross domestic product (2006): U.S.$15,958,000,000 (U.S.$20,238 per capita).

Structure of gross domestic product and labour force

	2003 in value €'000,000	2003 % of total value	2005[3, 6] labour force	2005[3, 6] % of labour force
Agriculture, fishing	429	4.5	7,562	3.7
Manufacturing, mining	371	3.9	7,365	3.6
Public utilities	107	1.1	1,550	0.7
Construction	627	6.5	11,835	5.8
Transp. and commun.	604	6.3	9,169	4.5
Trade, restaurants	1,113	11.6	29,976	14.6
Finance, real estate, business services	[7]	[7]	18,562	9.0
Pub. admin., defense	1,243	12.9	40,984	19.9
Services	5,448[7]	56.8[7]	55,474	27.0
Other	−345[8]	−3.6[8]	23,013[9]	11.2[9]
TOTAL	9,596[1]	100.0	205,490	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 1,880,000, corn (maize) 14,000, pineapples 10,000, bananas 9,000, tomatoes 7,000, cauliflower 5,500, potatoes 5,300, green onions 5,000, mangoes 4,500, tangerines 3,800, carrots and turnips 3,800, eggplants 3,200, pimento (allspice) (2005) 800, strawberries 750, garlic 600, tea 370, ginger 80, vanilla 25, geranium essence (2005) 1.9; livestock (number of live animals) 82,000 pigs, 37,000 goats, 33,000 cattle; roundwood (2006) 36,100 cu m, of which fuelwood 86%; fisheries production (2006) 3,748 (from aquaculture 4%). Mining and quarrying: gravel and sand for local use. Manufacturing (value added in F '000,000[10]; 1997): food and beverages 1,019, of which meat and milk products 268; construction materials (mostly cement) 394; fabricated metals 258; printing and publishing 192. Energy production (consumption): electricity (kW-hr; 2005) 1,620,000,000 (1,620,000,000); petroleum products (metric tons; 2005) none (680,000).
Population economically active (2006): total 321,700; activity rate of total population 40.8% (participation rates: ages 15–64, 60.9%; female [2005] 43.4%; unemployed [April–June 2007] 24.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.3	105.1	106.3	108.1	110.4	113.2	114.8
Monthly earnings index[11, 12]	101.0	102.4	103.1	...	...	...	.

Household income and expenditure. Average household size (2005) 3.0; average annual income per capita of household (2003) €11,446 (U.S.$14,456); sources of income (1997): wages and salaries and self-employment 41.8%, transfer payments 41.3%, other 16.9%; expenditure (2001): housing and energy 24.0%, transportation and communications 20.0%, food and beverages 17.0%, recreation and culture 10.0%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 308; remittances, n.a.; foreign direct investment (FDI) n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.; FDI, n.a.
Land use as % of total land area (2003): in temporary crops *c.* 14%, in permanent crops *c.* 2%, in pasture *c.* 5%; overall forest area (2005) *c.* 34%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	−2,711	−3,000	−3,050	−3,427	−3,674	−3,704
% of total	86.0%	86.3%	85.9%	86.7%	88.5%	87.4%

Imports (2006): €3,911,679,000 (machinery and equipment 18.4%; food and agricultural products 16.2%; transport equipment 13.2%; mineral fuels 12.1%; chemicals and chemical products 10.9%). *Major import sources:* France 42.2%; Singapore 8.6%; China 4.0%; Germany 3.8%; Italy 3.2%.
Exports (2006): €238,039,000 (food products 69.8%, of which sugar 41.0%; machinery and apparatus 9.3%; transportation equipment and parts 7.6%). *Major export destinations:* France 59.6%; Mayotte 8.0%; Japan 5.3%; Madagascar 5.2%; Mauritius 3.0%.

Transport and communications

Transport. Railroads: [13]. Roads (2001): total length 754 mi, 1,214 km (paved [1991] 79%). Vehicles (1999): passenger cars 190,300; trucks and buses 44,300. Air transport (2007)[14]: passenger-km 3,312,000,000; metric ton-km cargo (2005) 48,547,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	138	185	PCs	2004	278	351
Telephones				Dailies	2005	74[15]	95[15]
Cellular	2004	579[16]	753[16]	Internet users	2005	220	282
Landline	2001	300	410	Broadband	2004	57[16]	74[16]

Education and health

Educational attainment (1999). Percentage of population age 25 and over having: no formal schooling through incomplete secondary education 83.0%; complete secondary 7.4%; some higher 3.9%; complete higher 5.7%. *Literacy* (2003): total population age 15 and over literate 88.9%; males literate 87.0%; females literate 90.8%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	53[17]	6,502	121,860	18.7
Secondary (age 11–17)	86	8,161	63,392	7.8
Voc., teacher tr.	26	3,852	39,206	10.2
Higher[18]	1	328	10,562	32.2

Health: physicians (2007[3]) 1,935 (1 per 409 persons); hospital beds (2006[3]) 2,674 (1 per 295 persons); infant mortality rate per 1,000 live births (2005) 5.7; undernourished population, n.a.

Military

Total active duty personnel (2004): 3,600 French army and navy personnel[19].

[1]Detail does not add to total given because of rounding. [2]Excludes the French overseas territory of French Southern and Antarctic Territories (FSAT), which has been administered from Réunion since January 2001. FSAT comprises numerous, not permanently inhabited, archipelagoes as well as other remote islands in the South Indian Ocean and the French-claimed part of Antarctica. [3]January 1. [4]Population of commune. [5]Within Saint-Pierre agglomeration. [6]Employed only. [7]Services include Finance, real estate, business services. [8]Less imputed bank service charges. [9]Non-salaried employees. [10]The French franc (F) was the former monetary unit; on Jan. 1, 2002, F 6.56 = €1. [11]Indexes refer to December. [12]Minimum salary in public administration. [13]No public railways; railways in use are for sugar industry. [14]Air Austral only. [15]Circulation of daily newspapers. [16]Subscribers. [17]2004–05. [18]University only. [19]Includes troops and gendarmerie stationed on Mayotte.

Internet resources for further information:

- **INSEE: Réunion**
  http://www.insee.fr/fr/regions/reunion
- **Ministère de l'Outre-mer (Paris) http://www.outre-mer.gouv.fr**

Romania

Official name: România (Romania).
Form of government: unitary republic with two legislative houses (Senate [137]; Chamber of Deputies [334[1]]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Bucharest.
Official language: Romanian.
Official religion: none.
Monetary unit: (new) leu[2] (RON; plural [new] lei); valuation (Sept. 8, 2008) 1 U.S.$ = RON 2.53; 1 £ = RON 4.48.

Population

Counties	population 2007 estimate	Counties	population 2007 estimate	Counties	population 2007 estimate
Alba	376,086	Dâmbovița	533,330	Prahova	821,013
Arad	457,713	Dolj	712,187	Sălaj	243,157
Argeș	644,236	Galați	614,449	Satu Mare	366,270
Bacău	719,844	Giurgiu	283,408	Sibiu	423,156
Bihor	594,131	Gorj	381,643	Suceava	705,878
Bistrița-Năsăud	316,689	Harghita	325,611	Teleorman	413,064
Botoșani	454,167	Hunedoara	472,284	Timiș	666,866
Brăila	365,628	Ialomița	290,563	Tulcea	250,641
Brașov	593,928	Iași	825,100	Vâlcea	411,576
Buzău	488,763	Ilfov	294,094	Vaslui	455,594
Călărași	315,187	Maramureș	513,000	Vrancea	392,619
Caraș-Severin	327,579	Mehedinți	298,741		
Cluj	692,316	Mureș	581,759	**Municipality**	
Constanța	718,330	Neamț	566,059	Bucharest	1,931,838
Covasna	223,364	Olt	475,702	TOTAL	21,537,563

Demography

Area: 92,043 sq mi, 238,391 sq km.
Population (2008): 21,508,000.
Density (2008): persons per sq mi 233.7, persons per sq km 90.2.
Urban-rural (2007): urban 55.3%; rural 44.7%.
Sex distribution (2007): male 48.84%; female 51.16%.
Age breakdown (2005): under 15, 15.7%; 15–29, 23.8%; 30–44, 21.5%; 45–59, 19.7%; 60–74, 13.8%; 75–84, 4.8%; 85 and over, 0.7%.
Population projection: (2010) 21,422,000; (2020) 20,998,000.
Ethnic composition (2002): Romanian 89.5%; Hungarian 6.6%; Rom (Gypsy) 2.5%; Ukrainian 0.3%; German 0.3%; other 0.8%.
Religious affiliation (2002): Romanian Orthodox 86.7%; Protestant 6.3%; Roman Catholic 4.7%; Greek Catholic 0.9%; Muslim 0.3%; other 1.1%.
Major cities (2007): Bucharest 1,931,838; Iași 315,214; Cluj-Napoca 310,243; Timișoara 307,347; Constanța 304,279; Craiova 299,429; Galați 293,523.

Vital statistics

Birth rate per 1,000 population (2007): 10.0 (world avg. 20.3); within marriage 73.3%; outside of marriage 26.7%.
Death rate per 1,000 population (2007): 11.7 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 1.29.
Marriage/divorce rates per 1,000 population (2007): 8.8/1.7.
Life expectancy at birth (2007): male 69.2 years; female 76.1 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 739.0; malignant neoplasms (cancers) 204.1; diseases of the digestive system 70.2; accidents and violence 62.5.

National economy

Budget (in ROL '000,000,000,000[2]; 2004). Revenue: 322.0 (VAT 35.0%, excise tax 24.7%, tax on profits 20.0%, nontax revenue 5.8%). Expenditures: 340.7 (economic affairs 26.7%, social assistance 14.0%, police 11.9%, defense 10.5%, interest payments 7.7%, education 5.7%, health 3.6%).
Public debt (external, outstanding; 2006): U.S.$14,204,000,000.
Population economically active (2006): total 10,041,600; activity rate 46.5% (participation rates: ages 15–64, 63.7%; female 45.0%; unemployed [2007] 6.4%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	134.5	164.8	189.9	212.5	231.6	246.8	258.8
Annual earnings index	138.9	178.6	224.0	274.5	339.5	396.7	479.9

Household income and expenditure (2007). Average household size (2003) 2.8; average annual income per household RON 20,240 (U.S.$8,302); sources of income: wages and salaries 51.3%, transfers 19.8%, nonmonetary equivalent for consumption of own agricultural produce 15.8%, other 13.1%; expenditure: food and nonalcoholic beverages 41.7%; housing and energy 15.5%; clothing and footwear 6.8%; alcohol and tobacco 6.5%.
Production (metric tons). Agriculture (2007): corn (maize) 3,686,502, potatoes 3,498,443, wheat 2,866,234, cabbages 1,120,000, grapes 821,306, tomatoes 555,444, sunflower seed 521,489, barley 503,689, apples 374,799, plums 203,581; livestock (number of live animals) 7,678,000 sheep, 6,815,000 pigs, 2,934,000 cattle, 84,991,000 chickens; roundwood (2006) 13,839,000 cu m, of which fuelwood 19%; fisheries production (2006) 14,752 (from aquaculture 55%). Mining (2006): copper 12,200[3]; zinc 9,574[3]; lead 7,500[3]. Manufacturing (value added in U.S.$'000,000; 2004): wearing apparel 1,015; iron and steel 883; food products 782; cement, bricks, and ceramics 571; nonelectrical machinery 526; fabricated metals 519; furniture 397. Energy production (consumption): electricity (kW-hr; 2006) 61,829,000,000 ([2005] 56,510,000,000); hard coal (metric tons; 2005) negligible (3,041,000); lignite (metric tons; 2006) 32,400,000 ([2005] 32,961,000); crude petroleum (barrels; 2006) 35,900,000 ([2005] 104,108,000); petroleum products (metric tons; 2005) 13,531,000 (8,808,000); natural gas (cu m; 2006) 10,231,000,000 ([2005] 16,275,000,000).
Gross national income (GNI; 2007): U.S.$132,502,000,000 (U.S.$6,150 per capita); purchasing power parity GNI (U.S.$10,980 per capita).

Structure of gross domestic product and labour force

	2006			
	in value U.S.$'000,000	% of total value	labour force	% of labour force
Agriculture	13,400	11.0	2,840,300	28.3
Mining	5,300	4.4	119,700	1.2
Public utilities			197,500	2.0
Manufacturing	24,800	20.3	1,978,500	19.7
Construction	7,370	6.0	557,600	5.5
Transp. and commun.	12,000	9.8	491,800	4.9
Trade, hotels	13,200	10.8	1,192,300	11.9
Finance, real estate	31,300	25.7	373,600	3.7
Pub. admin.			507,500	5.0
Services			1,051,400	10.5
Other	14,630	12.0	731,400[4]	7.3[4]
TOTAL	122,000	100.0	10,041,600	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,308; remittances (2007) 8,533; foreign direct investment (FDI; 2004–06 avg.) 8,131. Disbursements for (U.S.$'000,000): tourism (2006) 1,310; remittances (2007) 351; FDI (2004–06 avg.) 26.
Land use as % of total land area (2003): in temporary crops 40.8%, in permanent crops 2.0%, in pasture 21.6%; overall forest area (2005) 27.7%.

Foreign trade[5]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–2,611	–4,537	–6,664	–9,618	–14,836	–24,312
% of total	8.6%	11.4%	12.4%	14.8%	18.7%	23.3%

Imports (2006): U.S.$51,106,000,000 (mineral fuels 13.5%, of which crude petroleum 7.7%; nonelectrical machinery and equipment 11.1%; road vehicles 10.6%; chemicals and chemical products 10.6%; base and fabricated metals 9.7%; electrical machinery/electronics/parts 7.5%). *Major import sources:* Germany 15.2%; Italy 14.6%; Russia 7.9%; France 6.5%; Turkey 5.0%.
Exports (2006): U.S.$32,336,000,000 (apparel/clothing accessories 13.7%; base and fabricated metals 12.6%; refined petroleum 8.9%; nonelectrical machinery and equipment 8.0%; road vehicles/parts 6.2%; insulated wire/optical fibre cables 6.0%; footwear 5.3%). *Major export destinations:* Italy 18.1%; Germany 15.7%; Turkey 7.7%; France 7.5%; Hungary 4.9%.

Transport and communications

Transport. Railroads (2007): route length (2004[6]) 11,053 km; passenger-km 7,476,000,000; metric ton-km cargo 16,000,000,000. Roads (2005[6])[7]: length 79,454 km (paved 26%). Vehicles (2007): cars 3,541,000; trucks and buses 519,000. Air transport (2007): passenger-km 3,696,000,000; metric ton-km cargo 5,688,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	15,150	697	PCs	2005	2,800	129
Telephones				Dailies	2004	1,148[8]	53[8]
Cellular	2007	22,875[9]	1,067[9]	Internet users	2007	12,000	560
Landline	2007	4,300	201	Broadband	2007	2,132[9]	99[9]

Education and health

Educational attainment (2002). Percentage of population age 10 and over having: no formal schooling 5.5%; primary education 20.1%; lower secondary 27.6%; upper secondary/vocational 36.7%; higher vocational 3.0%; university 7.1%. *Literacy* (2004): total population age 15 and over literate 97.3%; males 98.4%; females 96.3%.

Education (2004–05)

	schools	teachers	students	student/ teacher ratio
Primary	7,023	150,168	1,996,604	13.3
Secondary	1,413	62,192	773,843	12.4
Voc., special tech.	156	7,356	327,817	44.6
Higher	117	30,857	650,335	21.1

Health (2007): physicians 47,531 (1 per 453 persons); hospital beds 138,010 (1 per 156 persons); infant mortality rate per 1,000 live births 12.0; undernourished population (2002–04) less than 2.5% of total population.

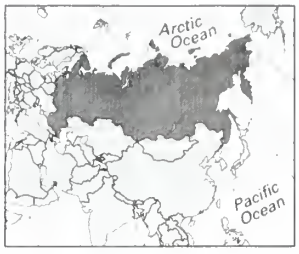
Military

Total active duty personnel (November 2007): 74,267 (army 56.8%, navy 10.9%, air force 14.1%, other 18.2%)[10]. *Military expenditure as percentage of GDP* (2005): 2.0%; per capita expenditure U.S.$90.

[1]Includes 18 elective seats for ethnic minorities. [2]The leu was redenominated on July 1, 2005. As of that date 10,000 (old) lei (ROL) = 1 (new) leu (RON). [3]Metal content of mine output. [4]Includes 3,000 not adequately defined and 728,400 unemployed. [5]Imports f.o.b. in balance of trade and trading partners and c.i.f. in commodities. [6]January 1. [7]Public roads only. [8]Circulation of daily newspapers. [9]Subscribers. [10]Paramilitary (including border guards and gendarmerie) total equals 79,900.

Internet resource for further information:
• **National Institute of Statistics http://www.insse.ro/cms/rw/pages/index.en.do**

Russia



Official name: Rossiyskaya Federatsiya (Russian Federation).
Form of government: federal multiparty republic with a bicameral legislative body (Federal Assembly comprising the Federation Council [178[1]] and the State Duma [450]).
Head of state: President.
Head of government: Prime Minister.
Capital: Moscow.
Official language: Russian.
Official religion: none.
Monetary unit: ruble (RUB); valuation (Sept. 8, 2008) 1 U.S.$ = RUB 25.49; 1 £ = RUB 45.03.

Area and population

Federal districts	Capitals	area sq mi	area sq km	population January 1 2008 estimate
Central	Moscow (Moskva)	252,000	652,800	37,150,741
Belgorod (region)	Belgorod	10,500	27,100	1,519,137
Bryansk (region)	Bryansk	13,500	34,900	1,308,479
Ivanovo (region)	Ivanovo	9,200	23,900	1,079,605
Kaluga (region)	Kaluga	11,600	29,900	1,005,648
Kostroma (region)	Kostroma	23,200	60,100	697,043
Kursk (region)	Kursk	11,500	29,800	1,162,475
Lipetsk (region)	Lipetsk	9,300	24,100	1,168,814
Moscow (city)		400	1,100	10,470,318
Moskva (Moscow, region)	Moscow (Moskva)	17,700	45,900	6,672,773
Oryol (region)	Oryol	9,500	24,700	821,934
Ryazan (region)	Ryazan	15,300	39,600	1,164,530
Smolensk (region)	Smolensk	19,200	49,800	983,227
Tambov (region)	Tambov	13,200	34,300	1,106,035
Tula (region)	Tula	9,900	25,700	1,566,295
Tver (region)	Tver	32,500	84,100	1,379,542
Vladimir (region)	Vladimir	11,200	29,000	1,449,475
Voronezh (region)	Voronezh	20,200	52,400	2,280,406
Yaroslavl (region)	Yaroslavl	14,100	36,400	1,315,005
Far Eastern	Khabarovsk	2,386,100	6,179,900	6,486,419
Amur (region)	Blagoveshchensk	140,400	363,700	869,617
Chukot (autonomous district)	Anadyr	284,800	737,700	50,263
Kamchatka (territory)[2]	Petropavlovsk-Kamchatsky	182,400	472,300	345,669
Khabarovsk (territory)	Khabarovsk	290,600	752,600	1,403,712
Magadan (region)	Magadan	178,100	461,400	165,820
Primorye (territory)	Vladivostok	64,100	165,900	1,995,828
Sakha (republic)	Yakutsk	1,198,200	3,103,200	951,436
Sakhalin (region)	Yuzhno-Sakhalinsk	33,600	87,100	518,539
Yevreyskaya (autonomous region)	Birobidzhan	13,900	36,000	185,535
Northwest	St. Petersburg	648,000	1,677,900	13,501,038[3]
Arkhangelsk (region)[4]	Arkhangelsk	158,600	410,700	1,229,858
Kaliningrad (region)	Kaliningrad	5,800	15,100	937,404
Kareliya (Karelia, republic)	Petrozavodsk	66,600	172,400	690,653
Komi (republic)	Syktyvkar	160,600	415,900	968,164
Leningrad (region)	St. Petersburg	32,600	84,500	1,633,350
Murmansk (region)	Murmansk	55,900	144,900	850,929
Nenets (autonomous district)[4]	Naryan-Mar	68,200	176,700	42,079
Novgorod (region)	Novgorod	21,400	55,300	652,437
Pskov (region)	Pskov	21,400	55,300	705,289
St. Petersburg (city)		600	1,400	4,568,047
Vologda (region)	Vologda	56,300	145,700	1,222,888
Siberia	Novosibirsk	1,974,800	5,114,800	19,553,461
Altay (republic)	Gorno-Altaysk	35,700	92,600	207,122
Altay (territory)	Barnaul	65,300	169,100	2,508,478
Buryatiya (republic)	Ulan-Ude	135,600	351,300	959,892
Irkutsk (region)[5]	Irkutsk	296,500	767,900	2,507,676
Kemerovo (region)	Kemerovo	36,900	95,500	2,823,539
Khakassia (republic)	Abakan	23,900	61,900	537,230
Krasnoyarsk (territory)[6]	Krasnoyarsk	903,400	2,339,700	2,890,350
Novosibirsk (region)	Novosibirsk	68,800	178,200	2,635,642
Omsk (region)	Omsk	53,900	139,700	2,017,997
Tomsk (region)	Tomsk	122,400	316,900	1,034,985
Tuva (republic)	Kyzyl	65,800	170,500	311,619
Zabaykalye (territory)[7]	Chita	166,600	431,500	1,118,931
Southern	Rostov-na-Donu	226,200	585,950	22,835,216
Adygeya (republic)	Maykop	2,900	7,600	441,176
Astrakhan (region)	Astrakhan	17,000	44,100	1,000,874
Chechnya (republic)	Grozny	4,750	12,300	1,209,040
Dagestan (republic)	Makhachkala	19,400	50,300	2,687,822
Ingushetiya (republic)	Magas	1,450	3,750	499,502
Kabardino-Balkariya (republic)	Nalchik	4,800	12,500	891,338
Kalmykiya (republic)	Elista	29,400	76,100	285,541
Karachayevo-Cherkessia (republic)	Cherkessk	5,450	14,100	427,418
Krasnodar (territory)	Krasnodar	29,350	76,000	5,121,799
Rostov (region)	Rostov-na-Donu	38,900	100,800	4,254,421
Severnaya Osetiya–Alaniya (North Ossetia; republic)	Vladikavkaz	3,100	8,000	702,456
Stavropol (territory)	Stavropol	25,700	66,500	2,705,067
Volgograd (region)	Volgograd	44,000	113,900	2,608,762
Urals	Yekaterinburg	690,500	1,788,400	12,240,382
Chelyabinsk (region)	Chelyabinsk	33,900	87,900	3,510,990
Khanty-Mansi (autonomous district)[8]	Khanty-Mansiysk	202,000	523,100	1,505,248
Kurgan (region)	Kurgan	27,400	71,000	960,410
Sverdlovsk (region)	Sverdlovsk	75,000	194,300	4,395,617
Tyumen (region)[8]	Tyumen	62,500	161,800	1,325,385
Yamalo-Nenets (autonomous district)[8]	Salekhard	289,700	750,300	542,732
Volga	Nizhny Novgorod	400,000	1,035,900	30,241,581
Bashkortostan (republic)	Ufa	55,400	143,600	4,052,731
Chuvashiya (republic)	Cheboksary	7,100	18,300	1,282,567
Kirov (region)	Kirov	46,600	120,800	1,413,257
Mari-El (republic)	Toshkar-Ola	8,950	23,200	703,220
Mordoviya (republic)	Saransk	10,100	26,200	840,391
Nizhegorod (region)	Nizhny Novgorod	28,900	74,800	3,359,816
Orenburg (region)	Orenburg	47,900	124,000	2,119,003
Penza (region)	Penza	16,700	43,200	1,388,021
Perm (territory)[9]	Perm	62,000	160,600	2,718,227
Samara (region)	Samara	20,700	53,600	3,172,787
Saratov (region)	Saratov	38,700	100,200	2,583,808
Tatarstan (republic)	Kazan	26,250	68,000	3,762,809
Udmurtia (republic)	Izhevsk	16,300	42,100	1,532,736
Ulyanovsk (Simbirsk, region)	Simbirsk	14,400	37,300	1,312,208
TOTAL		6,592,800[10]	17,075,400[10]	142,008,838

Demography

Population (2008): 141,841,000.
Density (2008): persons per sq mi 21.5, persons per sq km 8.3.
Urban-rural (2007[2]): urban 73.0%; rural 27.0%.
Sex distribution (2007): male 46.22%; female 53.78%.
Age breakdown (2007): under 15, 14.6%; 15–29, 23.9%; 30–44, 21.3%; 45–59, 22.8%; 60–74, 11.9%; 75–84, 4.7%; 85 and over, 0.8%.
Population projection: (2010) 141,280,000; (2020) 138,507,000.
Ethnic composition (2002): Russian 79.82%; Tatar 3.83%; Ukrainian 2.03%; Bashkir 1.15%; Chuvash 1.13%; Chechen 0.94%; Armenian 0.78%; Mordvin 0.58%; Belarusian 0.56%; Avar 0.52%; Kazakh 0.45%; Udmurt 0.44%; Azerbaijani 0.43%; Mari 0.42%; German 0.41%; Kabardinian 0.36%; Ossetian 0.35%; Dargin 0.35%; Buryat 0.31%; Sakha 0.31%; other 4.83%.
Religious affiliation (2005): Christian 58.4%, of which Russian Orthodox 53.1%, Roman Catholic 1.0%, Ukrainian Orthodox 0.9%, Protestant 0.9%; Muslim 8.2%[11, 12]; traditional beliefs 0.8%; Jewish 0.6%; nonreligious 25.8%; atheist 5.0%; other 1.2%.
Major cities (2006[2]): Moscow 10,425,075; St. Petersburg 4,580,620; Novosibirsk 1,397,015; Yekaterinburg 1,308,441; Nizhny Novgorod 1,283,553; Samara 1,143,346; Omsk 1,138,822; Kazan 1,112,673; Chelyabinsk 1,092,958; Rostov-na-Donu 1,054,865; Ufa 1,029,616; Perm 993,319.

Other principal cities (2006[2])

	population		population		population
Astrakhan	498,953	Lipetsk	502,821	Tolyatti	704,876
Barnaul	604,187	Naberezhnye Chelny	507,180	Tomsk	489,879
Irkutsk	578,073	Novokuznetsk	562,402	Tula	509,010
Izhevsk	619,468	Orenburg	533,872	Tyumen	542,463
Kemerovo	520,138	Penza	509,997	Vladivostok	583,673
Khabarovsk	578,060	Ryazan	513,261	Volgograd	991,643
Krasnodar	710,413	Saratov	850,086	Voronezh	846,349
Krasnoyarsk	920,926	Simbirsk (Ulyanovsk)	617,200	Yaroslavl	603,735

Migration (2006): immigrants 186,380; emigrants 54,061.
Refugees (2008[2]): 159,500, of which from Afghanistan 84,500, Georgia 45,000.
Households (2004). Total households 51,209,000; average household size 2.8; distribution by size (2002)[13]: 1 person 22.3%; 2 persons 27.6%; 3 persons 23.8%; 4 persons 17.0%; 5 persons 5.7%; 6 or more persons 3.6%.

Vital statistics

Birth rate per 1,000 population (2007): 11.1 (world avg. 20.3); (2005) within marriage 70.0%; outside of marriage 30.0%.
Death rate per 1,000 population (2007): 14.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): –3.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.39.
Marriage/divorce rates per 1,000 population (2006): 7.8/4.5.
Life expectancy at birth (2005): male 60.4 years; female 73.2 years.
Major causes of death per 100,000 population (2006): circulatory diseases 860; malignant neoplasms (cancers) 200; accidents, poisoning, and violence 191, of which suicide 30, transport accidents 27, alcohol poisoning 20; diseases of the digestive system 62; diseases of the respiratory system 58; infectious and parasitic diseases 25.
Adult population (ages 15–49) *living with HIV* (2007): 1.1% (world avg. 0.8%).

Social indicators

Educational attainment (2002). Percentage of population age 15 and over having: no formal schooling 2.1%; primary education 7.7%; some secondary 18.1%; complete secondary/basic vocational 53.0%; incomplete higher 3.1%; complete higher 16.0%, of which advanced degrees 0.3%.
Quality of working life (2006). Average workweek (2004): 40 hours. Annual rate per 100,000 workers of: injury or accident 290; industrial illness 16.0; death 11.8. Average working days lost to labour strikes per 1,000 employees 0.2.
Social participation. Eligible voters participating in last national election (2007): 63.8%. Trade union membership in total workforce (2003) *c.* 45%[14].
Social deviance. Offense rate per 100,000 population (2007) for: murder and attempted murder 15.6; rape and attempted rape 4.9; serious injury 33.3; burglary 207.6; drug abuse 162.6; robbery 31.9; theft 1,102.7. Incidence per 100,000 population of: suicide (2007) 29.0.

National economy

Public debt (external, outstanding; March 2008): U.S.$35,200,000,000.
Budget (2007). Revenue: RUB 7,443,900,000,000 (VAT 30.0%; taxes on natural resources 15.0%; taxes on corporate profits 8.5%; individual income tax 5.2%). Expenditures: RUB 6,531,400,000,000 (transfers 29.7%; social and cultural services 14.1%; defense 12.8%; national economy 11.2%; public security 10.3%).
Gross national income (GNI; 2007): U.S.$1,071,000,000,000 (U.S.$7,560 per capita); purchasing power parity GNI (U.S.$14,400 per capita).

Structure of gross domestic product and labour force

	2006			
	in value RUB '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	1,116,800	4.2	6,861,000	9.2
Mining	2,432,600	9.1	1,196,000	1.6
Manufacturing	4,437,200	16.6	12,470,000	16.8
Public utilities	773,100	2.9	2,063,000	2.8
Construction	1,356,100	5.1	4,460,000	6.0
Transp. and commun.	2,258,500	8.4	6,212,000	8.4
Trade, restaurants, hotels	4,712,800	17.6	11,986,000	16.2
Finance, real estate	3,252,700	12.1	5,206,000	7.0
Services	1,851,400	6.9	13,500,000	18.2
Pub. admin., defense	1,227,700	4.6	4,875,000	6.6
Other	3,362,000[15]	12.5[15]	5,316,000[16]	7.2[16]
TOTAL	26,781,100[17]	100.0	74,146,000[17]	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 49,389,860, potatoes 36,784,200, cow's milk 31,950,000, sugar beets 29,000,000, barley 15,663,110[18], sunflower seeds 5,656,500[18], oats 5,407,000[18], cabbages 4,054,000[19], corn (maize) 3,953,240, rye 3,910,290[18], tomatoes 2,393,000, apples 2,211,000, carrots and turnips 1,900,000, cattle meat 1,828,000, pig meat 1,788,000, dry onions 1,770,000, currants 600,000[18], raspberries (2005) 175,000[18], sour cherries 153,000[18]; livestock (number of live animals) 21,466,000 cattle, 17,508,000 sheep, 15,793,000 pigs; roundwood (2006) 190,600,000 cu m, of which fuelwood 24%; fisheries production (2006) 3,389,651 (from aquaculture 3%); aquatic plants production (2006) 66,372 (from aquaculture 1%). Mining and quarrying (2006): nickel 320,000[20] [world rank: 1]; platinum-group metals 138,300 [world rank: 2], of which palladium 96,800 [world rank: 1]; mica 100,000 [world rank: 2]; gem diamonds 23,400,000 carats [world rank: 2]; vanadium 15,100[20] [world rank: 3]; industrial diamonds 15,000,000 carats [world rank: 3]; iron ore 59,100,000[20] [world rank: 5]; cobalt 5,100[20] [world rank: 5]; copper ore 725,000[20] [world rank: 6]; molybdenum 3,100[20] [world rank: 6]; gold 159,340 kg [world rank: 7]. Manufacturing (value added in U.S.$'000,000; 2005): refined petroleum products 28,950; food products 12,942; iron and steel 11,904; nonferrous base metals 9,981; base chemicals 8,524; cement, bricks, and ceramics 4,892; beverages 4,532; general purpose machinery 4,075; motor vehicles 3,423; fabricated metal products 2,831; special purpose machinery 2,802; rubber products 2,313; paints, soaps, and pharmaceuticals 2,155; professional and scientific equipment 2,151; paper and paper products 1,982; publishing 1,733; wood products (excluding furniture) 1,730.

Financial aggregates

	2002	2003	2004	2005	2006	2007
Exchange rate[21], RUB per:						
U.S. dollar	31.78	29.45	27.75	28.78	26 33	24 55
£	51.22	52.56	53.60	49.56	51 69	49 18
SDR	43.21	43.77	43 09	41 14	39 61	38 79
International reserves (U.S.$)						
Total (excl. gold; '000,000)	44,054	73,175	120,809	175,891	295,568	464,379
SDRs ('000,000)	1.2	0.7	0.9	5.6	7 1	0.8
Reserve pos. in IMF ('000,000)	1.6	2.1	2.8	195.9	283 3	373 9
Foreign exchange ('000,000)	44,051	73,172	120,805	175,690	295,277	464,004
Gold ('000,000 fine troy oz)	12.46	12.55	12 44	12 44	12 91	14 48
% world reserves	1.3	1.4	1 4	1.4	1.5	1 7
Balance of payments (U.S.$'000,000)						
Balance of visible trade	+46,335	+59,859	+85,825	+118,364	+139,269	+132,044
Imports, f.o.b.	–60,966	–76,070	–97,382	–125,434	–164,281	–223,421
Exports, f.o.b.	107,301	135,929	183,207	243,798	303,550	355,465
Balance of invisibles	–17,219	–24,449	–26,311	–33,921	–44,902	–53,735
Balance of payments, current account	+29,116	+35,410	+59,514	+84,443	+94,367	+78,309

Energy production (consumption): electricity (kW-hr; 2007) 1,015,872,000,000 ([2005] 940,734,000,000); hard coal (metric tons; 2007) 242,100,000 ([2005] 141,400,000); lignite (metric tons; 2007) 72,200,000 ([2005] 73,200,000); crude petroleum (barrels; 2007) 3,568,000,000 ([2005] 1,444,000,000); petroleum products (metric tons; 2005) 186,292,000 (92,877,000); natural gas (cu m; 2007) 654,000,000,000 ([2005] 470,000,000,000).

Population economically active (2006): total 74,146,000; activity rate of total population 52.0% (participation rates: ages 15–64, 73.0%; female 49.4%; unemployed [October 2007] 6.1%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	121.5	140.6	159.9	177.3	199.7	219.1	238.8
Annual earnings index	143.1	182.0	229.5	255.5	311.7	378.7	470.3

Land use as % of total land area (2003): in temporary crops 7.5%, in permanent crops 0.1%, in pasture 5.6%; overall forest area (2005) 47.9%.

Household income and expenditure. Average household size (2004) 2.8; income per household: n.a.; sources of monetary income (2006): wages 66.4%[22], transfers 13.2%, self-employment 11.2%, property income 7.2%, other 2.0%; expenditure (2002): food 41.7%, clothing 13.3%, housing 6.2%, furniture and household appliances 5.7%, alcohol and tobacco 3.2%, transportation 2.7%.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 7,628; remittances (2007) 4,100; foreign direct investment (FDI; 2004–06 avg.) 18,981. Disbursements for (U.S.$'000,000): tourism (2006) 18,235; remittances (2007) 17,716; FDI (2004–06 avg.) 14,841.

Foreign trade[23, 24]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+58,770	+60,515	+76,310	+106,031	+142,744	+163,823
% of total	41.2%	39.6%	40.0%	41.2%	42.0%	37.3%

Imports (2006): U.S.$137,728,000,000 (machinery and apparatus 27.6%, of which telecommunications equipment/television receivers 6.3%, general industrial machinery 6.2%, machinery specialized for particular industries 5.4%, electrical machinery/electronics/parts 5.3%; road vehicles/parts 13.4%; chemicals and chemical products 12.2%, of which pharmaceuticals and medicine 4.6%; food 11.9%; base and fabricated metals 6.9%, of which iron and steel 3.6%). *Major import sources:* Germany 13.4%; China 9.4%; Ukraine 6.7%; Japan 5.7%; Belarus 5.0%; South Korea 4.9%; U.S. 4.7%; France 4.3%; Italy 4.2%; Finland 2.9%.

Exports (2006): U.S.$301,551,000,000 (crude petroleum 32.1%; refined petroleum 14.7%; natural gas [in gaseous state] 14.2%; nonferrous base metals 6.2%, of which aluminum 2.5%, nickel 2.0%, copper 1.5%; iron and steel 5.7%; chemicals and chemical products 3.8%, of which fertilizers 1.4%; machinery and apparatus 2.4%; coal/coke 1.5%; food 1.2%; unspecified special transactions 8.5%). *Major export destinations:* The Netherlands 11.9%; Italy 8.3%; Germany 8.1%; China 5.2%; Ukraine 5.0%; Turkey 4.7%; Belarus 4.3%; Switzerland 4.0%; Poland 3.8%; U.K. 3.4%.

Direction of trade (2006)

	imports		exports	
	U.S.$'000,000	%	U.S.$'000,000	%
Africa	1,143	0.8	3,155	1.0
Americas	12,974	9.4	14,143	4 7
North America	7,330	5.3	9,214	3.1
South America and Caribbean	5,644	4.1	4,929	1.6
Asia (excl. CIS and Pacific)	36,682	26.6	54,625	18.1
China	12,912	9.4	15,757	5.2
Asia (CIS only)	5,959	4.3	13,580	4.5
Europe	80,496	58.4	215,202	71 4
Germany	18,457	13.4	24,500	8.1
Italy	5,727	4 2	25,111	8.3
Europe (CIS only)	16,408	11.9	28,735	9.5
unspecified	474	0.3	846	0.3
TOTAL	137,728	100.0[17]	301,551	100.0

Transport and communications

Transport. Railroads (2005): length (2007[2]) 85,000 km; passenger-km 171,600,000,000; metric ton-km cargo 1,858,000,000,000. Roads (2007[2]): total length 854,000 km (paved 85%). Vehicles (2002): passenger cars 22,342,000; trucks and buses (2000) 5,040,700. Air transport (2006–07): passenger-km 97,510,000,000; metric ton-km cargo 2,980,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	50,599	351	PCs	2005	17,400	121
Telephones				Dailies	2004	15,075[25]	105[25]
Cellular	2007	170,000[26]	1,196[25]	Internet users	2007	30,000	211
Landline	2006	43,900	308	Broadband	2006	2,900[26]	20[26]

Education and health

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–13) / Secondary (age 14–17)	61,042	1,537,000	14,798,000	9.6
Voc., teacher tr	2,847	148,000	2,514,000	18.3
Higher	1,090	409,000	7,310,000	17.9

Health (2006[2]): physicians 690,000 (1 per 206 persons); hospital beds 1,575,000 (1 per 90 persons); infant mortality rate per 1,000 live births (2007) 9.2; undernourished population (2002–04) 3,900,000 (3% of total population based on the consumption of a minimum daily requirement of 1,980 calories).

Military

Total active duty personnel (November 2007): 1,027,000 (army 38.5%, navy 13.8%, air force 15.6%, strategic deterrent forces 7.8%, command and support 24.3%)[27]. *Military expenditure as percentage of GDP* (2005): 4.1%; per capita expenditure U.S.$217.

[1]Statutory number per Inter-Parliamentary Union website. [2]Kamchatka (region) and Koryak (autonomous district) merged on July 1, 2007, to form Kamchatka (territory). [3]Reported total; summed total equals 13,501,098. [4]Most administrative functions of Nenets have been assumed by Arkhangelsk. [5]Includes Ust-Orda Buryat (autonomous district) from Jan. 1, 2008. [6]Krasnoyarsk (territory) formally absorbed Evenk and Taymyr autonomous districts on Jan. 1, 2007. [7]Chita (region) and Agin Buryat (autonomous district) merged on March 3, 2008, to form Zabaykalye (territory). [8]Most administrative functions of Khanty-Mansi and Yamalo-Nenets have been assumed by Tyumen. [9]On Dec. 1, 2005, Komi-Permyak (autonomous district) merged with Perm (region) to form Perm (territory). [10]Reported total; summed total equals 6,577,600 sq mi (17,035,650 sq km)—reason for discrepancy is unknown. [11]Muslim population may be as high as 16%. [12]Shi'i make up *c.* 8% of all Muslims. [13]Excludes collective households (1.6% of all Russians live in collective households). [14]Mostly based on a claimed membership of 28,000,000 in the Federation of Independent Trade Unions of Russia, the successor to the former labour movement. [15]Net taxes on products less imputed bank service charges. [16]Includes 5,312,000 unemployed. [17]Detail does not add to total given because of rounding. [18]World's leading producer. [19]Includes other brassicas. [20]Metal content. [21]End of period. [22]Includes unreported wages and salaries. [23]Imports c.i.f.; exports f.o.b. [24]Based on data published by the *UN International Trade Statistics Yearbook (2006)*. [25]Refers to top 20 dailies only. [26]Subscribers. [27]An additional 418,000 personnel in paramilitary forces include railway troops, special construction troops, federal border guards, interior troops, and other federal guard units.

Internet resources for further information:

- **Federal State Statistics Service http://www.gks.ru/eng/default.asp**
- **Central Bank of the Russian Federation http://www.cbr.ru/eng**

Rwanda

Official name: Repubulika y'u Rwanda (Rwanda); République Rwandaise (French); Republic of Rwanda (English).
Form of government: multiparty republic with two legislative bodies (Senate [26]; Chamber of Deputies [80]).
Head of state and government: President assisted by Prime Minister.
Capital: Kigali.
Official languages: Rwanda; French; English.
Official religion: none.
Monetary unit: Rwandan franc (RF); valuation (Sept. 8, 2008) 1 U.S.$ = RF 549.44; 1 £ = RF 970.69.

Area and population[1]

Provinces	Principal cities	area sq mi	area sq km	population 2002 census
Est (Eastern)	Rwamagana	3,560[2]	9,220[2]	1,640,000[2]
Kigali	Kigali	280[2]	720[2]	745,000[2]
Nord (Northern)	Ruhengeri	1,430[2]	3,700[2]	1,740,000[2]
Ouest (Western)	Gisenyi	2,197	5,689	1,940,888
Sud (Southern)	Gitarama	2,312	5,987	2,072,131
SUBTOTAL		9,774[3]	25,314[3]	—
SUBTOTAL (Rwandan part of Lake Kivu)		411	1,065	—
TOTAL		10,185	26,379	8,128,553[3]

Demography

Population (2008): 10,009,000.
Density (2008)[4]: persons per sq mi 1,024, persons per sq km 395.4.
Urban-rural (2007): urban 17.6%; rural 82.4%.
Sex distribution (2007): male 49.75%; female 50.25%.
Age breakdown (2007): under 15, 41.9%; 15–29, 30.8%; 30–44, 15.5%; 45–59, 8.1%; 60–74, 2.9%; 75 and over, 0.8%.
Population projection: (2010) 10,601,000; (2020) 13,731,000.
Doubling time: 28 years.
Ethnic composition (2002): Hutu 85%; Tutsi 14%; Twa 1%.
Religious affiliation (2005): Roman Catholic *c.* 44%; Protestant *c.* 25%; Muslim *c.* 13%; other *c.* 18%[5].
Major cities (2002): Kigali (2003) 656,153; Gitarama 84,669; Butare 77,449; Ruhengeri 71,511; Gisenyi 67,766.

Vital statistics

Birth rate per 1,000 population (2007): 40.2 (world avg. 20.3).
Death rate per 1,000 population (2007): 14.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 25.3 (world avg. 11.7).
Marriage/divorce rates per 1,000 population: n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2007): 5.37.
Life expectancy at birth (2007): male 47.9 years; female 50.2 years.
Adult population (ages 15–49) *living with HIV* (2007): 2.8%[6] (world avg. 0.8%).

National economy

Budget (2007). Revenue: RF 472,300,000,000 (grants 46.6%; taxes on goods and services 25.6%; income tax 18.2%; import and export duties 6.6%; non-tax revenue 3.0%). Expenditures: RF 491,400,000,000 (current expenditures 63.7%, of which wages 10.7%, defense 6.5%, debt payment 2.2%; capital expenditure 36.3%).
Public debt (external, outstanding; 2007): U.S.$503,200,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): plantains 2,580,000, potatoes 1,200,000, sweet potatoes 940,000, cassava 830,000, dry beans 230,000, sorghum 187,000, taro 130,000, corn (maize) 90,000, tea 19,000, coffee 18,900, pyrethrum 15; livestock (number of live animals) 1,300,000 goats, 950,000 cattle, 470,000 sheep, 270,000 pigs; roundwood (2006) 9,910,894 cu m, of which fuelwood 95%; fisheries production (2006) 8,200 (from aquaculture 5%). Mining and quarrying (2006): cassiterite (tin content) 700; tungsten (wolframite content) 400; niobium 88,000 kg; tantalum 62,000 kg. Manufacturing (value added in RF '000,000; 2007): food products, beverages, and tobacco products 63,000; cement, bricks, and ceramics 10,000; chemicals and chemical products 6,000; wood products, paper products, and printing 5,000; textiles and wearing apparel 5,000. Energy production (consumption): electricity (kW-hr; 2007–08) 170,800,000 ([2005] 245,000,000); petroleum products (metric tons; 2005) none (180,000); natural gas (cu m; 2005) 589,400 (589,400).
Population economically active (2002): total 3,418,047; activity rate of total population 42.0% (participation rates: ages 6 and over, 52.1%; female 55.2%; officially unemployed [2006] 1.0%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.0	105.3	112.8	126.6	138.1	150.3	164.0

Land use as % of total land area (2003): in temporary crops 48.6%, in permanent crops 10.9%, in pasture 18.8%; overall forest area (2005) 19.5%.
Household income and expenditure. Average household size (2004) 3.4; average annual income per household, n.a.; sources of income: n.a.; expenditure (2003)[7]: food and nonalcoholic beverages 37.1%, housing and energy 15.8%, transportation 9.9%, household furnishings 7.6%, health 7.1%.
Gross national income (GNI; 2007): U.S.$3,072,000,000 (U.S.$320 per capita); purchasing power parity GNI (U.S.$860 per capita).

Structure of gross domestic product and labour force

	2007 in value RF '000,000,000	2007 % of total value	2002 labour force	2002 % of labour force
Agriculture, forestry, fishing	664	35.6	2,951,492	86.2
Mining and quarrying	21	1.1	5,274	0.2
Manufacturing	102	5.5	43,053	1.3
Construction	129	6.9	42,180	1.2
Public utilities	13	0.7	2,482	0.1
Transp. and commun.	112	6.0	30,255	0.9
Trade, hotels, restaurants	199	10.7	94,175	2.8
Finance, real estate	271	14.5	10,920	0.3
Pub. admin., defense	105	5.6	25,668	0.7
Services	152	8.1	155,980	4.6
Other	99[8]	5.3[8]	56,568	1.7
TOTAL	1,866[3]	100.0	3,418,047	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2004) 44; remittances (2007) 51; foreign direct investment (FDI; 2004–06 avg.) 11; official development assistance (2006) 585. Disbursements for (U.S.$'000,000): tourism (2004) 31; remittances (2007) 68; FDI (2004–06 avg.) negligible.

Foreign trade[9]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−131.4	−136.7	−166.0	−178.2	−229.2	−296.7
% of total	41.2%	50.3%	56.8%	47.6%	47.8%	51.0%

Imports (2006): U.S.$582,000,000 (intermediate goods 25.1%, machinery and equipment 21.8%, mineral fuels 19.8%, food 8.2%). *Major import sources* (2003): Kenya 28.4%; Belgium 12.2%; Uganda 7.7%; U.A.E. 7.6%; Tanzania 5.6%.
Exports (2006): U.S.$142,700,000 (coffee 37.9%, tea 22.5%, cassiterite [major ore of tin] 11.1%, tungsten 7.8%, columbite/tantalite 6.7%). *Major export destinations* (2003): Kenya 40.9%; Uganda 26.6%; Tanzania 7.9%; U.K. 6.2%; Democratic Republic of the Congo 4.2%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 8,704 mi, 14,008 km (paved 19%). Vehicles (2006)[10]: passenger cars 12,269; trucks 15,093. Air transport (2006)[11]: passengers embarked and disembarked *c.* 180,000; cargo loaded and unloaded (2000) 4,300 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	70	7.4	PCs	2006	19	2.2
Telephones				Dailies	2007	—	—
Cellular	2007	635[12]	65[12]	Internet users	2006	100	11
Landline	2007	23	2.4	Broadband	2007	0.7[12]	0.1[12]

Education and health

Educational attainment (2005)[13]. Percentage of population age 15–49 having: no formal education/unknown 21.4%; primary education 68.2%; secondary 9.6%; higher 0.8%. *Literacy* (2007): percentage of total population age 15 and over literate 74.7%; males literate 79.3%; females literate 70.2%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 7–15)	2,295	28,474[14]	2,019,991[14]	70.9[14]
Secondary (age 16–19)[15]	553	7,610	218,517	28.7
Higher	15	1,738[16]	27,887	14.5[16]

Health: physicians (2005) 450 (1 per 19,054 persons); hospital beds (2007) 14,246 (1 per 588 persons); infant mortality rate per 1,000 live births (2007) 85.3; undernourished population (2002–04) 2,800,000 (33% of total population based on the consumption of a minimum daily requirement of 1,750 calories).

Military

Total active duty personnel (November 2007): 33,000 (army 97.0%, air force 3.0%). *Military expenditure as percentage of GDP* (2005): 2.9%; per capita expenditure U.S.$7.

[1]The new administrative structure went into effect at the beginning of 2006. [2]Estimate. [3]Detail does not add to total given because of some estimated data. [4]Based on area excluding Lake Kivu (9,774 sq mi [25,314 sq km]). [5]Many small usually Christian-linked schismatic religious groups have proliferated since the 1994 genocide. [6]Statistically derived midpoint of range. [7]Weights of consumer price index components. [8]Taxes on products less imputed bank service charges. [9]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [10]Vehicles registered since 2003 only. [11]Kigali airport only. [12]Subscribers. [13]Based on the 2005 Rwanda Demographic and Health Survey, of which 15,735 people in 10,272 households were age 15–49. [14]2006. [15]Includes vocational and teacher training. [16]2003–04.

Internet resources for further information:

- **National Institute of Statistics**
  http://www.statistics.gov.rw/
- **Ministry of Finance and Economic Planning**
  http://www.minecofin.gov.rw
- **National Bank of Rwanda**
  http://www.bnr.rw

Saint Kitts and Nevis

Official name: Federation of Saint Kitts and Nevis[1].
Form of government: federated constitutional monarchy with one legislative house (National Assembly [15[2]]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Basseterre.
Official language: English.
Official religion: none.
Monetary unit: Eastern Caribbean dollar (EC$); valuation (Sept. 8, 2008) 1 U.S.$ = EC$2.70; 1 £ = EC$4.77.

Area and population

Islands	Capitals	area sq mi	area sq km	population 2001 census[3]
Nevis[4]	Charlestown	36.0	93.2	11,181
St. Kitts (St. Christopher)	Basseterre	68.0	176.2	34,703
TOTAL		104.0	269.4	45,884

Demography

Population (2008): 51,300.
Density (2008): persons per sq mi 493.3, persons per sq km 190.4.
Urban-rural (2005): urban *c.* 33%; rural *c.* 67%.
Sex distribution (2001): male 49.70%; female 50.30%.
Age breakdown (2000): under 15, 30.7%; 15–29, 26.5%; 30–44, 21.1%; 45–59, 10.8%; 60–74, 6.1%; 75–84, 2.9%; 85 and over, 1.9%.
Population projection: (2010) 52,000; (2020) 56,000.
Doubling time: 72 years.
Ethnic composition (2000): black 90.4%; mulatto 5.0%; Indo-Pakistani 3.0%; white 1.0%; other/unspecified 0.6%.
Religious affiliation (2005): Protestant *c.* 75%, of which Anglican *c.* 24%, Methodist *c.* 23%; Roman Catholic *c.* 11%; other *c.* 14%.
Major towns (2006): Basseterre (on St. Kitts) 12,900; Charlestown (on Nevis) 1,500; St. Paul's (on St. Kitts) 1,200.

Vital statistics

Birth rate per 1,000 population (2005): 18.1 (world avg. 20.3).
Death rate per 1,000 population (2005): 8.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 9.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.33.
Marriage/divorce rates per 1,000 population: (2001) 7.1/(2002) 0.5.
Life expectancy at birth (2005): male 69.3 years; female 75.2 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 404.9; malignant neoplasms (cancers) 110.4; communicable diseases 104.6; accidents, violence, and poisoning 42.9.

National economy

Budget (2006). Revenue: EC$524,600,000 (tax revenue 71.3%, of which taxes on international trade 33.6%, taxes on domestic goods and services 17.3%, company taxes 12.7%; nontax revenue 22.4%; grants 5.2%; other 1.1%). Expenditures: EC$551,200,000 (current expenditure 86.0%, of which interest payments 19.1%; development expenditure 14.0%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane (2005) 100,000[5], coconuts 1,000, roots and tubers 750, pulses 220, pineapples (2006) 55; livestock (number of live animals) 16,000 goats, 12,600 sheep, 4,850 cattle, 4,000 pigs, 70,000 chickens; roundwood, n.a.; fisheries production (2006) 450 (from aquaculture, negligible). Mining and quarrying: excavation of sand and crushed stone for local use. Manufacturing (2003): raw sugar 22,000[5]; carbonated beverages (2002) 32,000 hectolitres; beer (2002) 20,000 hectolitres; other manufactures include electronic components, garments, and cement. Energy production (consumption), electricity (kW-hr; 2005) 133,000,000 (133,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (44,000); natural gas, none (none).
Gross national income (GNI; 2007): U.S.$470,000,000 (U.S.$9,630 per capita); purchasing power parity GNI (U.S.$12,220 per capita).

Structure of gross domestic product and labour force

	2006 in value EC$'000,000	2006 % of total value	1994 labour force[6]	1994 % of labour force[6]
Agriculture, fishing	28.1	2.1	2,439[7]	14.7[7]
Mining	3.0	0.2	29	0.2
Manufacturing	98.0	7.3	1,290[8]	7.8[8]
Construction	152.3	11.4	1,745	10.5
Public utilities	28.6	2.1	416	2.5
Transp. and commun.	172.6	12.9	534	3.2
Trade, restaurants	226.2	16.9	3,367	20.3
Finance, real estate	253.7	19.0	3,708[9]	22.3[9]
Pub. admin., defense	189.1	14.1	2,738	16.5
Services	44.7	3.3	[9]	[9]
Other	140.5[10]	10.5[10]	342	2.1
TOTAL	1,336.6[11]	100.0[11]	16,608	100.0[11]

Household income and expenditure. Average household size (2001) 2.9; average annual income per wage earner (2006) EC$24,216 (U.S.$8,969); sources of income: n.a.; expenditure (2001)[12]: food, beverages, and tobacco 28.8%, education 19.3%, health 14.1%, housing 13.0%, clothing and footwear 9.3%, fuel and light 4.4%, household furnishings 3.7%, transportation 2.1%, other 5.3%.
Public debt (external, outstanding; 2007): U.S.$272,000,000.
Population economically active (1995): total 18,170; activity rate of total population 41.7% (participation rates [1991]: ages 15–64, 70.5%; female 44.4%[6]; unemployed [2006] 5.1%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.1	104.1	106.4	108.9	112.6	122.2	127.7
Earnings index					..	...	...

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 116; remittances (2007) 4; foreign direct investment (2004–06 avg.) 120; official development assistance (2006) 5.2. Disbursements for (U.S.$'000,000): tourism (2006) 12; remittances (2007) 3.
Land use as % of total land area (2003): in temporary crops *c.* 19%, in permanent crops *c.* 3%, in pasture *c.* 6%; overall forest area (2005) *c.* 15%.

Foreign trade[13]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−111.6	−118.6	−121.0	−106.3	−135.1	−166.8
% of total	50.3%	50.2%	52.6%	49.4%	57.4%	61.9%

Imports (2006): U.S.$249,500,000 (machinery and apparatus 23.1%, of which electrical machinery/parts 10.6%; food 15.5%; base and fabricated metals 9.2%; refined petroleum 6.6%; road vehicles 6.5%). *Major import sources:* United States 58.3%; Trinidad and Tobago 12.5%; United Kingdom 5.3%; Japan 4.3%; Canada 2.6%.
Exports (2006): U.S.$39,700,000 (electrical switches 43.8%; telecommunications equipment/parts 25.4%; generators 9.8%; beverages [water and beer] 5.5%). *Major export destinations:* United States 89.3%; United Kingdom 2.3%; Trinidad and Tobago 1.5%.

Transport and communications

Transport. Railroads (2003)[14]: length 36 mi, 58 km. Roads (2002): total length 238 mi, 383 km (paved [2001] 44%). Vehicles (2002): passenger cars 6,900; trucks and buses 2,500. Air transport (2001)[15]: passenger arrivals 135,237, passenger departures 134,937; cargo handled 1,802.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	11	239	PCs	2004	11	226
Telephones				Dailies	2005	...[16]	...[16]
Cellular	2004	10[17]	205[17]	Internet users	2002	10	214
Landline	2004	25	513	Broadband	2002	0.5[17]	11[17]

Education and health

Educational attainment (1991). Percentage of population age 25 and over having: no formal schooling 1.6%; primary education 45.9%; secondary 38.4%; higher 8.9%; other or not stated 5.2%. *Literacy* (2004): total population age 15 and over literate 97.8%.

Education (2003–04)

	schools	teachers	students	student/ teacher ratio
Primary (age 5–11)	23	367	6,394	17.4
Secondary (age 12–16)	7	421	4,548	10.8
Higher[18]	1	79	751	9.5

Health (2005): physicians 62 (1 per 796 persons); hospital beds 247 (1 per 200 persons); infant mortality rate per 1,000 live births 14.5; undernourished population (2002–04) 5,000 (10% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

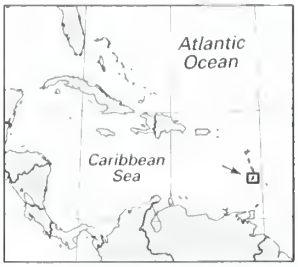
Military

Total active duty personnel: the defense force includes coast guard and police units. *Military expenditure as percentage of GDP:* n.a.

[1]The Federation of Saint Christopher and Nevis is the alternate official long-form name. [2]Includes 4 nonelective seats. [3]Preliminary figures. [4]Nevis has full internal self-government. The Nevis legislature is subordinate to the National Assembly only with regard to external affairs and defense. [5]Sugarcane production ended in July 2005. [6]Employed persons only. [7]Includes sugar manufacturing. [8]Excludes sugar manufacturing. [9]Finance, real estate includes Services. [10]Taxes less subsidies and less imputed bank service charges. [11]Detail does not add to total given because of rounding. [12]Weights of consumer price index components. [13]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [14]The light railway formerly serving the sugar industry on Saint Kitts began serving as a scenic tour route in 2003. [15]Saint Kitts airport only. [16]Circulation data unavailable for the one daily newspaper. [17]Subscribers. [18]Data for Medical University of the Americas at Charlestown, Nevis.

Internet resources for further information:
- **Official Web site of the Government of St. Kitts & Nevis**
  http://www.gov.kn
- **Eastern Caribbean Central Bank**
  http://www.eccb-centralbank.org

Saint Lucia



Official name: Saint Lucia.
Form of government: constitutional monarchy with a Parliament consisting of two legislative chambers (Senate [11]; House of Assembly [17[1]]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Castries.
Official language: English.
Official religion: none.
Monetary unit: Eastern Caribbean dollar (EC$); valuation (Sept. 8, 2008) 1 U.S.$ = EC$2.70; 1 £ = EC$4.77.

Area and population

Districts	Capitals	area sq mi	area sq km	population 2006 estimate
Anse-la-Raye	Anse-la-Raye	18	47	6,468
Canaries	Canaries			1,920
Castries	Castries	31	79	68,209
Choiseul	Choiseul	12	31	6,376
Dennery	Dennery	27	70	13,458
Gros Islet	Gros Islet	39	101	21,929
Laborie	Laborie	15	38	7,705
Micoud	Micoud	30	78	16,794
Soufrière	Soufriere	19	51	8,037
Vieux Fort	Vieux Fort	17	44	15,942
TOTAL		238[2]	617[2]	166,838

Demography

Population (2008): 171,000.
Density (2008): persons per sq mi 718.5, persons per sq km 277.1.
Urban-rural (2005): urban 28.0%; rural 72.0%.
Sex distribution (2005): male 48.91%; female 51.09%.
Age breakdown (2005): under 15, 28.4%; 15–29, 28.4%; 30–44, 21.5%; 45–59, 12.3%; 60–74, 6.5%; 75 and over, 2.9%.
Population projection: (2010) 175,000; (2020) 193,000.
Doubling time: 87 years.
Ethnic composition (2000): black 50%; mulatto 44%; East Indian 3%; white 1%; other 2%.
Religious affiliation (2001): Roman Catholic 67.5%; Protestant 22.0%, of which Seventh-day Adventist 8.4%, Pentecostal 5.6%; Rastafarian 2.1%; nonreligious 4.5%; other/unknown 3.9%.
Major towns (2001): Castries 10,634 (urban area 37,962); Vieux Fort (2004) 4,900; Micoud (2004) 4,000; Soufrière (2004) 3,600.

Vital statistics

Birth rate per 1,000 population (2005): 15.1 (world avg. 20.3); within marriage 15.0%; outside of marriage 85.0%.
Death rate per 1,000 population (2005): 7.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 7.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.21.
Marriage/divorce rates per 1,000 population (2005): 3.0/0.7.
Life expectancy at birth (2005): male 70.0 years; female 77.4 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 192.7, of which cerebrovascular diseases 75.9; malignant neoplasms (cancers) 101.8; diabetes mellitus 77.4; communicable diseases 39.4.

National economy

Budget (2005). Revenue: EC$575,700,000 (tax revenue 93.9%, of which taxes, duties, and service charges on imports 47.7%, taxes on domestic goods and services 15.5%, taxes on company profits 10.5%; nontax revenue 6.1%). Expenditures: EC$663,200,000 (current expenditures 74.9%, of which interest payments 10.6%; development expenditures 25.1%).
Public debt (external, outstanding; 2007–08): U.S.$397,500,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 34,000, coconuts 14,000, roots and tubers 4,800, plantains 750, pepper 260, ginger 70, cocoa beans 40; livestock (number of live animals) 15,000 pigs, 12,500 sheep, 12,500 cattle, 9,900 goats; roundwood, n.a.; fisheries production (2006) 1,496, of which tuna 410 (from aquaculture, negligible). Mining and quarrying: excavation of sand for local construction and pumice. Manufacturing (value of production in EC$'000; 2007): food, beverages (significantly alcoholic beverages), and tobacco products 81,005; electrical products 31,489; paper products and cardboard boxes 21,253; coconut oil 2,594. Energy production (consumption): electricity (kW-hr; 2005) 310,000,000 (310,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (121,000); natural gas, none (none).
Population economically active (2004): total 80,600; activity rate of total population 49.7% (participation rates: ages 15 and over, 68.6%; female [2000] 47.2%; unemployed [2006] 15.7%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.3	105.0	106.0	107.6	111.9	114.6	117.5

Household income and expenditure. Average household size (2001) 3.2; income per household: n.a.; sources of income: n.a.; expenditure (1984)[3]: food 46.8%; housing 13.5%; clothing and footwear 6.5%; transportation and communication 6.3%.

Gross national income (GNI; 2007): U.S.$929,000,000 (U.S.$5,530 per capita); purchasing power parity GNI (U.S.$9,000 per capita).

Structure of gross domestic product and labour force

	2007 in value EC$'000,000	2007 % of total value	2004 labour force	2004 % of labour force
Agriculture, fishing	80.5	3.8	10,500	13.0
Mining	7.7	0.4	...	...
Manufacturing	137.4	6.5	4,590	5.7
Construction	169.2	8.0	5,650	7.0
Public utilities	91.4	4.3	410	0.5
Transportation and communications	415.2	19.7	3,440	4.3
Trade, restaurants	562.0	26.6	19,550	24.3
Finance, real estate	446.0	21.1	4,710	5.8
Pub. admin., defense	297.9	14.1	8,470	10.5
Services	91.6	4.3	4,550	5.6
Other	–187.7[4]	–8.9[4]	18,730[5]	23.2[5]
TOTAL	2,111.4[6]	100.0[6]	80,600	100.0[6]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 347; remittances (2007) 3; foreign direct investment (2004–06 avg.) 94; official development assistance (2006) 18. Disbursements for (U.S.$'000,000): tourism (2006) 43; remittances (2007) 1.
Land use as % of total land area (2000): in temporary crops *c.* 7%, in permanent crops *c.* 23%, in pasture *c.* 3%; overall forest area *c.* 15%.

Foreign trade[7]

Balance of trade (current prices)

	2001	2002	2003	2004	2005
U.S.$'000,000	–231.0	–252.9	–345.2	–341.8	–418.4
% of total	72.1%	67.1%	73.4%	68.2%	76.5%

Imports (2006): U.S.$592,300,000 (food 15.9%; machinery and apparatus 15.3%; road vehicles 10.2%; chemicals and chemical products 6.9%; base and fabricated metals 6.2%; refined petroleum 5.7%). *Major import sources* (2006): United States 39.2%; Trinidad and Tobago 16.8%; United Kingdom 6.9%; Japan 6.3%; Barbados 4.4%.
Exports (2005): U.S.$64,200,000 (bananas 24.1%; beer 16.2%; refined petroleum 15.4%; nonelectrical machinery and equipment 6.7%; paperboard cartons 5.1%). *Major export destinations* (2005): United Kingdom 26.0%; Trinidad and Tobago 22.4%; United States 14.0%; Barbados 10.1%; Grenada 5.1%.

Transport and communications

Transport. Railroads: none. Roads (1999): total length 750 mi, 1,210 km (paved 5%). Vehicles (2001): passenger cars 22,453; trucks and buses 8,972. Air transport (2001)[8]: passenger arrivals and departures 679,000; cargo unloaded and loaded 3,500 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	46	291	PCs	2004	26	173
Telephones				Dailies	2005	0	0
Cellular	2005	106[9]	657[9]	Internet users	2004	55	339
Landline	2002	51	336	Broadband	2005	...	...

Education and health

Educational attainment (2004). Percentage of population age 15 and over having: no formal schooling 6.7%; incomplete primary education 7.4%; complete primary 45.0%; secondary 28.6%; higher vocational 6.2%; university 3.0%; other/unknown 3.1%. *Literacy* (2004): 94.8%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 5–11)	75	919	21,329	23.2
Secondary (age 12–16)	23	855	14,699	17.2
Higher[10]	1	114	1,689	14.8

Health (2005): physicians 83 (1 per 1,983 persons); hospital beds 477 (1 per 345 persons); infant mortality rate per 1,000 live births 18.9; undernourished population (2002–04) 8,000 (5% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

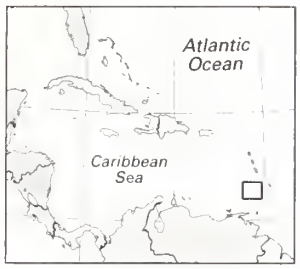
Military

Total active duty personnel (2004): [11].

[1]Represents elected seats only; the speaker may be elected from outside the House of Assembly. [2]Total includes the uninhabited 30 sq mi (78 sq km) Central Forest Reserve. [3]Weights of consumer price index components. [4]Less imputed bank service charges. [5]Includes 14,700 unemployed and 4,030 inadequately defined. [6]Detail does not add to total given because of rounding. [7]Imports c.i.f.; exports f.o.b. in commodities and trading partners. [8]Combined data for both Castries and Vieux Fort airports. [9]Subscribers. [10]Arthur Lewis Community College only. [11]The 300-member police force includes a specially trained paramilitary unit and a coast guard unit.

Internet resources for further information:
- **Saint Lucian Government Statistics Department**
  http://www.stats.gov.lc
- **Eastern Caribbean Central Bank**
  http://www.ecch-centralbank.org

Saint Vincent and the Grenadines



Official name: Saint Vincent and the Grenadines.
Form of government: constitutional monarchy with one legislative house (House of Assembly [22[1]]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Kingstown.
Official language: English.
Official religion: none.
Monetary unit: Eastern Caribbean dollar (EC$); valuation (Sept. 8, 2008) 1 U.S.$ = EC$2.70; 1 £ = EC$4.77.

Area and population

Census Divisions[3]	area sq mi	area sq km	population 2004[2] estimate
Island of Saint Vincent			
Barrouallie	14 2	36.8	5,142
Bridgetown	7.2	18.6	6,381
Calliaqua	11.8	30 6	21,376
Chateaubelair	30.9	80.0	5,725
Cofonarie	13.4	34 7	7,052
Georgetown	22.2	57.5	6,576
Kingstown (city)	1.9	4.9	13,044
Kingstown (suburbs)	6.4	16.6	12,263
Layou	11 1	28.7	5,966
Marriaqua	9.4	24.3	7,770
Sandy Bay	5.3	13.7	2,640
Saint Vincent Grenadines			
Northern Grenadines	9.0	23.3	5,316
Southern Grenadines	7.5	19 4	3,380
TOTAL	150.3	389 3[4]	102,631

Demography

Population (2008): 106,000.
Density (2008): persons per sq mi 705.3, persons per sq km 272.3.
Urban-rural (2006): urban 46.3%; rural 53.7%.
Sex distribution (2005): male 50.85%; female 49.15%.
Age breakdown (2005): under 15, 27.1%; 15–29, 30.0%; 30–44, 22.1%; 45–59, 12.1%; 60–74, 5.8%; 75 and over, 2.9%.
Population projection: (2010) 107,000; (2020) 110,000.
Doubling time: 59 years.
Ethnic composition (1999): black 65.5%; mulatto 23.5%; Indo-Pakistani 5.5%; white 3.5%; black-Amerindian 2.0%.
Religious affiliation (2000): Protestant 47.0%; unaffiliated Christian 20.3%; independent Christian 11.7%; Roman Catholic 8.8%; Hindu 3.4%; Spiritist 1.8%; Muslim 1.5%; nonreligious 2.3%; other 3.2%.
Major cities (2006): Kingstown 18,200; Georgetown 1,700; Byera 1,400; Port Elizabeth (on Bequia in the Northern Grenadines) 850.

Vital statistics

Birth rate per 1,000 population (2006): 20.0 (world avg. 20.3); (2003) within marriage 15.6%; outside of marriage 84.4%.
Death rate per 1,000 population (2006): 6.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 13.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.20.
Marriage/divorce rates per 1,000 population (2003): 4.7/0.9.
Life expectancy at birth (2006): male 69.0 years; female 74.6 years.
Major causes of death per 100,000 population (2003): diseases of the circulatory system 252.4; diabetes mellitus 115.2; malignant neoplasms (cancers) 114.2; infectious and parasitic diseases 49.0; diseases of the respiratory system 42.2.

National economy

Budget (2006). Revenue: EC$399,240,000 (tax revenue 90.6%, of which taxes on international trade and transactions 40.6%, income tax 12.4%, corporate taxes 10.9%, stamp duty 9.6%; nontax revenue 9.4%). Expenditures: EC$456,740,000 (current expenditure 77.8%, of which wages and salaries 37.5%; development expenditure 22.2%).
Public debt (external, outstanding; 2005): U.S.$248,300,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 51,000, sugarcane 20,000, roots and tubers (significantly eddoes and dasheens[5]) 14,270, plantains 3,600, citrus fruits (2005) 3,225, coconuts 2,650, guavas and mangoes 1,600, apples 1,300, ginger (2002) 510, nutmegs 160, soursops and papayas are also grown; livestock (number of live animals) 12,000 sheep, 9,150 pigs, 7,200 goats, 5,000 cattle; roundwood, n.a.; fisheries production 2,745 (from aquaculture, none). Mining and quarrying: sand and gravel for local use. Manufacturing (value added in EC$'000,000; 2000): beverages and tobacco products 17.4; food 15.6; paper products and publishing 3.6; textiles, clothing, and footwear 3.3. Energy production (consumption): electricity (kW-hr; 2005) 124,000,000 (124,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (62,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 113; remittances (2006) 5.0; foreign direct investment (FDI; 2004–06 avg.) 64; official development assistance (2006) 4.7. Disbursements for (U.S.$'000,000): tourism (2005) 14; remittances (2006) 2.0; FDI (2001–05 avg.) negligible.
Gross national income (GNI; 2007): U.S.$507,000,000 (U.S.$4,210 per capita); purchasing power parity GNI (U.S.$6,890 per capita).

Structure of gross domestic product and labour force

	2005 in value EC$'000,000	2005 % of total value	2001 labour force	2001 % of labour force
Agriculture, forestry, fishing	79 2	6.8	5,303	12.1
Mining	2.2	0.2	104	0.2
Manufacturing	55.5	4 8	2,444	5.6
Construction	119 6	10.3	3,659	8.4
Public utilities	62.9	5.4	596	1.4
Transp. and commun.	183.3	15.8	2,594	5 9
Trade, restaurants	211.8	18.2	8,271	18.9
Finance, real estate	113 4	9.7	1,905	4.3
Pub. admin., defense	189 1	16.3	2,151	4.9
Services	20.5	1.8	6,045	13.8
Other	124 8[6]	10 7[6]	10,707[7]	24 5[7]
TOTAL	1,162.2[4]	100.0	43,779	100.0

Population economically active (2006): total 58,000; activity rate of total population 48.3% (participation rates: ages 15–64, 75.3%; female 41.4%; unemployed [2004] 12.0%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	100.8	101.6	101.9	104.9	108.8	112.1	119 9

Household income and expenditure. Average household size (1991) 3.9; income per household (1988) EC$4,579 (U.S.$1,696); sources of income: n.a.; expenditure (2001)[8]: food and beverages 53.6%, housing and energy 12.8%, clothing and footwear 8.9%, transportation and communications 6.9%.
Land use as % of total land area (2003): in temporary crops *c.* 18%, in permanent crops *c.* 18%, in pasture *c.* 5%; overall forest area (2005) *c.* 27%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−141.9	−141.5	−163.0	−188.6	−200.5	−233.2
% of total	61 4%	66.2%	68 1%	72.0%	71 5%	75.4%

Imports (2006): U.S.$271,300,000 (machinery and apparatus 17.4%; food 17.1%; refined petroleum 13.0%; base and fabricated metals 8.6%; chemicals and chemical products 8.0%). *Major import sources:* U.S. 32.7%; Trinidad and Tobago 25.9%; U.K. 7.1%; Japan 3.9%; Canada 3.6%.
Exports (2006): U.S.$38,100,000 (food 72.4%, of which bananas 29.4%, wheat flour 13.1%, roots and tubers 10.8%, rice 10.0%, foodstuff for animals 5.0%; base and fabricated metals 6.6%; aerated water 3.9%). *Major export destinations:* U.K. 25.5%; Trinidad and Tobago 14.7%; Barbados 13.9%; St. Lucia 12.1%; Antigua and Barbuda 7.9%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 515 mi, 829 km (paved *c.* 70%). Vehicles (2004[2]): passenger cars 12,196; trucks and buses 4,447. Air transport (2003): passenger arrivals 133,769; passenger departures 137,899.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	50	446	PCs	2005	16	152
Telephones				Dailies	2005		
Cellular	2007	111[9]	918[9]	Internet users	2007	57	473
Landline	2007	23	190	Broadband	2007	8.0[9]	75[9]

Education and health

Educational attainment (2001). Percentage of employed population having: no formal schooling 0.4%; primary education 55.6%; secondary 27.3%; higher vocational 15.1%; university 0.3%; other/unknown 1.3%. *Literacy* (2004): total population age 15 and over literate 88.1%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 5–11)	65	1,020	17,858	17 5
Secondary (age 12–18)	22	526	9,393	17.9
Voc., teacher tr.	6	22	387	17.6

Health (2005): physicians 72 (1 per 1,458 persons); hospital beds 472 (1 per 222 persons); infant mortality rate per 1,000 live births 15.7; undernourished population (2002–04) 10,000 (10% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

Military

Total active duty personnel (November 2007): no regular military forces; the paramilitary includes coast guard and police units.

[1]Includes 7 nonelective seats (including 1 seat for the attorney-general serving ex officio). [2]January 1. [3]For statistical purposes and the election of legislative representatives only. [4]Detail does not add to total given because of rounding. [5]Varieties of taro roots. [6]Indirect taxes less subsidies and less imputed bank service charges. [7]Includes 9,258 unemployed. [8]Based on weights of consumer price index components. [9]Subscribers.

Internet resources for further information:
- **Eastern Caribbean Central Bank http://www.eccb-centralbank.org**
- **Official Website of St. Vincent and the Grenadines http://www.gov.vc**

Samoa

Official name: Malo Sa'oloto Tuto'atasi o Samoa (Samoan); Independent State of Samoa (English).
Form of government: mix of parliamentary democracy and Samoan customs with one legislative house (Legislative Assembly [49]).
Chief of state: Head of State.
Head of government: Prime Minister.
Capital: Apia.
Official languages: Samoan; English.
Official religion: none.
Monetary unit: tala (SAT); valuation (Sept. 8, 2008) 1 U.S.$ = SAT 2.70; 1 £ = SAT 4.77.

Area and population

Islands Districts	Largest towns	area sq mi	area sq km	population 2006 preliminary census
Savai'i	Malaeai	649[1]	1,682	46,477
Fa'aseleleaga		103	266	13,241
Gaga'emauga		86	223	7,334
Gaga'ifomauga		141	365	4,801
Palauli		202	523	9,064
Salupa'itea		49	127	5,270
Vaisigano		69	178	6,474
other[2]		—	—	293
Upolu[3]	Apia	444	1,150	132,709
A'ana[3]		75	193	20,486
Aiga-i-le-Tai		10	27	4,766
Atua[3]		159	413	21,172
Tuamasaga		185	479	82,239
Vaa-o-Fonoti		15	38	1,618
other[2]		—	—	2,428
TOTAL		1,093	2,831[1]	179,186

Demography

Population (2008): 180,000.
Density (2008): persons per sq mi 164.7, persons per sq km 63.6.
Urban-rural (2007): urban 23.0%; rural 77.0%.
Sex distribution (2006): male 51.88%; female 48.12%.
Age breakdown (2001): under 15, 40.7%; 15–29, 25.5%; 30–44, 17.8%; 45–59, 9.3%; 60–74, 5.0%; 75–84, 1.3%; 85 and over, 0.2%; unknown 0.2%.
Population projection: (2010) 180,000; (2020) 184,000.
Doubling time: 33 years.
Ethnic composition (2000): Samoan (Polynesian) 88.1%; Euronesian (European and Polynesian) 10.1%; European and U.S. white 1.2%; other 0.6%.
Religious affiliation (2001): Congregational 34.8%; Roman Catholic 19.6%; Methodist 15.0%; Mormon 12.7%; Assemblies of God 6.6%; other Christian 9.6%; other/unknown 1.7%.
Major towns (2006): Apia 37,237 (urban agglomeration 60,702); Vaitele 6,294[4]; Faleasi'u 3,548; Vailele 3,174[4]; Le'auva'a 3,015.

Vital statistics

Birth rate per 1,000 population (2005): 27.1 (world avg. 20.3).
Death rate per 1,000 population (2005): 5.6 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 21.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 4.17.
Marriage/divorce rates per 1,000 population: (2001) 4.7/(2005) 0.2.
Life expectancy at birth (2005): male 67.8 years; female 74.2 years.
Major causes of death per 100,000 population (2005–06): diseases of the circulatory system 56.3, of which hypertensive diseases 21.1; diabetes mellitus 24.9; malignant neoplasms (cancers) 22.2; accidents/injuries 21.7.

National economy

Budget (2005–06). Revenue: SAT 387,200,000 (tax revenue 70.5%, of which VAT 28.0%, excise taxes 17.8%, income tax 12.2%; grants 18.6%; nontax revenue 10.9%). Expenditures: SAT 391,700,000 (current expenditure 72.0%, of which general services 22.9%, economic services 14.4%, education 14.1%, health 12.1%; development expenditure 22.0%; net lending 6.0%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 146,000, bananas 23,000, taro 17,600, pineapples 4,600, pig meat 4,000, mangoes 4,000, avocados 1,150, cattle meat 1,000, honey 400, noni[5], n.a.; livestock (number of live animals) 202,000 pigs, 29,000 cattle; roundwood (2006) 131,000 cu m, of which fuelwood 53%; fisheries production 3,340 (from aquaculture, negligible). Mining and quarrying: n.a. Manufacturing (value of manufactured exports in SAT '000; 2006–07): beer 3,520; noni[5] juice 3,130; coconut cream 2,130. Energy production (consumption): electricity (kW-hr; 2006) 113,000,000 (90,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (49,000); natural gas, none (none).
Household income and expenditure. Average household size (2004) 7.2; average annual income per household (2002) SAT 23,116[6] (U.S.$6,849[6]); sources of income (2002): wages and salaries/self-employment 41.8%, own produce consumed 20.2%, gifts 16.2%, remittances 10.4%, other 11.4%; expenditure (2002)[7]: food 50.3%, transportation and communications 14.4%, alcohol and tobacco products 12.2%, household furnishings and operation 11.1%.
Population economically active (2003)[8]: total 64,000; activity rate of total population *c.* 35% (participation rates: ages 15–64, *c.* 63%; female *c.* 32%; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.8	112.2	112.3	130.7	133.1	138.0	145.7

Public debt (external, outstanding; March 2008): U.S.$192,000,000.
Gross national income (GNI; 2007): U.S.$454,000,000 (U.S.$2,430 per capita); purchasing power parity GNI (U.S.$3,910 per capita).

Structure of gross domestic product and labour force

	2006 in value SAT '000,000	2006 % of total value	2001 labour force	2001 % of labour force
Agriculture, fishing	142	11.4	20,076	37.9
Mining				
Manufacturing/handicrafts	161	12.9	7,327	13.8
Construction	112	9.0	1,669	3.2
Public utilities	59	4.7	905	1.7
Transp. and commun.	154	12.3	1,928	3.6
Trade, hotels, restaurants	303	24.2	4,275	8.1
Finance, real estate	164	13.1	1,348	2.5
Pub. admin., defense	105	8.4		
Services	65	5.2	11,471	21.7
Other	−15[9]	−1.2[9]	3,946[10]	7.5[10]
TOTAL	1,250	100.0	52,945	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2007–08) 110; remittances (2007–08) 122; foreign direct disinvestment (2004–06 avg.) −1; official development assistance (2006) 47. Disbursements for (U.S.$'000,000): tourism (2006) 6; remittances (2007) 2; foreign direct investment (2004–06 avg.) 1.
Land use as % of total land area (2003): in temporary crops 21.2%, in permanent crops 24.4%, in pasture 0.7%; overall forest area (2005) 60.4%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
SAT '000,000	−408	−363	−409	−475	−579	−557
% of total	81.5%	80.4%	86.1%	88.0%	91.0%	88.5%

Imports (2007): SAT 593,000,000 (petroleum products 20.6%, products for government 5.1%, unspecified 74.3%). *Major import sources* (2005–06): New Zealand 29.3%; Australia 18.8%; U.S. 10.6%; Fiji 7.0%; China 5.3%.
Exports (2007): SAT 36,000,000 (fresh fish 55.3%, noni[5] juice 10.6%, beer 8.6%, coconut cream 6.5%, noni[5] fruit 1.9%). *Major export destinations* (2005–06): American Samoa 49.1%; U.S. 32.6%; New Zealand 9.4%; Australia 3.4%; Japan 3.1%.

Transport and communications

Transport. Railroads: none. Roads (2001): total length 1,452 mi, 2,337 km (paved 14%). Vehicles (2005): passenger cars 4,638; trucks and buses 4,894. Air transport (2004)[11]: passenger-km 326,090,000; metric ton-km cargo 2,709,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	27	152	PCs	2005	4.0	22
Telephones				Dailies	2005	4.5[12]	25[12]
Cellular	2007	86[13]	479[13]	Internet users	2006	8.0	45
Landline	2005	19	106	Broadband	2005	0.1[13]	0.5[13]

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling 1.8%; incomplete/complete primary education 32.4%; incomplete/complete secondary 55.4%; higher 10.4%. *Literacy* (2003): total population over age 15 literate 99.7%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 5–12)	167	1,392	40,074	28.8
Secondary (age 13–17)	44	799	14,900	18.6
Higher[14]	1	91	1,400	15.4

Health (2005): physicians 50 (1 per 3,570 persons); hospital beds 229 (1 per 780 persons); infant mortality rate per 1,000 live births 27.7; undernourished population (2002–04) 7,000 (4% of total population based on the consumption of a minimum daily requirement of 1,870 calories).

Military

No military forces are maintained; informal defense ties exist with New Zealand.

[1]Detail does not add to total given because of rounding. [2]Population of institutionalized persons (including persons housed in boarding schools, hospitals, and prisons) and visitors. [3]Includes area and any population of offshore islets. [4]Within Apia urban agglomeration. [5]Fruit known locally as *nonu;* also known as Indian mulberry. [6]Includes estimated value of agricultural products consumed by grower. [7]Weights of consumer price index components. [8]Estimates of the ILO Employment Trends Unit. [9]Less imputed bank service charges. [10]Includes 2,620 unemployed. [11]Polynesian Airlines only. [12]Circulation for one of two daily newspapers. [13]Subscribers. [14]Data are for the National University of Samoa.

Internet resources for further information:
- **Central Bank of Samoa http://www.cbs.gov.ws**
- **Samoa Statistical Services Division http://www.spc.int/prism/Country/WS/stats**

San Marino

Official name: Repubblica di San Marino (Republic of San Marino).
Form of government: unitary multiparty republic with one legislative house (Great and General Council [60]).
Heads of state and government: Captains-Regent (2).
Capital: San Marino.
Official language: Italian.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Municipalities	Capitals	area sq mi	area sq km	population 2008[1] estimate
Acquaviva	Acquaviva	1.88	4.86	1,960
Borgo Maggiore	Borgo Maggiore	3.48	9.01	6,198
Chiesanuova	Chiesanuova	2.11	5.46	1,041
Città (San Marino)	San Marino	2.74	7.09	4,376
Domagnano	Domagnano	2.56	6.62	3,008
Faetano	Faetano	2.99	7.75	1,154
Fiorentino	Fiorentino	2.53	6.57	2,346
Montegiardino	Montegiardino	1.28	3.31	872
Serravalle	Serravalle	4.07	10.53	10,051
TOTAL		23.63[2]	61.20	31,006

Demography

Population (2008): 31,000.
Density (2008): persons per sq mi 1,312, persons per sq km 506.5.
Urban-rural (2005): urban *c.* 96%; rural *c.* 4%.
Sex distribution (2008[1]): male 49.08%; female 50.92%.
Age breakdown (2004)[3]: under 15, 15.3%; 15–29, 16.1%; 30–44, 27.3%; 45–59, 19.6%; 60–74, 14.1%; 75–84, 6.0%; 85 and over, 1.6%.
Population projection: (2010) 32,000; (2020) 34,000.
Ethnic composition (2006): Sammarinesi 87.0%; Italian 11.4%; other 1.6%.
Religious affiliation (2000): Roman Catholic 88.7%; other Christian 3.5%; nonreligious 5.1%; other 2.7%.
Major municipalities (2008[1]): Serravalle 10,051; Borgo Maggiore 6,198; San Marino 4,376.

Vital statistics

Birth rate per 1,000 population (2006): 9.9 (world avg. 20.3); within marriage (2005) 90.1%; outside of marriage 9.9%.
Death rate per 1,000 population (2006): 7.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 2.5 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.11.
Marriage/divorce rates per 1,000 population: (2007) 7.1/(2006) 2.8.
Life expectancy at birth (2007): male 79.6 years; female 85.3 years.
Major causes of death per 100,000 population (2007): diseases of the circulatory system 334.4; malignant neoplasms (cancers) 272.1; pneumonia 45.9; accidents, violence, and suicide 29.5.

National economy

Budget (2005). Revenue: €504,800,000 (VAT 23.6%; social contributions 21.3%; income tax 20.2%). Expenditures: €433,100,000 (wages and salaries 35.4%; social benefits 30.5%).
Public debt (2003): U.S.$52,900,000.
Tourism: number of visitor arrivals (2007–08) 2,166,066; receipts from visitors, n.a.; expenditures by nationals abroad, n.a.
Remittances: n.a.
Population economically active (2007): total 22,056; activity rate of total population 72.3% (participation rates: ages 15–64 [2002] 72.1%[4]; female 41.9%; unemployed 2.6%).

Price and earnings indexes (2003 = 100)

	2003	2004	2005	2006	2007
Consumer price index	100.0	101.4	103.1	105.3	107.9
Annual earnings index	100.0	100.7	103.0	106.2	. .

Household income and expenditure. Average household size (2008[1])[5] 2.3; income per household: n.a.; sources of income: n.a.; expenditure (2006)[5]: food and beverages 21.3%, housing 15.3%, transportation 10.6%, vacation and recreation 10.4%, restaurants 10.2%, clothing and footwear 5.6%, energy 5.4%, household furnishings 4.4%.
Production (metric tons except as noted). Agriculture, forestry, fishing: small amounts of wheat, grapes, and barley; livestock (number of live animals; 2005) 991 cattle, 91 sheep, 32 pigs. Quarrying: building stone is an important export product. Manufacturing (2005): processed meats 283,674 kg, of which beef 270,616 kg, veal 8,549 kg, pork 3,615 kg; cheese 56,610 kg; butter 8,110 kg; pasteurized milk 630,784 litres; yogurt (2004) 10,314 litres; other major products include electrical appliances, musical instruments, printing ink, paint, cosmetics, furniture, floor tiles, gold and silver jewelry, clothing, and postage stamps. Energy production (consumption): all electrical power is imported via electrical grid from Italy (kW-hr; consumption [2006] 230,070,000); coal, none (n.a.); crude petroleum, none (none); petroleum products, none (n.a.); natural gas (cu m; 2006) none (54,888,000).
Gross national income (GNI; 2007): U.S.$1,493,000,000 (U.S.$48,285 per capita); purchasing power parity GNI, n.a.

Structure of gross domestic product and labour force

	2007 in value €'000,000[6]	% of total value	labour force	% of labour force
Agriculture	1.2	0.1	82	0.4
Manufacturing	464.0	38.0	6,422	29.1
Construction	79.4	6.5	1,687	7.7
Public utilities				.
Mining				
Transp. and commun	20.7	1.7	560	2.5
Trade, hotels	139.2	11.4	3,546	16.1
Finance and insurance	227.1	18.6	3,885	17.6
Services	133.1	10.9	1,266	5.7
Pub. admin., defense	156.3	12.8	4,020	18.2
Other		.	588[7]	2.7[7]
TOTAL	1,221.0	100.0	22,056	100.0

Land use as % of total land area (2003): in temporary crops *c.* 17%, in permanent crops, n.a., in pasture n.a.; overall forest (2005) *c.* 2%.

Foreign trade[8]

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.$'000,000	–53.3	–54.4	–91.0	–94.9	–54.6	–51.0
% of total	1.5%	1.8%	2.8%	2.3%	1.1%	1.0%

Imports (2005): U.S.$2,582,000,000 (manufactured goods of all kinds, petroleum products, natural gas, electricity, and gold). *Major import source* (2004): significantly Italy.
Exports (2005): U.S.$2,531,000,000 (goods include electronics, postage stamps, leather products, ceramics, wine, wood products, and building stone). *Major export destinations* (2004): Italy 90%; remainder 10%.

Transport and communications

Transport. Railroads: none (nearest rail terminal is at Rimini, Italy, 17 mi [27 km] northeast). Roads (2001): total length 156 mi, 252 km. Vehicles (2007): passenger cars 34,025; trucks and buses 5,084. Air transport: a heliport provides passenger and cargo service between San Marino and Rimini, Italy, during the summer months.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	25	893	PCs	2003	23	819
Telephones				Dailies	2007	0.8[9]	26[9]
Cellular	2006	17[10]	576[10]	Internet users	2006	15	510
Landline	2006	21	696	Broadband	2006	1.5[10]	50[10]

Education and health

Educational attainment (2007). Percentage of population age 15 and over having: basic literacy or primary education 55.3%; secondary or vocational 34.5%; higher degree 10.2%. *Literacy* (2001): total population age 15 and over literate 98.7%; males literate 98.9%; females literate 98.4%.

Education (2007–08)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	14	248	1,573	6.3
Secondary (age 11–18)[11]	7[12]	221[12]	1,463	6.1[12]
Higher[11]	1		31	.

Health (2002): physicians 117 (1 per 230 persons); hospital beds 134 (1 per 191 persons); infant mortality rate per 1,000 live births (2004) 3.4; undernourished population, n.a.

Military

Total active duty personnel (November 2007): [13]. *Military expenditure as percentage of GDP:* n.a.

[1]June. [2]Detail does not add to total given because of rounding. [3]Based on derived percentages from official age-breakdown pyramid. [4]Percentage includes cross-border workers. [5]Data is for families. [6]Figures calculated using percentage breakdowns. [7]Includes 573 unemployed. [8]A customs union with Italy has existed since 1862. [9]Circulation of the daily newspaper *San Marino Oggi* only. [10]Subscribers. [11]Excludes 760 secondary students and 898 university students enrolled abroad. [12]2005–06. [13]Defense is the responsibility of Italy: a small voluntary military force performs ceremonial duties and provides limited assistance to police.

Internet resource for further information:
- **Office of Economic Planning: Data Processing and Statistics**
  http://www.upeceds.sm/eng

São Tomé and Príncipe

Official name: República democrática de São Tomé e Príncipe (Democratic Republic of São Tomé and Príncipe).
Form of government: multiparty republic with one legislative house (National Assembly [55]).
Chief of state: President.
Head of government: Prime Minister.
Capital: São Tomé.
Official language: Portuguese.
Official religion: none.
Monetary unit: dobra (Db); valuation (Sept. 8, 2008) 1 U.S.$ = Db 14,400; 1 £ = Db 25,440.

Area and population

Islands	Capitals	area sq mi	area sq km	population 2006 estimate
São Tomé		332	859	145,175
Districts				
Aqua Grande	São Tomé	7	17	56,492
Cantagalo	Santana	46	119	14,681
Caué	São João Angolares	103	267	6,324
Lembá	Neves	88	229	11,759
Lobata	Guadalupe	41	105	17,251
Me-Zóchi	Trindade	47	122	38,668
Príncipe		55	142	6,737
Autonomous Region				
Príncipe	Santo António	55	142	6,737
TOTAL		386[1]	1,001	151,912

Demography

Population (2008): 160,000.
Density (2008): persons per sq mi 414.5, persons per sq km 159.8.
Urban-rural (2007): urban 59.9%; rural 40.1%.
Sex distribution (2006): male 48.63%, female 51.37%.
Age breakdown (2006): under 15, 41.2%; 15–29, 30.8%; 30–44, 14.6%; 45–59, 7.8%; 60–74, 4.1%; 75 and over, 1.5%.
Population projection: (2010) 165,000; (2020) 197,000.
Doubling time: 27 years.
Ethnic composition (2000): black-white admixture 79.5%; Fang 10.0%; angolares (descendants of former Angolan slaves) 7.6%; Portuguese 1.9%; other 1.0%.
Religious affiliation (2005): Roman Catholic *c.* 80%; Protestant *c.* 15%; Muslim *c.* 3%; other *c.* 2%.
Major urban areas (2001): São Tomé 49,957; Neves 6,635; Santana 6,228; Trindade 6,049; Santo António (on Príncipe) 1,010.

Vital statistics

Birth rate per 1,000 population (2006). 33.4 (world avg. 20.3).
Death rate per 1,000 population (2006): 7.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 26.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 5.71.
Marriage/divorce rates per 1,000 population (2003): 2.2/n.a.
Life expectancy at birth (2006): male 63.5 years; female 68.5 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 253.7, of which malaria 52.7; diseases of the circulatory system 198.6; accidents and injuries 74.3; malignant neoplasms 69.0; iron-deficiency anemia 50.2.

National economy

Budget (2005). Revenue: Db 972,100,000,000 (petroleum exploration bonuses 57.8%; grants 18.9%; taxes 18.9%, of which consumption taxes 7.1%; nontax revenue 4.4%). Expenditures: Db 545,500,000,000 (current expenditure 58.7%; capital expenditure 35.5%; other 5.8%).
Public debt (external, outstanding; 2005): U.S.$293,700,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): oil palm fruit 40,000, coconuts 28,000, taro 27,000, bananas 27,000, vegetables 6,500, cassava 5,800, cacao 3,500, corn (maize) 3,000, cinnamon 30, coffee 20; livestock (number of live animals) 5,000 goats, 4,600 cattle, 2,800 sheep, 350,000 chickens; roundwood (2006) 9,000 cu m, of which fuelwood, none; fisheries production (2006) 4,000 (from aquaculture, none). Mining and quarrying: some quarrying to support local construction industry. Manufacturing (value in Db; 1995): beer 880,000; clothing 679,000; lumber 369,000; bakery products 350,000; palm oil 228,000; soap 133,000; ceramics 87,000. Energy production (consumption): electricity (kW-hr; 2005) 19,000,000 (19,000,000); coal, none (none); crude petroleum, none[2] (none); petroleum products (metric tons; 2005) none (33,000); natural gas, none (none).
Household income and expenditure. Average household size (2004) 5.5; income per household: n.a.; sources of income: n.a.; expenditure (1995)[3]: food, beverages, and tobacco 71.9%, housing and energy 10.2%, transportation and communications 6.4%, clothing and footwear 5.3%, household durable goods 2.8%.
Population economically active (2006): total 53,266; activity rate of total population 35.1% (participation rates: ages 10 and over (2001)[4] 43.7%; female 41.6%; unemployed *c.* 30%).

Price index (2000 = 100)

	1999	2000	2001	2002	2003	2004	2005
Consumer price index	89.1	100.0	109.2	120.2	132.0	149.6	175.3

Gross national income (GNI; 2007): U.S.$138,000,000 (U.S.$870 per capita); purchasing power parity GNI (U.S.$1,630 per capita).

Structure of gross domestic product and labour force

	2004 in value Db '000,000	2004 % of total value	2001 labour force[4]	2001 % of labour force[4]
Agriculture, fishing	102,300	16.3	13,518	31.5
Mining	...	..	...	...
Manufacturing / Public utilities	26,300	4.2	2,893	6.7
Construction	61,200	9.7	4,403	10.2
Transp. and commun.	175,000	27.8	792	1.8
Trade			8,787	20.5
Finance	69,400	11.0	..	...
Pub. admin., defense	190,600	30.3	3,307	7.7
Services	4,500	0.7	9,237	21.5
TOTAL	629,300	100.0	42,937	100.0[1]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 14; remittances (2007) 2; foreign direct disinvestment (2004–06 avg.) –1; official development assistance (2006) 22. Disbursements for (U.S.$'000,000): tourism (2002) 0.6; remittances (2007) 1.
Land use as % of total land area (2003): in temporary crops *c.* 8%, in permanent crops *c.* 49%, in pasture *c.* 1%; overall forest area (2005) *c.* 28%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	–24.2	–26.2	–34.1	–37.8	–46.3	–67.0
% of total	78.6%	72.5%	72.1%	84.3%	87.2%	89.8%

Imports (2006): U.S.$70,853,000 (food and beverages 30.1%, petroleum products 20.4%, machinery and equipment 13.5%, construction materials 8.7%, transportation equipment 8.2%). *Major import sources:* Portugal 63.6%; Angola 18.3%; Belgium 4.6%; Gabon 3.5%.
Exports (2006): U.S.$3,820,000 (cocoa beans 64.9%, coffee 24.2%, remainder 10.9%). *Major export destinations:* Portugal 33.3%; The Netherlands 27.1%; Belgium 14.3%; France 8.9%; United States 5.3%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 199 mi, 320 km (paved 68%). Vehicles (1996): passenger cars 4,040; trucks and buses 1,540. Air transport (2001): passenger-km 7,000,000; short ton-km cargo, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	19	128	PCs	2005	6.0	38
Telephones				Dailies	2005	...[5]	...[5]
Cellular	2007	30[6]	191[6]	Internet users	2007	23	146
Landline	2007	7.7	49	Broadband	2007	2.5[6]	16[6]

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 0.3%; primary education 41.4%; lower secondary 25.0%; upper secondary/vocational 8.8%; higher 1.9%; unknown 22.6%.
Literacy (2006): total population age 15 and over literate *c.* 85%; males literate *c.* 92%; females literate *c.* 78%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	71[7]	929	29,784	32.1
Secondary (age 13–18) / Voc., teacher tr.	11[7]	...	7,367	...
		..	56	...
Higher	—	—	—	—

Health: physicians (2006) 58 (1 per 2,621 persons); hospital beds (1991) 532 (1 per 211 persons); infant mortality rate per 1,000 live births (2006) 43.9; undernourished population (2002–04) 15,000 (10% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (2005): 460 (army/coast guard 65.2%; presidential guard 34.8%). *Military expenditure as percentage of GDP* (2005): 1.2%; per capita expenditure U.S.$4.

[1]Detail does not add to total given because of rounding. [2]Licenses for petroleum exploration in an offshore area shared by São Tomé and Príncipe and Nigeria were awarded in March 2006. [3]Weights of consumer price index components. [4]Employed only. [5]No data available for the one daily newspaper. [6]Subscribers. [7]1998.

Internet resource for further information:
- **Instituto Nacional de Estatística**
  http://www.ine.st

Saudi Arabia

Official name: Al-Mamlakah al-ʿArabīyah as-Saʿūdīyah (Kingdom of Saudi Arabia).
Form of government: monarchy[1].
Head of state and government: King.
Capital: Riyadh.
Official language: Arabic.
Official religion: Islam.
Monetary unit: Saudi riyal (SR); valuation (Sept. 8, 2008) 1 U.S.$ = SR 3.75; 1 £ = SR 6.63.

Area and population

Administrative Regions	Capitals	area sq mi	area sq km	population 2007 census
ʿAsīr	Abha	29,611	76,693	1,786,401
Al-Bāhah	Al-Bāhah	3,830	9,921	393,180
Ḥāʾil	Ḥāʾil	40,111	103,887	558,083
Al-Hudūd ash-Shamālīyah (Northern Borders)	ʿArʿar	43,165	111,797	295,411
Al-Jawf	Sakākah	38,692	100,212	388,678
Jīzān	Jīzān	4,506	11,671	1,290,233
Al-Madīnah	Medina (Al-Madīnah)	58,684	151,990	1,632,259
Makkah	Mecca (Makkah)	59,123	153,128	6,111,576
Najrān	Najrān	57,727	149,511	459,931
Al-Qaṣīm	Buraydah	22,412	58,046	1,086,042
Ar-Riyāḍ	Riyadh (Ar-Riyāḍ)	156,078	404,240	5,922,361
Ash-Sharqīyah (Eastern Province)	Ad-Dammām	259,662	672,522	3,566,789
Tabūk	Tabūk	56,399	146,072	751,634
TOTAL		830,000	2,149,690	24,242,578

Demography

Population (2008): 24,780,000[2].
Density (2008): persons per sq mi 29.9, persons per sq km 11.5.
Urban-rural (2005): urban 81.0%; rural 19.0%.
Sex distribution (2007): male 55.24%; female 44.76%.
Age breakdown (2007): under 15, 32.6%; 15–29, 27.5%; 30–44, 25.2%; 45–59, 10.5%; 60–74, 3.3%; 75 and over, 0.9%.
Population projection: (2010) 25,890,000; (2020) 31,450,000.
Doubling time: 26 years.
Ethnic composition (2005): Saudi Arab *c.* 74%; expatriates *c.* 26%, of which Indian *c.* 5%, Bangladeshi *c.* 3.5%, Pakistani *c.* 3.5%, Filipino *c.* 3%, Egyptian *c.* 3%, Palestinian *c.* 1%, other *c.* 7%.
Religious affiliation (2000): Muslim *c.* 94%, of which Sunnī *c.* 84%, Shīʿī *c.* 10%; Christian *c.* 3.5%, of which Roman Catholic *c.* 3%; Hindu *c.* 1%; non-religious/other *c.* 1.5%.
Major cities (2007)[3]: Riyadh 4,465,000; Jiddah 3,012,000; Mecca 1,385,000; Medina 1,010,000; Ad-Dammām 822,000.

Vital statistics

Birth rate per 1,000 population (2007): 24.5 (world avg. 20.3).
Death rate per 1,000 population (2007): 3.9 (world avg. 8.6).
Marriage/divorce rates per 1,000 population (2007): 4.8/1.0.
Total fertility rate (avg. births per childbearing woman; 2007): 3.17.
Life expectancy at birth (2006): male 73.7 years; female 77.8 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 144, of which ischemic heart disease 69; accidents and violence 66; malignant neoplasms (cancers) 44; diabetes mellitus 20.

National economy

Budget (2007). Revenue: SR 642,800,000,000 (oil revenues 87.5%). Expenditures: SR 466,248,000,000 (current expenditures 74.5%; capital expenditures 25.5%).
National debt (public only; end of 2007): *c.* U.S.$71,200,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 2,700,000, alfalfa (2006) 1,644,661, dates 970,000, potatoes 570,000, tomatoes 500,000, sorghum 243,000, cucumbers 212,000, grapes 132,000, corn (maize) 91,000; livestock (number of live animals) 7,000,000 sheep, 2,200,000 goats, 372,000 cattle, 260,000 camels; roundwood, n.a.; fisheries production (2006) 81,057 (from aquaculture 19%). Mining and quarrying (2007): gypsum 537,537; silver 8,230 kg; gold 4,048 kg. Manufacturing (value added in U.S.$'000,000; 1998): industrial chemicals 3,349; refined petroleum 1,806; cement, bricks, and tiles 1,505; fabricated metal products 1,129; food products 990; iron and steel 615. Energy production (consumption): electricity (kW-hr; 2006) 156,119,000,000 ([2007] 169,302,800,000); coal, none (none); crude petroleum (barrels; 2007–08) 3,291,300,000 (69,390,000); petroleum products (metric tons; 2005) 115,372,000 (63,272,000); natural gas (cu m; 2006) 75,853,300,000 ([2005] 71,237,600,000).
Land use as % of total land area (2003): in temporary crops 1.7%, in permanent crops 0.1%, in pasture 79.1%; overall forest area (2005) 1.3%.
Population economically active (2007): total 8,229,654, of which 4,029,955 Saudi workers and 4,199,699 foreign nationals; activity rate of total population 34.0% (participation rates: ages 15–64, 51.8%; female 15.4%; unemployed 5.6%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index[4]	98.9	99.1	99.7	100.0	100.7	102.9	107.2

Gross national income (GNI; 2007): U.S.$373,490,000,000 (U.S.$15,440 per capita); purchasing power parity GNI (U.S.$22,910 per capita).

Structure of gross domestic product and labour force

	2007 in value SR '000,000	% of total value	labour force	% of labour force
Agriculture	40,130	2.8	364,184	4.4
Petroleum and natural gas[5]	719,636	50.9	102,807	1.3
Other mining	3,291	0.2		
Manufacturing[6]	136,003	9.6	565,774	6.8
Construction	64,721	4.6	793,586	9.7
Public utilities	12,419	0.9	74,381	0.9
Transp. and commun.	45,078	3.2	343,552	4.2
Trade, hotels	73,762	5.2	1,498,967	18.2
Finance, real estate	110,146	7.8	334,034	4.1
Pub. admin., defense	185,135	13.1	1,400,092	17.0
Services	30,663	2.2	2,288,973	27.8
Other	–6,980[7]	–0.5[7]	463,315[8]	5.6[8]
TOTAL	1,414,006[9]	100.0	8,229,654[9, 10]	100.0[10]

Household income and expenditure. Average household size (2006) 6.0; income per household: n.a.; sources of income: n.a.; expenditure (1998–99): food and nonalcoholic beverages 37.3%, transportation 18.9%, housing and energy 15.7%, household furnishings 9.7%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2007) 5,230; remittances (2007) n.a.; foreign direct investment (FDI; 2004–06 avg.) 10,777; official development assistance (2006) 25. Disbursements for (U.S.$'000,000): tourism (2007) 4,883; remittances (2007) 15,611; FDI (2004–06 avg.) 882.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
SR '000,000,000	+150.7	+211.2	+304.7	+454.2	+529.9	+539.4
% of total	38.4%	43.3%	47.6%	50.5%	50.3%	44.4%

Imports (2007): SR 338,088,000,000 (machinery and apparatus 29.5%; transport equipment 17.6%; base and fabricated metals 15.0%; food and live animals 13.3%; chemicals and chemical products 11.8%). *Major import sources:* U.S. 13.6%; China 9.7%; Germany 8.9%; Japan 8.7%; Italy 4.5%.
Exports (2007): SR 877,457,000,000 (crude petroleum 75.8%; refined petroleum products 12.2%; other mineral fuels [mostly natural gas] 6.2%). *Major export destinations* (2006): Japan 16.5%; U.S. 15.1%; South Korea 9.2%; China 6.3%; India 6.1%.

Transport and communications

Transport. Railroads (2007): route length (2006) 1,392 km; passenger-km 343,000,000; metric ton-km cargo 1,257,000,000. Roads (2007): total length 178,946 km (paved 100%). Vehicles (2001): passenger cars 4,452,793; trucks and buses 4,110,271. Air transport (2007)[12]: passenger-km 26,904,000,000; metric ton-km cargo 1,238,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	6,576	292	PCs	2005	8,184	354
Telephones				Dailies	2007	833[13]	34[13]
Cellular	2007	23,381[14]	1,147[14]	Internet users	2007	6,200	251
Landline	2007	3,996	162	Broadband	2007	600[14]	24[14]

Education and health

Educational attainment (2007). Percentage of Saudi ([2000] non-Saudi) population age 10 and over who: are illiterate 13.7% (12.1%), are literate/have primary education 34.0% (40.6%), have some/completed secondary 42.1% (36.0%), have at least begun university 10.2% (11.3%). *Literacy* (2005): percentage of total population age 15 and over literate 80.4%; males 85.8%; females 73.3%.

Education (2007)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	13,454	217,555	2,442,482	11.2
Secondary (age 13–18)	12,019	195,888	2,157,622	11.0
Vocational	117	7,045	76,462	10.9
Higher	108[15]	27,964[16]	636,445[16]	22.8[16]

Health (2006): physicians 45,589 (1 per 520 persons); hospital beds 54,724 (1 per 433 persons); infant mortality rate per 1,000 live births (2007) 17.9; undernourished population (2002–04) 1,000,000 (4% of total population based on the consumption of a minimum daily requirement of 1,860 calories).

Military

Total active duty personnel (November 2007): 114,500[17] (army 65.5%, navy 13.5%, air force 17.5%, air defense forces 3.5%); U.S. troops (June 2008) 287. *Military expenditure as percentage of GDP* (2005): 8.2%; per capita expenditure U.S.$1,092.

[1]Additionally, there is the Consultative Council consisting of 150 appointed members. [2]Expatriates constitute 27% of total population. [3]Urban agglomerations. [4]Urban areas only. [5]Excludes refined petroleum. [6]Includes refined petroleum. [7]Import duties less imputed bank service charges. [8]Unemployed. [9]Detail does not add to total given because of rounding. [10]Includes 4,199,699 (51.0%) foreign workers. [11]Imports c.i.f., exports f.o.b. [12]Saudi Arabian Airlines only. [13]Circulation of 10 leading dailies only. [14]Subscribers. [15]2003. [16]2006. [17]Excludes 9,000 in an industrial security force, 100,000 national guard, and 15,500 paramilitary.

Internet resources for further information:
- **Ministry of Economy and Planning http://www.mep.gov.sa**
- **Saudi Arabian Monetary Agency http://www.sama.gov.sa/indexe.htm**

Senegal

Official name. Republique du Sénégal (Republic of Senegal).
Form of government: multiparty republic with two legislative houses (Senate[1] [100[2]]; National Assembly [150]).
Head of state and government: President assisted by Prime Minister.
Capital: Dakar.
Official language: French.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Area and population

Regions	area sq km	population 2007[3] estimate	Regions	area sq km	population 2007[3] estimate
Dakar	547	2,565,000	Matam	29,041	514,500
Diourbel	4,903	1,271,700	Saint-Louis	19,241	812,400
Fatick	7,910	675,500	Tambacounda	59,542	708,800
Kaolack	15,449	1,171,400	Thies	6,670	1,442,300
Kolda	21,112	951,800	Ziguinchor	7,352	468,900
Louga	25,254	761,000	TOTAL	197,021[4]	11,343,300

Demography

Population (2008): 12,688,000[5].
Density (2008): persons per sq mi 166.8, persons per sq km 64.4.
Urban-rural (2007): urban 42.1%; rural 57.9%.
Sex distribution (2006): male 49.99%; female 50.01%.
Age breakdown (2006): under 15, 42.2%; 15–29, 28.4%; 30–44, 16.0%; 45–59, 8.7%; 60–74, 3.9%; 75–84, 0.7%; 85 and over, 0.1%.
Population projection: (2010) 13,311,000; (2020) 16,442,000.
Doubling time: 26 years.
Ethnic composition (2000): Wolof 34.6%; Peul (Fulani) and Tukulor 27.1%; Serer 12.0%; Malinke (Mandingo) 9.7%; other 16.6%.
Religious affiliation (2005): Muslim *c.* 94%[6] (including Shī'ī *c.* 5%); Christian (mostly Roman Catholic) *c.* 4%; other *c.* 2%.
Major cities (2007[3]): Dakar 2,243,400[7]; Touba 529,200; Thiès 263,500; Kaolack 186,000; Mbour 181,800; Saint-Louis 171,300; Rufisque 162,100.

Vital statistics

Birth rate per 1,000 population (2006): 38.3 (world avg. 20.3).
Death rate per 1,000 population (2006): 11.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 27.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 5.13.
Life expectancy at birth (2006): male 55.0 years; female 57.7 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases *c.* 385, of which malaria *c.* 134; respiratory infections *c.* 165; cardiovascular diseases *c.* 119; perinatal conditions *c.* 91; accidents *c.* 81.

National economy

Budget (2005). Revenue: CFAF 955,800,000,000 (tax revenue 89.0%, of which taxes on domestic goods and services 28.7%, income taxes 21.4%, taxes on imports 19.7%; grants 7.9%; nontax revenue 3.1%). Expenditures: CFAF 1,084,400,000,000 (current expenditures 58.0%, of which public debt interest payments 4.3%; development expenditure 42.0%).
Public debt (external, outstanding; 2006): U.S.$1,712,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 836,000, peanuts (groundnuts) 427,093, millet 362,825, paddy rice 215,212, corn (maize) 185,188, cassava 178,172, sorghum 120,334, watermelons 117,579, oil palm fruit 71,000, seed cotton 49,972; livestock (number of live animals) 5,131,300 sheep, 4,382,900 goats, 3,180,900 cattle, 521,160 horses; roundwood (2006) 6,099,747 cu m, of which fuelwood 87%; fisheries production (2006) 377,885 (from aquaculture, negligible). Mining and quarrying (2006): calcium phosphate (crude rock) 584,000. Manufacturing (value added in U.S.$'000,000; 2002): food and food products 108; industrial chemicals 70; cement, bricks, and ceramics 31; paints, soaps, and pharmaceuticals 21; beverages 11. Energy production (consumption): electricity (kW-hr; 2005) 2,595,000,000 (2,595,000,000); coal, none (none); crude petroleum (barrels; 2005) none (6,641,000); petroleum products (metric tons; 2005) 883,000 (1,220,000); natural gas (cu m; 2005) 16,145,000 (16,145,000).
Population economically active (2003): total 4,383,000[8]; activity rate of total population 39.4%[8] (participation rates: ages 15–64, 71.5%[8]; female 42.0%[8]; unemployed [2005] *c.* 40%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.1	105.4	105.3	105.9	107.7	110.0	116.4

Household income and expenditure. Average household size (2005) 8.7; sources of income (1997–2000)[9]: agricultural 45%; other 55%; expenditure (2005): food and nonalcoholic beverages 54.8%, household furnishings 6.9%, housing and energy 6.3%, communications 6.0%, transportation 4.3%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2005) 242; remittances (2007) 874; foreign direct investment (2004–06 avg.) 60; official development assistance (2006) 825. Disbursements for (U.S.$'000,000): tourism (2005) 65; remittances (2007) 77.
Gross national income (GNI; 2007): U.S.$10,170,000,000 (U.S.$820 per capita); purchasing power parity GNI (U.S.$1,640 per capita).

Structure of gross domestic product and labour force

	2005 in value CFAF '000,000,000	2005 % of total value	1991 labour force	1991 % of labour force
Agriculture	668.3	14.7	1,789,467	65.3
Mining	45.2	1.0	1,998	0.1
Manufacturing	631.6	13.8	161,124	5.9
Public utilities	106.3	2.3	...	...
Construction	207.3	4.5	60,935	2.2
Transp. and commun.	409.6	9.0	58,081	2.1
Trade, hotels	715.9	15.7	378,241	13.8
Finance, Services	881.5	19.3	4,623	0.2
Pub. admin., defense	322.2	7.1	268,721	9.8
Other	573.3[10]	12.6[10]	16,286	0.6
TOTAL	4,561.2	100.0	2,739,476	100.0

Land use as % of total land area (2003): in temporary crops 12.8%, in permanent crops 0.2%, in pasture 29.3%; overall forest area (2005) 40.0%.

Foreign trade[11]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−945	−1,336	−1,244	−1,523	−2,027	−2,179
% of total	37.6%	49.0%	35.0%	36.7%	40.8%	42.2%

Imports (2006): U.S.$3,671,000,000 (mineral fuels 25.9%, of which refined petroleum 18.4%; food 19.0%, of which cereals 8.8%; chemicals and chemical products 9.4%; nonelectrical machinery and equipment 9.0%). *Major import sources:* France 24.4%; U.K. 6.0%; China 4.3%; Thailand 4.0%; Spain 3.8%.
Exports (2006): U.S.$1,492,000,000 (food 27.8%, of which fish 10.7%, crustaceans and mollusks 6.9%; refined petroleum 24.3%; portland cement 5.3%; phosphoric acid [and related products] 5.2%). *Major export destinations:* Mali 20.2%; bunker and ships' stores 16.2%; France 7.6%; The Gambia 5.6%; India 5.3%.

Transport and communications

Transport. Railroads (2005): route length 563 mi, 906 km; (2004) passenger-km 122,000,000; (2004) metric ton-km cargo 358,000,000. Roads (2003): total length 8,436 mi, 13,576 km (paved 29%). Vehicles (2004): passenger cars 147,000; trucks and buses 46,000. Air transport (2006)[12]: passenger-km 937,000,000; metric ton-km cargo, none.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	869	77	PCs	2005	250	21
Telephones				Dailies	2005	70[13]	6.5[13]
Cellular	2007	4,123[14]	333[14]	Internet users	2007	820	66
Landline	2007	269	22	Broadband	2007	38[14]	3.0[14]

Education and health

Educational attainment (2005)[15]. Percentage of population age 25 and over having: no formal schooling 68.2%; incomplete primary education 13.0%; complete primary 3.7%; incomplete secondary 9.5%; complete secondary 1.4%; higher 2.4%; unknown 1.8%. *Literacy* (2007): percentage of total population age 15 and over literate 44.0%; males literate 53.4%; females literate 34.9%.

Education (2003–04)

	schools[16]	teachers	students	student/teacher ratio
Primary (age 6–12)	5,670	32,005	1,382,700	43.2
Secondary (age 13–18)	591	13,654	360,000	26.4
Higher[17]	3	1,017	25,063	24.6

Health: physicians (2005) 693 (1 per 17,115 persons); hospital beds (1998) 3,582 (1 per 2,500 persons); infant mortality rate per 1,000 live births (2006) 61.4; undernourished population (2002–04) 2,100,000 (20% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

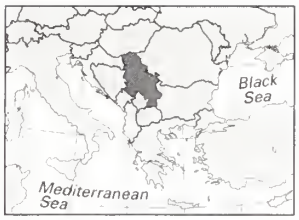
Total active duty personnel (November 2007): 13,620 (army 87.4%, navy 7.0%, air force 5.6%); French troops (November 2007) 841. *Military expenditure as percentage of GDP* (2005): 1.5%; per capita expenditure U.S.$11.

[1]Originally created in 1999, abolished in 2001, and reinstated in August 2007. [2]Includes 65 appointees of president. [3]December 31; official projection based on 2002 census. [4]Summed total of regions as reported in 2002 census; reported total from same source was 196,021 sq km. [5]Estimate of U.S. Bureau of the Census International Database (August 2006 update), including *c.* 3,000,000 abroad, many of whom are illegal workers. [6]Most citizens practice a syncretic form of Islam. [7]Includes communes of Pikine (2004; pop. 815,378) and Guédiawaye (2004; pop. 274,014), adjacent to Dakar commune (2004; pop. 1,009,256). [8]Estimate of the ILO Employment Trends Unit. [9]Approximate figures for span of years. [10]Taxes and duties on imports. [11]Imports c.i.f.; exports f.o.b. [12]Air Sénégal International only. [13]Circulation of 3 leading daily newspapers only. [14]Subscribers. [15]Based on the 2005 Senegal Demographic and Health Survey, of which 22,795 people were age 25 and over. [16]2002–03. [17]Universities only; 2005.

Internet resources for further information:

- **Agence Nationale de la Statistique et de la Démographie**
  http://www.ansd.sn
- **La Banque de France: La Zone Franc**
  http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm

Serbia



Official name: Republika Srbija (Republic of Serbia).
Form of government: republic with National Assembly (250).
Chief of state: President.
Head of government: Prime Minister.
Capital: Belgrade.
Official language: Serbian.
Official religion: none.
Monetary unit: Serbian dinar (CSD); valuation (Sept. 8, 2008) 1 U.S.$ = CSD 53.79; 1 £ = CSD 95.02.

Area and population

Administrative divisions[1]	area sq km	population 2005 estimate	Administrative divisions[1]	area sq km	population 2005 estimate
Central Serbia	55,962[2]	5,427,851	Zaječar	3,623	131,896
Districts			Zlatibor	6,140	307,622
Bor	3,507	140,367	**City**		
Braničevo	3,865	197,194	Belgrade	3,224	1,596,919
Jablanica	2,769	236,062			
Kolubara	2,474	187,629	Vojvodina, Autonomous Province of	21,536[2]	2,012,918
Mačva	3,268	322,703	**Districts**		
Morava	3,016	221,523	Central Banat	3,256	202,286
Nisava	2,729	379,076	North Bačka	1,784	196,843
Pčinja	3,520	229,707	North Banat	2,329	160,757
Pirot	2,761	101,538	South Bačka	4,016	598,331
Podunavlje	1,248	208,297	South Banat	4,245	310,862
Pomoravlje	2,614	223,391	Srem	3,486	337,216
Rasina	2,668	253,823	West Bačka	2,420	206,623
Raška	3,918	295,575	TOTAL	77,498[2]	7,440,769
Šumadija	2,387	295,241			
Toplica	2,231	99,288			

Demography

Population (2008): 7,352,000[3].
Density (2008)[3, 4]: persons per sq mi 245.7, persons per sq km 94.9.
Urban-rural (2002)[5]: urban 56.4%; rural 43.6%.
Sex distribution (2007)[5]: male 48.62%; female 51.38%.
Age breakdown (2002)[5]: under 15, 15.7%; 15–29, 20.2%; 30–44, 19.9%; 45–59, 21.1%; 60–74, 17.2%; 75–84, 4.7%; 85 and over, 0.6%; unknown 0.6%.
Population projection[5]: (2010) 7,297,000; (2020) 7,028,000.
Ethnic composition (2002)[5]: Serb 82.9%; Hungarian 3.9%; Bosniac 1.8%; Rom (Gypsy) 1.4%; Yugoslav 1.1%; Croat 0.9%; Montenegrin 0.9%; other 7.1%.
Religious affiliation (2002)[5]: Orthodox 85.0%; Roman Catholic 5.5%; Muslim 3.2%; Protestant 1.1%; other/unknown 5.2%.
Major cities (2002): Belgrade 1,120,092; Novi Sad 191,405; Niš 173,724; Kragujevac 146,373; Subotica 99,981.

Vital statistics

Birth rate per 1,000 population (2007)[5]: 9.2 (world avg. 20.3); within marriage 77.7%, outside of marriage 22.3%.
Death rate per 1,000 population (2007)[5]: 13.9 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007)[5]: 1.40.
Marriage/divorce rates per 1,000 population (2007)[5]: 5.6/1.2.
Life expectancy at birth (2007)[5]: male 70.7 years; female 76.2 years.
Major causes of death per 100,000 population (2005)[5]: diseases of the circulatory system 815.6; malignant neoplasms (cancers) 270.3; diseases of the respiratory system 57.2; accidents, violence, and poisoning 51.2.

National economy

Budget (2006)[5, 6]. Revenue: CSD 867,500,000,000 (social security contributions 26.7%; VAT 26.0%; personal income tax 13.7%; excises tax 10.0%; customs duties 5.2%; remainder 18.4%). Expenditures: CSD 898,400,000,000 (current expenditure 89.9%; capital expenditure 8.9%; remainder 1.2%).
Population economically active (2007)[5]: total 3,241,200; activity rate of total population 42.9% (participation rates: ages 15–64, 63.4%; female 43.4%; unemployed 18.1%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	195	233	256	284	330	369	392

Production (metric tons except as noted). Agriculture, forestry, fishing (2007)[7]: corn (maize) 3,904,825, sugar beets 3,206,380, wheat 1,863,811, cow's milk 1,700,000, potatoes 743,282, plums 680,566, pig meat 560,000, grapes 353,343, sunflower seeds 294,502; livestock (number of live animals) 3,998,927 pigs, 1,106,000 cattle; roundwood[7, 8] (2006) 3,170,000 cu m, of which fuelwood 58%; fisheries production[7] (2006) 7,463 (from aquaculture 65%). Mining and quarrying (2006)[7]: copper (metal content) 28,000; zinc (metal content) 2,100. Manufacturing (value added in CSD '000,000[5, 9]; 2006): food products and beverages 52,302; chemicals and chemical products 23,813; cement, bricks, and ceramics 11,532; fabricated metal products 11,056; base metals 9,407. Energy production (consumption)[10]: electricity (kW-hr; 2007) 35,360,000,000 ([2006] 26,253,000,000); coal (metric tons; 2006) 65,000[7] ([2005] 161,000[7, 8]); lignite (metric tons; 2007) 37,005,000 ([2005] 40,449,000[7, 8]); crude petroleum (barrels; 2006) 4,790,000[7] ([2005] 29,900,000[7, 8]); petroleum products (metric tons; 2005) 3,242,000[7, 8] (3,244,000[7, 8]); natural gas (cu m; 2007) 271,000,000 ([2005] 2,308,000,000[7, 8]).
Gross national income (GNI; 2007)[5]: U.S.$34,969,000,000 (U.S.$4,730 per capita); purchasing power parity GNI (U.S.$10,220 per capita).

Structure of gross domestic product and labour force

	2006		2007	
	in value CSD '000,000,000[5]	% of total value[5]	labour force[5]	% of labour force[5]
Agriculture, forestry, fishing	191.6	9.4	552,600	17.0
Mining and quarrying	28.4	1.4	41,300	1.3
Manufacturing	310.7	15.2	521,700	16.1
Construction	81.4	4.0	161,300	5.0
Public utilities	74.2	3.6	58,000	1.8
Transp. and commun.	138.4	6.8	169,800	5.2
Trade, hotels	240.9	11.8	470,800	14.5
Finance, real estate	351.1	17.2	131,900	4.1
Pub. admin., defense	68.0	3.3	141,900	4.4
Services	231.1	11.3	405,000	12.5
Other	326.2[11]	16.0[11]	586,900[12]	18.1[12]
TOTAL	2,042.0	100.0	3,241,200	100.0

Public debt (external, outstanding; September 2008): U.S.$8,559,000,000.
Household income and expenditure. Average household size (2006)[5] 3.2; average annual income per household CSD 394,740 (U.S.$5,620); sources of income: wages and salaries 47.7%, transfers 26.5%, self-employment 5.5%; expenditure: food and nonalcoholic beverages 35.1%, housing and energy 18.9%, transportation 11.2%, clothing and footwear 6.8%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 398[5]; remittances (2007) 4,910[8, 13]; foreign direct investment (FDI; 2004–06 avg.) 2,358[8, 13]; official development assistance (2006) 1,586[8, 13]. Disbursements for (U.S.$'000,000): tourism (2006) 322[5].
Land use as % of total land area (2002)[5]: in temporary crops 43.3%, in permanent crops 4.1%, in pasture 18.2%; overall forest area 25.2%.

Foreign trade[5, 14]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–3,228	–4,021	–6,469	–5,290	–6,230	–8,832
% of total	42.2%	37.7%	44.2%	34.7%	32.4%	33.3%

Imports (2006): U.S.$13,172,000,000 (mineral fuels 19.7%; machinery and apparatus 18.1%; chemicals and chemical products 14.2%; base metals 7.9%; road vehicles 7.2%). *Major import sources:* Russia 16.3%; Germany 9.5%; unspecified EU 9.2%; Italy 8.3%; China 5.9%.
Exports (2006): U.S.$6,428,000,000 (food 16.6%; iron and steel 13.6%; nonferrous metals 9.5%, of which copper 6.4%; machinery and apparatus 9.1%; apparel/clothing accessories 5.0%). *Major export destinations:* Italy 14.4%; Bos.–Her. 11.7%; Germany 9.9%; Montenegro 9.6%; Russia 4.8%.

Transport and communications

Transport[5]. Railroads (2006): route length (2005[15]) 3,809 km; passenger-km 684,000,000; metric ton-km cargo 4,232,000,000. Roads (2006): total length 23,995 mi, 38,616 km (paved 62%). Vehicles (2005): passenger cars 1,497,418; trucks and buses 257,642. Air transport (2006): passenger-km 1,252,000,000; metric ton-km cargo 5,470,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions[7, 8]	2000	2,980	279	PCs[7, 8]	2005	446	55
Telephones				Dailies[7, 8]	2002	1,015[16]	95[16]
Cellular	2007	8,453[13, 17]	890[13, 17]	Internet users	2007	1,500[13]	158[13]
Landline	2007	2,993[13]	315[13]	Broadband	2007	326[13, 17]	34[13, 17]

Education and health

Educational attainment (2002)[5]. Percentage of population age 15 and over having: no formal education/unknown 7.8%; incomplete primary education 16.2%; complete primary 23.9%; secondary 41.1%; higher 11.0%.

Education (2005–06)[5]

	schools	teachers	students	student/teacher ratio
Primary (age 7–14)	3,817	47,959	647,000	13.5
Secondary (age 15–18)	519	27,565	288,862	10.5
Higher[18]	272	6,304	238,710	37.9

Health (2006)[5]: physicians 20,157 (1 per 368 persons); hospital beds 43,115 (1 per 172 persons); infant mortality rate (2007) 7.1; undernourished population (2002–04) 900,000[7, 8] (9% of total population based on the consumption of a minimum daily requirement of 2,000 calories).

Military

Total active duty personnel (November 2007)[5]: 24,257 (army 46.1%, air force/air defense 17.1%, training/ministry of defense 36.8%). *Military expenditure as percentage of GDP* (2006) 2.3%[5]; per capita expenditure U.S.$995.

[1]Excludes Kosovo, a disputed transitional republic that declared its independence from Serbia on Feb. 17, 2008. [2]Summed total of district/city areas; reported total is based on older survey. [3]Excludes Kosovo, whose 2008 estimated population per a Kosovar source is 2,143,000. [4]Excludes the area of Kosovo, which is 10,887 sq km (4,203 sq mi). [5]Excludes Kosovo. [6]Consolidated general government. [7]Includes Kosovo. [8]Includes Montenegro. [9]In constant prices of 2002. [10]Energy data exclude Kosovo unless unit of data is specifically footnoted. [11]Taxes less subsidies. [12]Includes 585,500 unemployed. [13]Inclusion/exclusion of Kosovo unknown. [14]Imports t.o.b. in balance of trade and c.i.f. in commodities and trading partners. [15]January 1. [16]Circulation of daily newspapers. [17]Subscribers. [18]2006–07.

Internet resources for further information:

- **National Bank of Serbia http://www.nbs.yu/internet/english**
- **Statistical Office of the Republic of Serbia http://webrzs.statserb.sr.gov.yu/axd/en/index.php**

Seychelles

Official name: Repiblik Sesel (Creole); Republic of Seychelles (English); République des Seychelles (French).
Form of government: multiparty republic with one legislative house (National Assembly [34]).
Head of state and government: President.
Capital: Victoria.
Official languages: none[1].
Official religion: none.
Monetary unit: Seychelles rupee (roupi; SR); valuation (Sept. 8, 2008) 1 U.S.$ = SR 8.07; 1 £ = SR 14.25.

Area and population

Island Groups[2]	Principal towns	area sq mi	area sq km	population 2006 estimate
Inner (granitic) Islands				
La Digue		21.6[3]	56.0[3]	3,300[4]
Les Mamelles	. .	1.6	4.2	.. [4]
Mahé	Victoria	55.6	144.0	73,900
Praslin	...	15.3	39.5	7,400
Outer (coralline) Islands	.	81.6[5]	211.3[5]	...[4]
TOTAL		175.7	455.0	84,600

Demography

Population (2008): 85,500.
Density (2008): persons per sq mi 486.6, persons per sq km 187.9.
Urban-rural (2005): urban *c.* 53%; rural *c.* 47%.
Sex distribution (2008): male 51.75%; female 48.25%.
Age breakdown (2006): under 15, 23.8%; 15–29, 26.4%; 30–44, 24.4%; 45–59, 15.1%; 60–74, 7.0%; 75 and over, 3.3%.
Population projection: (2010) 86,000; (2020) 91,000.
Doubling time: 69 years.
Ethnic composition (2000): Seychellois Creole (mixture of Asian, African, and European) 93.2%; British 3.0%; French 1.8%; Chinese 0.5%; Indian 0.3%; other unspecified 1.2%.
Religious affiliation (2002): Roman Catholic 82.3%; Anglican 6.4%; other Christian 4.5%; Hindu 2.1%; Muslim 1.1%; other 2.1%; unknown 1.5%.
Major towns (2004): Victoria 23,200; Anse Royale 3,800.

Vital statistics

Birth rate per 1,000 population (2007): 17.6 (world avg. 20.3); (2007) within marriage 20.8%; outside of marriage 79.2%.
Death rate per 1,000 population (2007): 7.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 10.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.11.
Marriage/divorce rates per 1,000 population (2006): 4.6[6]/1.7.
Life expectancy at birth (2006): male 68.9 years; female 75.7 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 279.0; malignant neoplasms (cancers) 121.7; diseases of the respiratory system 88.7; diseases of the digestive system 37.8.

National economy

Budget (2006). Revenue: SR 2,476,000,000 (current revenue 97.1%, of which dividends and interest 14.0%, income and business tax 12.0%, indirect taxes on services 9.5%, trades tax 9.1%, indirect taxes on locally manufactured goods 8.8%, indirect taxes on imported goods 6.9%; grants 2.9%). Expenditures: SR 2,302,000,000 (current expenditure 82.5%, of which public debt interest charges 17.6%, education 8.6%, health 8.4%, social security contributions 6.4%, defense 3.8%; development expenditure 17.5%).
Public debt (2006): U.S.$1,035,000,000.
Gross national income (GNI; 2007): U.S.$762,000,000 (U.S.$8,960 per capita); purchasing power parity GNI (U.S.$13,560 per capita).

Structure of gross domestic product and labour force

	2006 in value SR '000,000	% of total value	labour force[7]	% of labour force[7]
Agriculture, fishing	107 4	2.5	1,189	3.0
Mining, quarrying	...	...	15	—
Manufacturing	673 8	15 9	4,465	11.3
Construction	540 7	12.7	3,702	9 4
Public utilities	107.0	2.5	1,089	2.7
Trade, hotels	929 6	21.9	7,978	20.2
Transportation and communications	801.2	18.8	3,366	8.5
Pub. admin., defense	562.0	13.2	6,710	17.0
Finance, real estate	566 9	13.3	2,370	6 0
Services			8,677	21.9
Other	–36.0[8]	–0 8[8]	—	—
TOTAL	4,252.6	100.0	39,561	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 3,200, eggs 2,200, bananas 2,000, assorted vegetables 1,750, cinnamon 315, tea 190; livestock (number of live animals) 18,700 pigs, 5,200 goats, 575,000 chickens; roundwood (2006) negligible; fisheries production (2006) 93,327 (from aquaculture 1%). Mining and quarrying (2006): granite 93,000. Manufacturing (2006): canned tuna 40,222; fish meal 14,821; copra 253; soft drinks 92,250 hectolitres; beer and stout 67,300 hectolitres; mineral water 60,270 hectolitres; fruit juices 30,950 hectolitres; cigarettes 19,000,000 units. Energy production (consumption): electricity (kW-hr; 2006) 251,000,000 ([2005] 220,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (189,000); natural gas, none (none).
Population economically active (2002): total 43,859; activity rate of total population 53.6% (participation rates: ages 15–64, 80.1%; female [1997] 47.6%; unemployed [2006] 2.6%).

Price and earnings indexes (2001 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	100.0	100.2	103.5	107.5	108.5	108.1	113.8
Monthly earnings index	100.0	101 4	105.4	108.5	111.7	112.9	...

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 228; remittances (2007) 15; foreign direct investment (FDI; 2004–06 avg.) 90; official development assistance (2006) 14. Disbursements for (U.S.$'000,000): tourism (2006) 36; remittances (2007) 17; FDI (2004–06 avg.) 8.
Household income and expenditure. Average household size (2004) 3.5; average annual income per household, n.a.; sources of income (1997): wages and salaries 77.2%, self-employment 3.8%, transfer payments 3.2%; expenditure (2001)[9]: food 25.5%, housing and energy 14.8%, beverages 13.3% (of which alcoholic 10.7%), clothing and footwear 6.7%, transportation 5.8%, recreation 5.5%.
Land use as % of total land area (2003): in temporary crops *c.* 2%, in permanent crops *c.* 13%, in pasture, n.a.; overall forest area (2005) *c.* 89%.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
SR '000,000	–1,046	–747	–1,132	–1,844	–2,050	–3,293
% of total	29.5%	20.1%	26.1%	33.0%	32.8%	40.3%

Imports (2007): SR 5,728,000,000 (mineral fuels 25.1%; machinery and apparatus 22.4%; food 19.5%, of which marine products 11.9%; transportation equipment 4.1%; iron and steel 3.4%). *Major import sources:* Saudi Arabia 24.8%; Germany 9.5%; Singapore 8.5%; France 7.8%; Spain 6.6%.
Exports (2007): SR 2,435,000,000 (domestic exports 55.3%, of which canned tuna 50.6%, fish meal 1.2%, medicine and medical appliances 1.2%; reexports 44.7%, of which petroleum products to ships and aircraft 43.1%). *Major export destinations*[11]: United Kingdom 40.1%; France 34.7%; Italy 10.0%; Germany 3.2%; unspecified 9.0%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 312 mi, 502 km (paved 96%). Vehicles (2006): passenger cars 7,070; trucks and buses 2,796. Air transport (2006–07)[12]: passenger-km 1,593,000,000; metric ton-km cargo 31,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	22	266	PCs	2005	16	193
Telephones				Dailies	2004	3.5[13]	42[13]
Cellular	2007	77[14]	892[14]	Internet users	2007	32	370
Landline	2007	23	262	Broadband	2007	3.0[14]	36[14]

Education and health

Educational attainment (2003). Percentage of population age 12 and over having: less than primary or primary education 23.2%; secondary 73.4%; higher 3.4%. *Literacy* (2006): total population age 15 and over literate 91.8%; males literate 91.4%; females literate 92.3%.

Education (2005)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–15)	25	670	9,204	13.7
Secondary (age 16–18)	13	590	7,895	13.4
Voc., teacher tr	8	183	1,837	10.0

Health (2006): physicians 83 (1 per 1,019 persons); hospital beds 417 (1 per 203 persons); infant mortality rate per 1,000 live births (2007) 10.7; undernourished population (2002–04) 7,000 (9% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2007): 200 (army 100%)[15]. *Military expenditure as percentage of GDP* (2005): 1.8%; per capita expenditure U.S.$157.

[1]Creole, English, and French are all national languages per constitution. [2]The Seychelles are administratively divided into 26 districts and geographically split among 43 Inner (granitic) Islands and (at least) 73 Outer (coralline) Islands. [3]Includes area of Inner Islands other than Les Mamelles, Mahé, and Praslin. [4]La Digue population total includes Inner Islands and Outer Islands other than Mahé and Praslin. [5]Includes *c.* 62 sq mi (*c.* 160 sq km) land area of Aldabra atoll. [6]Residents only; marriage rate if including visitors is 11.6. [7]Formally employed only. [8]Import duties less imputed bank service charges. [9]Weights of consumer price index components. [10]Imports c.i.f.; exports f.o.b. [11]Domestic exports only. [12]Air Seychelles only. [13]Circulation of daily newspapers. [14]Subscribers. [15]Excludes the 250-member paramilitary, which is primarily the coast guard.

Internet resources for further information:
- **Seychelles in Figures http://www.nsb.gov.sc**
- **Central Bank of Seychelles http://www.cbs.sc**

Sierra Leone

Official name: Republic of Sierra Leone.
Form of government: republic with one legislative body (Parliament [124[1]]).
Head of state and government: President.
Capital: Freetown.
Official language: English.
Official religion: none.
Monetary unit: leone (Le); valuation (Sept. 8, 2008) 1 U.S.$ = Le 2,977; 1 £ = Le 5,259.

Area and population

Provinces/Area Local Councils	area sq km	population 2004 census	Provinces/Area Local Councils	area sq km	population 2004 census
Eastern Province	15,553	1,191,539	Tonkolili (district)	7,003	347,197
Kailahun (district)	3,859	358,190	Southern Province	19,694	1,092,657
Kenema (district)	6,053	369,546	Bo (district)	5,219	313,711
Kenema (town)		128,402	Bo (town)		149,957
Koidu (town)	5,641	80,025	Bonthe (district)	3,458	129,947
Kono (district)		255,376	Bonthe (town)	10	9,740
Northern Province	35,936	1,745,553	Moyamba (district)	6,902	260,910
Bombali (district)	7,985	325,550	Pujehun (district)	4,105	228,392
Kambia (district)	3,108	270,462	Western Area	557	947,122
Koinadugu (district)	12,121	265,758	Freetown (rural area)	544	174,249
Makeni (town)		82,840	Freetown (city)	13	772,873
Port Loko (district)	5,719	453,746	TOTAL	71,740	4,976,871

Demography

Population (2008): 5,969,000.
Density (2008): persons per sq mi 215.5, persons per sq km 83.2.
Urban-rural (2005): urban 40.7%; rural 59.3%.
Sex distribution (2005): male 49.23%; female 50.77%.
Age breakdown (2005): under 15, 42.8%; 15–29, 26.1%; 30–44, 16.0%; 45–59, 9.6%; 60–74, 4.7%; 75–84, 0.7%; 85 and over, 0.1%.
Population projection: (2010) 6,185,000; (2020) 7,747,000.
Doubling time: 29 years.
Ethnic composition (2000): Mende 26.0%; Temne 24.6%; Limba 7.1%; Kuranko 5.5%; Kono 4.2%; Fulani 3.8%; Bullom-Sherbro 3.5%; other 25.3%.
Religious affiliation (2005): Muslim *c.* 65%[2]; Christian *c.* 25%[2]; traditional beliefs/other *c.* 10%.
Major city/towns (2004): Freetown 772,873; Bo 149,957; Kenema 128,402; Makeni 82,840; Koidu 80,025.

Vital statistics

Birth rate per 1,000 population (2005): 46.5 (world avg. 20.3).
Death rate per 1,000 population (2005): 22.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 23.7 (world avg. 11.7).
Marriage/divorce rates per 1,000 population (2005): n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2005): 6.49.
Life expectancy at birth (2005): male 40.1 years; female 43.5 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 1,343.0, of which diarrheal diseases 270.8, malaria 198.7, HIV/AIDS 116.5; accidents, injuries, and violence 215.2; diseases of the circulatory system 180.5; malignant neoplasms (cancers) 75.6.

National economy

Budget (2007). Revenue: Le 1,179,000,000,000 (grants 42.7%; import duties 21.8%; corporate income taxes 7.7%; personal income taxes 7.1%; excise duties on petroleum products 6.6%). Expenditures: Le 1,222,000,000,000 (current expenditures 63.4%; capital expenditures 36.6%).
Gross national income (GNI; 2007): U.S.$1,537,000,000 (U.S.$260 per capita); purchasing power parity GNI (U.S.$660 per capita).

Structure of gross domestic product and labour force

	2006		2004	
	in value Le '000,000,000	% of total value	labour force	% of labour force
Agriculture	1,809	37.0		
Forestry	182	3.7	1,040,000[3]	58.2[3]
Fishing	489	10.0		
Mining	202	4.1		
Manufacturing, handicrafts	108	2.2		
Construction	88	1.8		
Public utilities	16	0.3		
Transp. and commun.	345	7.1	246,700[4]	13.8[4]
Trade, hotels	467	9.6		
Finance, real estate	295	6.0		
Pub. admin., defense	223	4.6		
Services	419	8.6		
Other	244[5]	5.0[5]	499,000	28.0
TOTAL	4,887	100.0	1,785,700	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 650,000, cassava 370,000, vegetables 220,000, oil palm fruit 195,000, peanuts (groundnuts) 90,000, citrus fruit 85,000, coffee 18,000, cacao beans 12,000, chicken meat 11,250; livestock (number of live animals) 300,000 cattle, 7,500,000 chickens; roundwood (2006) 5,572,000 cu m, of which fuelwood 98%; fisheries production (2006) 148,146 (from aquaculture, negligible). Mining and quarrying (2007): bauxite 1,169,000; rutile 82,810; ilmenite 15,750; diamonds 603,700 carats; gold 212 kg. Manufacturing (2006): soap 467,360; cement 234,440; paint 142,730 gallons; soft drinks 2,088,750 crates; beer and stout 832,100 cartons. Energy production (consumption): electricity (kW-hr; 2005) 102,000,000 (102,000,000); coal, none (none); crude petroleum (barrels; 2005) none (1,960,000); petroleum products (metric tons; 2005) 178,000 (228,000); natural gas, none (none).
Household income and expenditure (2003–04). Average household size (2004) 6.0; average annual income per household Le 4,369,000[6] (U.S.$1,731); sources of income, n.a.; expenditure: food and nonalcoholic beverages 40.6%, housing and energy 14.5%, health 13.6%, clothing and footwear 7.7%, transportation 4.8%, household furnishings 4.3%.
Public debt (external, outstanding; 2006): U.S.$1,323,000,000.
Population economically active (2003–04): total 2,005,900; activity rate of total population 40.0% (participation rates: ages 15–64, 68.2%; female 53.6%; unemployed [2007] unofficially 65%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.1	98.7	106.2	121.3	135.9	148.9	166.3

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 23; remittances (2007) 38; foreign direct investment (2004–06 avg.) 54; official development assistance (2006) 364. Disbursements for (U.S.$'000,000): tourism (2006) 12; remittances (2007) 35.
Land use as % of total land area (2003): in temporary crops 8.0%, in permanent crops 1.0%, in pasture 30.7%; overall forest area (2005) 38.5%.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
Le '000,000	–452,826	–490,166	–400,959	–538,275	–513,189	–599,782
% of total	68.9%	53.0%	34.9%	37.0%	28.6%	29.0%

Imports (2007): Le 1,333,189,000,000 (mineral fuels 37.7%; machinery and transport equipment 16.8%; food products 15.2%, of which rice 5.4%; manufactured goods 11.6%). *Major import sources* (2005): Germany *c.* 19%; Côte d'Ivoire *c.* 11%; U.K. *c.* 8%; U.S. *c.* 7%; China *c.* 6%; The Netherlands *c.* 5%.
Exports (2007): Le 733,407,000,000 (diamonds 57.8%; rutile 15.5%; bauxite 13.3%; cacao 4.6%; gold 1.2%). *Major export destinations* (2007): Belgium 49.5%; U.S. 20.6%; The Netherlands 4.6%; Canada 4.0%.

Transport and communications

Transport. Railroads (2002)[8]: length 52 mi, 84 km. Roads (2002): total length 7,020 mi, 11,300 km (paved 8%). Vehicles (2005): passenger cars 7,700; trucks and buses 7,700. Air transport: passenger-km (2004) 85,000,000; metric ton-km cargo 8,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	63	13	PCs	1999	0.1	
Telephones				Dailies	2004	16	3.3
Cellular	2007	776[9]	132[9]	Internet users	2007	13	2.2
Landline	2002	24	4.8	Broadband	2007	..	..

Education and health

Educational attainment (2004): percentage of total population having: no formal schooling 62.2%; incomplete/complete primary 24.6%; lower secondary 6.4%; upper secondary 4.2%; vocational 2.0%; incomplete/complete higher 0.6%. *Literacy* (2004): total population age 10 and over literate *c.* 39%; males *c.* 49%; females *c.* 29%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	2,704[10]	17,327	1,158,399	66.9
Secondary (age 12–17)	246[10]	5,264[10]	74,235	
Higher[11]	1	301	4,310	14.3

Health: physicians (2004) 168 (1 per 32,083 persons); hospital beds (2001) 2,770 (1 per 1,698 persons); infant mortality rate per 1,000 live births (2005) 163.0; undernourished population (2002–04) 2,500,000 (51% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

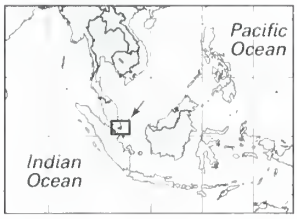
Military

Total active duty personnel (November 2007): *c.* 10,500 (army *c.* 98%, navy *c.* 2%, air force, none). *Military expenditure as percentage of GDP* (2005): 1.0%; per capita expenditure U.S.$2.

[1]Includes 12 paramount chiefs elected to represent each of the provincial districts. [2]Often mixed with traditional beliefs. [3]Represents crop farming. [4]Represents trade and repairs. [5]Indirect taxes less imputed bank service charges. [6]Includes estimated value for income in kind. [7]Imports c.i.f.; exports f.o.b. [8]Marampa Mineral Railway; there are no passenger railways. [9]Subscribers. [10]2001–02. [11]University of Sierra Leone only.

Internet resources for further information:
- **Statistics Sierra Leone**
  http://www.statistics.sl
- **Bank of Sierra Leone**
  http://www.bankofsierraleone-centralbank.org

Singapore



Official name: Xinjiapo Gongheguo (Chinese); Republik Singapura (Malay); Cingkappur Kudiyarasu (Tamil); Republic of Singapore (English).
Form of government: unitary multiparty republic with one legislative house (Parliament [94[1]]).
Chief of state: President[2].
Head of state government: Prime Minister[3].
Capital: Singapore.
Official languages: Chinese; Malay; Tamil; English.
Official religion: none.
Monetary unit: Singapore dollar (S$); valuation (Sept. 8, 2008) 1 U.S.$ = S$1.44; 1 £ = S$2.54.

Population (2007 estimate)[4]	
De facto population	4,588,600[5]
De jure population	3,583,100[6]

Demography

Area: 273.0 sq mi, 707.1 sq km.
Population (2008): 4,839,000.
Density (2008): persons per sq mi 17,725, persons per sq km 6,843.
Urban-rural: urban 100%.
Sex distribution (2007)[7]: male 49.48%; female 50.52%.
Age breakdown (2007)[7]: under 15, 18.9%; 15–29, 20.2%; 30–44, 25.8%; 45–59, 22.7%; 60–74, 9.1%; 75–84, 2.6%; 85 and over, 0.7%.
Population projection: (2010) 5,215,000; (2020) 6,299,000.
Ethnic composition (2007)[7]: Chinese 74.8%; Malay 13.5%; Indian 9.0%; other 2.7%.
Religious affiliation (2000)[7]: Buddhist/Taoist/Chinese folk-religionist 51.0%; Muslim 14.9%; Christian 14.6%; Hindu 4.0%; traditional beliefs 0.6%; nonreligious 14.9%.

Vital statistics

Birth rate per 1,000 population (2007)[7]: 10.3 (world avg. 20.3).
Death rate per 1,000 population (2007)[7]: 4.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2007)[7]: 5.8 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007)[7]: 1.29.
Marriage/divorce rates per 1,000 population (2007)[7]: 6.7/2.0.
Life expectancy at birth (2007)[7]: male 78.2 years; female 82.9 years.
Major causes of death per 100,000 population (2005)[7]: diseases of the circulatory system 150.9, of which ischemic heart diseases 82.9; malignant neoplasms (cancers) 120.7; pneumonia 68.1.

National economy

Budget (2006). Revenue: S$31,072,000,000 (income tax 48.1%, goods and services tax 12.7%, fees and charges 6.8%, assets taxes 6.6%, customs and excise duties 6.3%). Expenditures: S$29,875,000,000 (security and external relations 42.8%, education 21.3%, transportation 6.8%, health 6.2%, trade and industry 5.6%).
Public debt (2006): U.S.$122,000,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): hen eggs 21,300, vegetables 20,820, orchids (15% of the world market) and other ornamental plants are cultivated for export; livestock (number of live animals) 260,000 pigs, 2,700,000 chickens; roundwood, negligible; fisheries production[8] 11,676 (from aquaculture 73%). Quarrying: limestone, n.a.[9]. Manufacturing (value added in S$'000,000; 2005): pharmaceuticals 8,204; semiconductors 7,636; computer-related electronics 7,218; professional and scientific equipment 6,203; refined petroleum and petrochemicals 4,826; other electronics 3,066; ships, oil platforms, and related products 2,498; aircraft and spacecraft 2,264; chemicals and chemical products 2,199; printing 1,305; food and food products, beverages, and tobacco products 1,213. Energy production (consumption): electricity (kW-hr; 2005) 38,213,000,000 (34,761,000,000); crude petroleum (barrels; 2005) none (400,365,000); petroleum products (metric tons; 2005) 38,894,000 (8,141,000); natural gas (cu m; 2005) none (7,076,000,000).
Gross national income (GNI; 2007): U.S.$148,992,000,000 (U.S.$32,470 per capita); purchasing power parity GNI (U.S.$48,520 per capita).

Structure of gross domestic product and labour force

	2007			
	in value S$'000,000	% of total value	labour force	% of labour force
Agriculture, quarrying	187	0.1	21,000[10]	1.1[10]
Manufacturing	57,684	23.7	313,400	16.3
Construction	9,084	3.7	103,400	5.4
Public utilities	3,732	1.5	...	.
Transp. and commun.[11]	31,194	12.8	273,000	14 3
Trade, hotels	43,466	17.9	407,700	21.3
Finance, real estate	70,858[12]	29 1[12]	341,100	17 8
Pub. admin., defense, services	23,376	9 6	382,400	19 9
Other	3,588[13]	1.5[13]	76,100[14]	4.0[14]
TOTAL	243,169	100.0[15]	1,918,100	100.0[15]

Household income and expenditure (2003). Average household size 3.6; income per household S$58,404 (U.S.$33,523); sources of income: wages and salaries 82.5%, self-employment 12.3%, other 5.2%; expenditure: housing costs and furnishings 22.4%, transportation and communications 21.4%, food 21.3%, education 7.8%, health 5.1%, clothing and footwear 3.6%.
Population economically active (2006): total 1,880,800[7]; activity rate of total population 52.1%[7] (participation rates: ages 15–64, 71.3%[7]; female 42.5%[7]; unemployed 3.6%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.0	100.6	101.1	102.8	103.3	104.3	106.5
Monthly earnings index	102.3	103.1	104 9	108.7	112.4	116.0	123.1

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 7,069; remittances, n.a.; foreign direct investment (FDI; 2004–06 avg.) 19,680. Disbursements for (U.S.$'000,000): tourism (2006) 10,384; remittances, n.a.; FDI (2004–06 avg.) 7,245.
Land use as % of total land area (2003): in temporary crops 0.9%, in permanent crops 0.3%, in pasture, n.a.; overall forest area (2005) 3.4%.

Foreign trade[16]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
S$'000,000	+15,686	+28,277	+42,278	+49,341	+52,587	+54,615
% of total	3.6%	6.0%	6.7%	6.9%	6.5%	6.5%

Imports (2006): S$379,277,000,000 (electrical machinery/electronics/parts 26.2%, refined petroleum 10.1%, nonelectrical machinery and equipment 9.1%, crude petroleum 8.6%, office machines/computers/parts 8.1%, telecommunications equipment 6.8%). *Major import sources* (2007): Malaysia 13.1%; U.S. 12.3%; China 12.1%; Japan 8.2%; Taiwan 5.9%; Indonesia 5.6%.
Exports (2006): S$431,864,000,000 (machinery and apparatus 55.5%, of which electronic integrated circuits and micro-assemblies 20.9%, office machines/computers/parts 11.8%, nonelectrical machinery and equipment 6.8%; refined petroleum 12.5%; organic chemicals 4.8%). *Major export destinations* (2007): Malaysia 12.9%; Hong Kong 10.5%; Indonesia 9.8%; China 9.7%; U.S. 8.8%.

Transport and communications

Transport. Railroads (2006): length 24 mi (39 km)[17]. Roads (2006[18]): total length 3,234 km (paved [2004] 99%). Vehicles (2007): passenger cars 517,041; trucks and buses 165,509. Air transport (2007): passenger-km 93,684,000,000; metric ton-km cargo 7,956,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2005	1,847	425	PCs	2005	2,960	682
Telephones				Dailies	2004	1,624[19]	383[19]
Cellular	2007	5,619[20]	1,267[20]	Internet users	2007	3,105	700
Landline	2007	1,859	419	Broadband	2007	881[20]	193[20]

Education and health

Educational attainment (2005)[7]. Percentage of population age 15 and over[21] having: no schooling 16.4%; primary education 22.0%; lower secondary 21.3%; upper secondary 15.1%; technical 8.2%; university 17.0%. *Literacy* (2007)[7]: 95.7%.

Education (2007)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	170	12,472	277,772	22.3
Secondary (age 12–18)	154	10,850	202,858	18.7
Voc., teacher tr.	9	6,247	100,291	16.1
Higher	17	5,540	89,629	16.2

Health (2007): physicians 7,384 (1 per 618 persons); hospital beds 11,580 (1 per 394 persons); infant mortality rate per 1,000 live births[7] 2.1; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 72,500 (army 69.0%, navy 12.4%, air force 18.6%). *Military expenditure as percentage of GDP* (2005): 4.7%; per capita expenditure U.S.$1,274.

[1]Includes 10 nonelective seats. [2]Title per constitution is Head of State. [3]Has principal executive authority per constitution. [4]Singapore does not have a local government structure. Five community development councils established in 2001 manage a variety of social services. [5]The de facto population figure (as of the 2000 census) includes citizens (2,973,091), noncitizens with permanent residency status (290,118), and temporary residents (754,524). [6]The de jure population figure excludes temporary residents. [7]Based on de jure population. [8]Aquarium fish farming is also an important economic pursuit; Singapore produces 30% of the world's ornamental fish. [9]The last granite quarry closed in 1999. [10]Includes not adequately defined. [11]Includes information services. [12]Includes ownership of dwellings. [13]Taxes less imputed bank service charges. [14]Unemployed. [15]Detail does not add to total given because of rounding. [16]Imports c.i.f., exports f.o.b. [17]Length of Singapore portion of Singapore–to–Kuala Lumpur, Malaysia, railway. [18]January 1. [19]Circulation of daily newspapers. [20]Subscribers. [21]Nonstudent population only.

Internet resources for further information:
- **Statistics Singapore http://www.singstat.gov.sg**
- **Ministry of Trade and Industry http://app.mti.gov.sg**

Slovakia

Official name: Slovenská Republika (Slovak Republic).
Form of government: unitary multiparty republic with one legislative house (National Council [150]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Bratislava.
Official language: Slovak.
Official religion: none.
Monetary unit: Slovak koruna (Sk)[1]; valuation (Sept. 8, 2008) 1 U.S.$ = Sk 21.23; 1 £ = Sk 37.50.

Area and population

Regions	Capitals	area sq mi	area sq km	population 2007[2] estimate
Banská Bystrica	Banská Bystrica	3,651	9,455	655,762
Bratislava	Bratislava	793	2,053	606,753
Košice	Košice	2,607	6,752	773,086
Nitra	Nitra	2,449	6,343	707,305
Prešov	Prešov	3,464	8,973	800,483
Trenčín	Trenčín	1,738	4,502	599,847
Trnava	Trnava	1,601	4,147	555,075
Žilina	Žilina	2,629	6,809	695,326
TOTAL		18,932	49,034	5,393,637

Demography

Population (2008): 5,401,000.
Density (2008): persons per sq mi 285.3, persons per sq km 110.1.
Urban-rural (2006): urban 55.4%; rural 44.6%.
Sex distribution (2006[2]): male 48.54%; female 51.46%.
Age breakdown (2007): under 15, 16.4%; 15–29, 24.4%; 30–44, 21.9%; 45–59, 21.0%; 60–74, 11.3%; 75–84, 4.2%; 85 and over, 0.8%.
Population projection: (2010) 5,410,000; (2020) 5,410,000.
Ethnic composition (2001): Slovak 85.8%; Hungarian 9.7%; Rom (Gypsy) 1.7%; Czech 0.8%; Ruthenian and Ukrainian 0.7%; other 1.3%.
Religious affiliation (2001): Roman Catholic 68.9%; Protestant 9.2%, of which Lutheran 6.9%, Reformed Christian 2.0%; Greek Catholic 4.1%; Eastern Orthodox 0.9%; nonreligious 13.0%; other/unknown 3.9%.
Major cities (2006[2]): Bratislava 417,653; Košice 222,492; Prešov 91,621; Žilina 85,425; Nitra 85,172; Banská Bystrica 81,281.

Vital statistics

Birth rate per 1,000 population (2007): 9.9 (world avg. 20.3); (2004) within marriage 75.2%; outside of marriage 24.8%.
Death rate per 1,000 population (2007): 10.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): –0.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.25.
Marriage/divorce rates per 1,000 population (2006): 4.8/2.4.
Life expectancy at birth (2006): male 70.4 years; female 78.2 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 540.7; malignant neoplasms (cancers) 220.4; accidents and violence 58.1; diseases of the respiratory system 57.8.

National economy

Budget (2006). Revenue: Sk 573,650,000,000 (tax revenue 49.5%, of which taxes on goods and services 31.9%; social security contributions 35.0%; nontax revenue 14.3%; grants 1.2%). Expenditures: Sk 634,860,000,000 (social protection 29.0%; health 16.9%; general administration 16.6%; economic affairs 13.4%; education 9.9%; police 5.1%; defense 4.0%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 1,440,637, cow's milk 1,000,000, sugar beets 855,343, barley 695,042, corn (maize) 675,226, potatoes 381,650, rapeseed 336,368, sunflower seeds 135,376, pig meat 130,000, grapes 50,700; livestock (number of live animals) 1,104,830 pigs, 507,820 cattle; roundwood (2006) 7,869,000 cu m, of which fuelwood 4%; fisheries production (2006) 2,981 (from aquaculture 42%). Mining and quarrying (2006): magnesite 555,710; kaolin 30,000; barite 25,000. Manufacturing (value added in U.S.$'000,000; 2006): fabricated metal products 1,200; nonelectrical machinery and apparatus 1,165; motor vehicles/parts 1,000; electrical/electronic machinery and apparatus 850; food and beverages 805; base metals (mostly iron and steel and to a lesser extent aluminum) 795. Energy production (consumption): electricity (kW-hr; 2007) 28,063,000,000 ([2005] 28,190,000,000); hard coal (metric tons; 2005) none (4,983,000); lignite (metric tons; 2007) 2,113,000 ([2005] 3,307,000); crude petroleum (barrels; 2005) 210,000 (39,900,000); petroleum products (metric tons; 2005) 5,269,000 (3,122,000); natural gas (cu m; 2005) 151,000,000 (7,014,000,000).
Population economically active (2006): total 2,654,800; activity rate of total population 49.2% (participation rates: ages 15–64, 68.9%; female 45.8%; unemployed [2007] 8.4%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	107.3	110.9	120.4	129.5	133.0	138.9	142.8
Annual earnings index	108.2	118.2	125.7	138.5	151.1	164.1	176.2

Household income and expenditure. Average household size (2003) 2.9; average annual gross income per household (2003) Sk 288,388 (U.S.$7,842); sources of income (2003): wages and salaries 73.9%, transfers 19.6%, self-employment 4.7%; expenditure (2007): food and nonalcoholic beverages 22.2%, housing and energy 19.2%, recreation and culture 11.1%, transportation 10.4%, hotels and restaurants 6.3%.
Public debt (external, outstanding; 2006): U.S.$4,508,000,000.
Gross national income (GNI; 2007): U.S.$63,324,000,000 (U.S.$11,730 per capita); purchasing power parity GNI (U.S.$19,340 per capita).

Structure of gross domestic product and labour force

	2006 in value Sk '000,000	% of total value	labour force[3]	% of labour force[3]
Agriculture	58,577	3.6	100,800	3.8
Mining	7,718	0.5		
Manufacturing	324,682	19.8	666,400	25.1
Public utilities	83,091	5.1		
Construction	101,944	6.2	226,100	8.5
Transp. and commun.	146,278	8.9	156,200	5.9
Trade, restaurants	249,792	15.3	392,400	14.8
Finance, real estate	280,336	17.1	183,400	6.9
Pub. admin., defense	79,874	4.9	161,800	6.1
Services	147,440	9.0	406,600	15.3
Other	156,531[4]	9.6[4]	361,100[5]	13.6[5]
TOTAL	1,636,263	100.0	2,654,800	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,513; remittances (2007) 424; foreign direct investment (FDI; 2004–06 avg.) 3,101. Disbursements for (U.S.$'000,000): tourism (2006) 1,055; remittances (2007) 16; FDI (2004–06 avg.) 168.
Land use as % of total land area (2003): in temporary crops 29.4%, in permanent crops 0.6%, in pasture 16.5%; overall forest area (2005) 40.1%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	–2,150	–684	–1,593	–2,374	–2,664	–1,339
% of total	6.9%	1.5%	2.8%	3.6%	3.1%	1.2%

Imports (2006): U.S.$44,383,000,000 (machinery and apparatus 26.3%, mineral fuels 13.6%, road vehicles/parts 12.1%, base and fabricated metals 9.7%, chemicals and chemical products 8.9%, optical and measuring instruments 5.2%). *Major import sources:* Germany 20.4%; Czech Republic 12.0%; Russia 11.5%; Italy 4.6%; Hungary 4.6%.
Exports (2006): U.S.$41,719,000,000 (machinery and apparatus 27.5%, of which colour television receivers 7.6%; road vehicles/parts 20.5%, of which passenger cars 15.3%; base and fabricated metals 14.4%, of which iron and steel 8.5%; refined petroleum 5.2%). *Major export destinations:* Germany 23.5%; Czech Republic 13.7%; Italy 6.5%; Poland 6.2%; Austria 6.0%.

Transport and communications

Transport. Railroads (2006): length 3,658 km; (2005) passenger-km 2,181,000,000; (2005) metric ton-km cargo 9,463,000,000. Roads (2004): total length 26,719 mi, 43,000 km (paved 87%). Vehicles (2006): passenger cars 1,334,000; trucks and buses 182,000. Air transport (2006)[6]: passenger-km 2,596,207,000; metric ton-km cargo 29,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	2,285	425	PCs	2005	1,929	358
Telephones				Dailies	2005	894[7]	166[7]
Cellular	2007	6,068[8]	1,124[8]	Internet users	2007	2,350	435
Landline	2007	1,151	213	Broadband	2007	444[8]	82[8]

Education and health

Educational attainment (2002). Percentage of population age 25–64 having: primary education 1%; complete lower secondary 13%; complete upper secondary 75%; higher 11%. *Literacy* (2007): total population age 15 and over literate nearly 100%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 6–14)	2,304	34,914	532,188	15.2
Secondary (age 15–18)	238	7,568	99,758	13.2
Voc., teacher tr.	455	11,123	146,518	13.2
Higher	26	10,220	116,195	11.4

Health (2005): physicians 20,158 (1 per 267 persons); hospital beds 48,622 (1 per 111 persons); infant mortality rate per 1,000 live births 6.4; undernourished population (2002–04) 400,000 (7% of total population based on the consumption of a minimum daily requirement of 2,030 calories).

Military

Total active duty personnel (November 2007): 17,129 (army 42.8%, air force 25.0%, headquarters staff 15.3%, support/training 16.9%). *Military expenditure as percentage of GDP* (2005): 1.7%; per capita expenditure U.S.$153.

[1]Slovakia adopted the euro on Jan. 1, 2009. [2]January 1. [3]Excludes persons on child-care leave and conscripts. [4]Taxes less subsidies. [5]Including 353,400 unemployed. [6]SkyEurope and Slovak airlines only, including charter services. [7]Circulation of daily newspapers. [8]Subscribers.

Internet resources for further information:
- **National Bank of Slovakia http://www.nbs.sk**
- **Statistical Office of the Slovak Republic http://www.statistics.sk**

Slovenia

Official name: Republika Slovenija (Republic of Slovenia).
Form of government: unitary multiparty republic with two legislative houses (National Council [40]; National Assembly [90]).
Head of state: President.
Head of government: Prime Minister.
Capital: Ljubljana.
Official language: Slovene.
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24[1].

Area and population

Statistical regions[3]	Principal cities	area sq mi	area sq km	population 2008[2] estimate
Gorenjska	Kranj	825	2,137	201,000
Goriška	Nova Gorica	898	2,325	120,000
Jugovzhodna Slovenija	Novo mesto	653	1,690	142,000
Koroška	Ravne na Koroškem	401	1,041	74,000
Notranjsko-kraška	Postojna	562	1,456	52,000
Obalno Kraško	Koper	403	1,044	108,000
Osrednjeslovenska	Ljubljana	1,367	3,540	509,000
Podravska	Maribor	838	2,170	322,000
Pomurska	Murska Sobota	516	1,337	122,000
Savinjska	Celje	920	2,384	261,000
Spodnjeposavska	Krško	342	885	70,000
Zasavska	Trbovlje	102	264	45,000
TOTAL		7,827	20,273	2,026,000

Demography

Population (2008): 2,029,000.
Density (2008): persons per sq mi 259.2, persons per sq km 100.1.
Urban-rural (2005): urban 51.0%; rural 49.0%.
Sex distribution (2008[4]): male 49.64%; female 50.36%.
Age breakdown (2008[2]): under 15, 13.9%; 15–29, 20.0%; 30–44, 22.6%; 45–59, 22.4%; 60–74, 14.1%; 75–84, 5.7%; 85 and over, 1.3%.
Population projection: (2010) 2,041,000, (2020) 2,065,000.
Ethnic composition (2002)[5]: Slovene 91.2%; Serb 2.2%; Croat 2.0%; Bosniac (ethnic Muslim) 1.8%; other 2.8%.
Religious affiliation (2002): Roman Catholic 57.8%, Muslim 2.4%, Orthodox 2.3%, Protestant 0.8%, nonreligious/atheist 10.2%, other/unknown 26.5%.
Major cities (2008[2])[6]: Ljubljana 267,760; Maribor 111,340; Kranj 53,872; Koper 50,708; Celje 49,501.

Vital statistics

Birth rate per 1,000 population (2007): 9.8 (world avg. 20.3); within marriage 49.2%; outside of marriage 50.8%.
Death rate per 1,000 population (2007): 9.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 0.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.38.
Marriage/divorce rates per 1,000 population (2007): 3.2/1.3.
Life expectancy at birth (2007): male 75.0 years; female 82.3 years.
Major causes of death per 100,000 population (2007): diseases of the circulatory system 376.4; malignant neoplasms (cancers) 274.2; accidents and violence 79.1; diseases of the digestive system 59.1.

National economy

Budget (2007). Revenue: €13,658,091,000 (tax revenue 59.7%, of which taxes on goods and services 32.9%, personal income tax 13.2%; social security contributions 33.7%; nontax revenue 5.2%; other [including grants] 1.4%). Expenditures: €13,092,376,000 (current expenditures 88.8%, of which social protection 46.9%, wages and salaries 21.5%; capital expenditures 11.2%).
Public debt (2007): U.S.$10,875,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 308,259, sugar beets 260,000, wheat 133,339, potatoes 131,050, grapes 122,543, apples 114,490, hops 2,157; livestock (number of live animals) 575,120 pigs, 451,293 cattle, 212,000 beehives; roundwood (2006) 3,179,136 cu m, of which fuelwood 31%; fisheries production 1,967 (from aquaculture 54%). Mining and quarrying (2007): sand and gravel 11,008,600; salt (2005) 125,000. Manufacturing (value added in €'000,000; 2007): chemicals and chemical products 971; fabricated metal products 961; nonelectrical machinery 776; food products and beverages 514; electrical machinery 453; rubber products and plastic products 440; transportation equipment 438. Energy production (consumption): electricity (kW-hr; 2007) 14,044,000,000 (13,337,000,000); hard coal (metric tons; 2005) none (49,000); lignite (metric tons; 2007) 4,562,000 (5,197,000); crude petroleum (barrels; 2007) 2,199 (negligible); petroleum products (metric tons; 2007) none (2,296,000); natural gas (cu m; 2007) 3,400,000 (1,124,000,000).
Land use as % of total land area (2003): in temporary crops 8.6%, in permanent crops 1.4%, in pasture 15.3%; overall forest area (2005) 62.8%.
Household income and expenditure (2006). Average household size 2.6; average annual income per household SIT 4,104,896 (U.S.$21,542); sources of income: wages and salaries 57.6%, transfers 28.9%, self-employment 5.5%; expenditure (2007): housing and energy 18.0%, transportation 16.2%, food and nonalcoholic beverages 14.2%, recreation and culture 10.2%.
Gross national income (GNI; 2007): U.S.$42,306,000,000 (U.S.$20,960 per capita); purchasing power parity GNI (U.S.$26,640 per capita).

Structure of gross domestic product and labour force

	2007 in value €'000,000	% of total value	labour force	% of labour force
Agriculture, forestry	715.4	2.1	101,000	9.7
Mining	134.4	0.4	4,000	0.4
Manufacturing	7,070.3	20.5	266,000	25.5
Construction	2,407.4	7.0	61,000	5.9
Public utilities	781.8	2.3	9,000	0.9
Transp. and commun.	2,340.9	6.8	60,000	5.8
Trade, restaurants	4,425.6	12.8	155,000	14.9
Finance, real estate	6,671.2	19.3	89,000	8.5
Pub. admin., defense	1,682.7	4.9	59,000	5.7
Services	4,001.4	11.6	180,000	17.3
Other	4,239.8[7]	12.3[7]	58,000[8]	5.6[8]
TOTAL	34,470.9	100.0	1,041,600[9]	100.0[9]

Population economically active (2007): total 1,041,600; activity rate 51.8% (participation rates: ages 15–64, 71.7%; female 46.0%; unemployed [April 2007–March 2008] 7.4%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	108.4	116.5	123.0	127.4	130.6	133.8	138.6
Annual earnings index	111.9	122.8	132.1	139.6	144.6	151.6	160.6

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 1,797; remittances (2007) 300; foreign direct investment (FDI; 2004–06 avg.) 562. Disbursements for (U.S.$'000,000): tourism (2006) 974; remittances (2007) 207; FDI (2004–06 avg.) 620.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	−612	−954	−1,360	−1,408	−1,584	−2,102
% of total	2.7%	4.1%	5.1%	4.7%	4.5%	5.2%

Imports (2007): €21,487,000,000 (base and fabricated metals 14.1%, road vehicles 13.2%, chemicals and chemical products 12.1%, nonelectrical machinery and equipment 10.6%, mineral fuels 9.4%, food 5.6%). *Major import sources:* Germany 19.4%; Italy 18.3%; Austria 12.5%; France 5.4%; Croatia 4.0%.
Exports (2007): €19,385,000,000 (road vehicles/parts 15.9%, base and fabricated metals 13.6%, nonelectrical machinery and equipment 12.5%, electrical machinery/electronics/parts 9.6%, medicine and pharmaceuticals 7.2%, furniture 4.3%). *Major export destinations:* Germany 18.9%; Italy 13.2%; Croatia 8.1%; Austria 7.8%; France 6.5%.

Transport and communications

Transport. Railroads (2007): length 763 mi, 1,228 km; passenger-km 812,000,000; metric ton-km cargo 3,603,000,000. Roads (2006): total length 23,961 mi, 38,562 km (paved 100%). Vehicles (2007): passenger cars 1,014,122; trucks and buses 79,898. Air transport (2007): passenger-km 1,186,000,000; metric ton-km cargo 3,724,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2005	559	279	PCs	2005	808	404
Telephones				Dailies	2007	307[11]	153[11]
Cellular	2007	1,928[12]	964[12]	Internet users	2007	992	496
Landline	2007	857	428	Broadband	2007	345[12]	172[12]

Education and health

Educational attainment (2006). Percentage of population age 15 and over having: no formal schooling through complete primary education 27.7%; secondary 6.0%; vocational 55.1%; some higher 2.9%; undergraduate 7.1%; advanced degree 1.2%. *Literacy* (2007): virtually 100%.

Education (2007–08)

	schools	teachers	students	student/teacher ratio
Primary (age 7–14)[13]	796	13,218	164,477	12.4
Secondary (age 15–18)[13]	142	7,504	96,310	12.8
Vocational	59	570	16,424	28.8
Higher	70	3,579	89,337	25.0

Health (2007): physicians 4,441 (1 per 453 persons); hospital beds 9,414 (1 per 214 persons); infant mortality rate per 1,000 live births 2.8; undernourished population (2002–04) 60,000 (3% of total population based on the consumption of a minimum daily requirement of 1,990 calories).

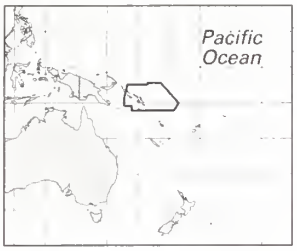
Military

Total active duty personnel (November 2007): 5,973 (army 100%). *Military expenditure as percentage of GNP* (2005): 1.5%; per capita expenditure U.S.$257.

[1]The Slovenian tolar (SIT) was the former monetary unit; on Jan. 1, 2007, SIT 239.64 = €1. [2]January 1. [3]Actual first-order administration is based on 193 municipalities. [4]July 1. [5]Prorating 8.9% of population not responding to census questionnaire. [6]Populations of municipalities. [7]Net taxes on products. [8]Includes 48,000 unemployed and 10,000 not distributed. [9]Detail does not add to total given because of rounding. [10]Imports c.i.f.; exports f.o.b. [11]Circulation of four top daily newspapers only. [12]Subscribers. [13]2006–07.

Internet resources for further information:
- **Statistical Office of the Republic of Slovenia http://www.stat.si/eng/index.asp**
- **Bank of Slovenia http://www.bsi.si/en**

Solomon Islands



Official name: Solomon Islands.
Form of government: constitutional monarchy with one legislative house (National Parliament [50]).
Chief of state: British Monarch represented by Governor-General.
Head of government: Prime Minister.
Capital: Honiara.
Official language: English.
Official religion: none.
Monetary unit: Solomon Islands dollar (SI$); valuation (Sept. 8, 2008) 1 U.S.$ = SI$7.66; 1 £ = SI$13.61.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2007 estimates
Central Islands	Tulagi	237	615	26,100
Choiseul	Taro	1,482	3,837	24,100
Guadalcanal	Honiara	2,060	5,336	73,000
Isabel	Buala	1,597	4,136	24,500
Makira-Ulawa	Kirakira	1,231	3,188	37,700
Malaita	Auki	1,631	4,225	149,200
Rennell and Bellona	Tigoa	259	671	2,800
Temotu	Santa Cruz	334	865	22,800
Western	Gizo	2,114	5,475	75,800
Capital Territory				
Honiara	—	9	22	59,100
TOTAL		10,954	28,370	495,000[1]

Demography

Population (2008): 517,000.
Density (2008): persons per sq mi 47.2, persons per sq km 18.2.
Urban-rural (2005–06)[2]: urban 16.0%; rural 84.0%.
Sex distribution (2006): male 51.53%; female 48.47%.
Age breakdown (2006): under 15, 40.0%; 15–29, 28.7%; 30–44, 17.9%; 45–59, 8.5%; 60–74, 3.9%; 75 and over, 1.0%.
Population projection: (2010) 545,000; (2020) 692,000.
Doubling time: 27 years.
Ethnic composition (2002): Melanesian 93.0%; Polynesian 4.0%; Micronesian 1.5%; other 1.5%.
Religious affiliation (2005): Protestant *c.* 70%, of which Anglican *c.* 32%, Adventist *c.* 10%; Roman Catholic *c.* 18%; traditional beliefs *c.* 5%; other *c.* 7%.
Major towns (2004): Honiara (on Guadalcanal) 57,600; Gizo (in the New Georgia Islands) 6,200; Auki (on Malaita) 4,700; Buala (on Santa Isabel) 2,900.

Vital statistics

Birth rate per 1,000 population (2006): 30.0 (world avg. 20.3).
Death rate per 1,000 population (2006): 3.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 26.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 3.78.
Marriage/divorce rates per 1,000 population (2006): n.a./n.a.
Life expectancy at birth (2006): male 70.4 years; female 75.5 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 157, of which cerebrovascular diseases 47, ischemic heart disease 46; respiratory diseases 45; malignant neoplasms (cancers) 43; about 20% of the population has malaria, one of the world's highest rates.

National economy

Budget (2006). Revenue: SI$946,200,000 (tax revenue 73.0%, of which VAT 17.9%, logging duties 13.6%, import duties 9.3%, corporate tax 8.2%; non-tax revenue 13.9%; grants 13.1%). Expenditures: SI$911,100,000 (current expenditure 90.5%, of which wages 27.3%, debt service 13.9%; capital expenditure 9.5%).
Public debt (external, outstanding; 2007): U.S.$147,300,000.
Gross national income (GNI; 2007): U.S.$363,000,000 (U.S.$730 per capita); purchasing power parity GNI (U.S.$1,810 per capita).

Structure of gross domestic product and labour force

	2006 in value SI$'000,000	2006 % of total value	2004 labour force[3]	2004 % of labour force[3]
Agriculture, forestry, fishing	1,217.4	35.0	14,938	28.7
Mining	1.7	—	1,476	2.8
Manufacturing	165.5	4.8		
Construction	18.8	0.5	1,397	2.7
Public utilities	44.6	1.3	469	0.9
Transportation and communications	322.2	9.3	1,246	2.4
Trade, hotels	477.9	13.8	3,274	6.3
Finance, real estate	492.6	14.2	806	1.5
Pub. admin., defense	238.1	6.9	6,758	13.0
Services	435.8	12.5	21,757	41.7
Other	60.5[4]	1.7[4]	..	..
TOTAL	3,475.3[1]	100.0	52,121	100.0

Household income and expenditure (2005–06)[2]. Average household size 6.2; average annual income per household U.S.$3,129; sources of income: home production[5] 36.9%, wages and salaries 26.6%, transfers 8.8%, self-employment 7.8%; expenditure: food 53.5%, housing 15.8%, transportation 6.8%, education 3.8%.

Population economically active (2006): total 201,000; activity rate of total population 41.0% (participation rates: ages 15 and over 68.8%; female 38.3%; unemployed [2003] 15.2%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	106.9	118.6	128.4	137.4	147.5	164.0	176.6

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 276,000, oil palm fruit 155,000, sweet potatoes 86,000, taro 40,000, yams 30,000, cacao beans 5,300; livestock (number of live animals) 54,000 pigs, 13,600 cattle, 235,000 chickens; roundwood (2006) 1,268,000 cu m, of which fuelwood 11%; fisheries production (2006) 39,336 (from aquaculture, negligible); aquatic plants production (2006) 120 (from aquaculture 100%). Mining and quarrying (2005): gold 10 kg[6]. Manufacturing (2006): coconut oil 59,000, vegetable oils and fats (2002) 50,000, copra 21,214, palm oil 5,427, cocoa 3,828. Energy production (consumption): electricity (kW-hr; 2006) 68,000,000 (55,000,000); coal, none (none); petroleum products (metric tons; 2005) none (57,000); natural gas, none (none).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 2; remittances (2007) 20; foreign direct investment (2004–06 avg.) 15; official development assistance (2006) 205. Disbursements for (U.S.$'000,000): tourism (2006) 8; remittances (2007) 3.
Land use as % of total land area (2003): in temporary crops 0.6%, in permanent crops 2.1%, in pasture 1.4%; overall forest area (2005) 77.6%.

Foreign trade[7]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−38.2	−11.3	−19.6	−24.7	−82.6	−130.2
% of total	28.9%	8.9%	11.7%	11.3%	28.7%	35.1%

Imports (2006): U.S.$250,613,000 (machinery and transport equipment 24.7%; petroleum [all forms] 21.7%; food 14.1%; construction materials 10.0%; chemicals 5.2%). *Major import sources:* Australia 25.3%; Singapore 23.4%; Japan 7.8%; New Zealand 5.0%; Fiji 4.2%.
Exports (2007): U.S.$156,008,000 (logs 63.7%; palm oil 8.6%; frozen fish 7.2%; cacao beans 5.8%; copra 3.7%; sawn wood 3.2%; gold[6] 0.8%). *Major export destinations* (2006): China 45.7%; South Korea 14.0%; Japan 8.5%; Thailand 4.4%; The Philippines 4.0%.

Transport and communications

Transport. Railroads: none. Roads (2007): total length 1,500 km (paved 2.7%). Vehicles (1993): passenger cars 2,052; trucks and buses 2,574. Air transport (2006)[8]: passenger-km 74,870,000; metric ton-km cargo 648,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	5.3	11	PCs	2005	22	47
Telephones				Dailies	2006	4.0[9]	8.3[9]
Cellular	2007	11[10]	22[10]	Internet users	2006	8.0	17
Landline	2005	7.4	16	Broadband	2007	1.0[10]	2.0[10]

Education and health

Educational attainment (2005–06)[2]. Percentage of population age 15 and over having: no schooling/unknown 15.6%; primary education 46.7%; secondary 32.8%; vocational 4.0%; higher 0.9%. *Literacy* (2004): total population age 15 and over literate 76.6%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	520[11]	2,412	92,091	38.2
Secondary (age 12–16)	23[11]	1,865	22,487	12.1
Voc. teacher tr.[12]	1	..	9,560	.
Higher[12]				

Health (2005): physicians 89 (1 per 5,293 persons); hospital beds 691 (1 per 682 persons); infant mortality rate per 1,000 live births (2006) 20.6; undernourished population (2002–04) 90,000 (21% of total population based on the consumption of a minimum daily requirement of 1,780 calories).

Military

Total active duty personnel (2007): none; *c.* 200–300 military troops and police in an Australian-led multinational regional intervention force (from mid-2003) maintain civil and political order.

[1]Detail does not add to total given because of rounding. [2]Based on the Household Income and Expenditure Survey 2005–06 comprising 3,822 households. [3]Persons employed in the monetary sector only. [4]Taxes on products less subsidies and less imputed bank charges. [5]Mostly food preparations and handicrafts. [6]Although small-scale artisanal production continued, production at the country's only gold mine was suspended from 2000 because of lawlessness, but it resumed in 2007. [7]Imports c.i.f.; exports f.o.b. [8]Solomon Airlines only. [9]Circulation of the one daily newspaper. [10]Subscribers. [11]1994. [12]2002; vocational and teacher training are carried out at the College of Higher Education.

Internet resources for further information:

- **Central Bank of Solomon Islands**
  http://www.cbsi.com.sb
- **Solomon Islands National Statistics Office**
  http://www.spc.int/prism/country/sb/stats

Somalia[1]

Official name: Soomaaliya (Somali) (Somalia).
Form of government: transitional regime[2] with one legislative body (Transitional Federal Assembly [275[3]]).
Head of state and government: President assisted by Prime Minister[2].
Capital: Mogadishu.
Official languages: Somali; Arabic.
Official religion: Islam.
Monetary unit: Somali shilling (Shilin Soomaali; So.Sh.); valuation[4, 5].

Area and population

Historic Administrative Regions	Principal cities	area sq mi	area sq km	population 2008 estimate
Awdal[6]	Borama	8,253	21,374	
Bakool	Xudur	10,410	26,962	
Banaadir	Mogadishu (Muqdisho)	143	370	..
Bari[7]	Boosaaso	27,061	70,088	.
Bay	Baidoa (Baydhaba)	13,574	35,156	.
Galguduud	Dhuusamarreeb	17,809	46,126	.
Gedo	Garbahaarey	23,316	60,389	..
Hiiraan	Belet Weyne	12,166	31,510	...
Juba Dhexe	Bu'aale	3,798	9,836	..
Juba Hoose	Kismayo	16,555	42,876	
Mudug[8]	Gaalkacyo	28,160	72,933	
Nugaal[7]	Garoowe	10,108	26,180	
Sanaag[9]	Ceerigaabo	20,608	53,374	
Shabelle Dhexe	Jowhar	8,750	22,663	.
Shabelle Hoose	Marka	9,763	25,285	.
Sool[9]	Laas Caanood (Las Anod)	9,666	25,036	..
Togdheer[9]	Burao (Burco)	14,928	38,663	...
Woqooyi Galbeed[6]	Hargeysa	11,134	28,836	...
TOTAL		246,201[10]	637,657	8,956,000[11]

Demography

Population (2008): 8,956,000[11].
Density (2008): persons per sq mi 36.4, persons per sq km 14.0.
Urban-rural (2006): urban 36.5%; rural 63.5%.
Sex distribution (2005): male 49.60%; female 50.40%.
Age breakdown (2005): under 15, 44.1%; 15–29, 27.1%; 30–44, 16.1%; 45–59, 8.5%; 60–74, 3.5%; 75–84, 0.6%; 85 and over, 0.1%.
Population projection: (2010) 9,486,000; (2020) 12,291,000.
Doubling time: 24 years.
Ethnic composition (2000): Somali 92.4%; Arab 2.2%; Afar 1.3%; other 4.1%.
Religious affiliation (2005): Muslim (nearly all Sunnī) *c.* 99%; other *c.* 1%.
Major cities (2008): Mogadishu (2007) 1,100,000[12]; Hargeysa (in Somaliland) 436,232[13]; Burao (in Somaliland) 151,451[13]; Belet Weyne 108,125[13]; Boosaaso (in Puntland) 108,016[13].

Vital statistics

Birth rate per 1,000 population (2005): 45.6 (world avg. 20.3).
Death rate per 1,000 population (2005): 17.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 28.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 6.84.
Life expectancy at birth (2005): male 46.4 years; female 49.9 years.
Major causes of death as percentage of all deaths (2001–02): sickness 61.1%; old age 19.0%; accidents 11.0%, of which land mines 3.6%; war-related 4.3%; pregnancy/childbirth-related 4.0%.

National economy

Budget: n.a. UN assistance (2007): U.S.$175,000,000, of which food aid U.S.$50,000,000.
Public debt (external, outstanding; 2006): U.S.$1,923,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): milk 2,166,000 (of which from: camels 870,000, sheep 468,000, cows 435,000), sugarcane 215,000, meat 203,725 (of which from sheep/goats 90,000), corn (maize) 99,000, cassava 82,000, sorghum 80,000, bananas 38,000, sesame seed 30,000, citrus fruits 23,200, dry beans 18,000, dates 12,000; other tree/bush products include khat, frankincense, and myrrh; livestock (number of live animals) 13,100,000 sheep, 12,700,000 goats, 7,000,000 camels, 5,350,000 cattle; roundwood (2006) 11,237,000 cu m, of which fuelwood 99%; fisheries production (2006) 30,000 (from aquaculture, none). Mining and quarrying (2006): small quantities of gemstones (including garnet and opal) and salt. Manufacturing: small manufacturers produce textiles, handicrafts and processed meat. Energy production (consumption): electricity (kW-hr; 2005) 290,000,000 (290,000,000); coal, none (none); crude petroleum (barrels; 2005) none (388,000); petroleum products (metric tons; 2005) 30,000 (169,000); natural gas, none (none).
Population economically active (2001–02): total 3,906,000; activity rate of total population 52.6% (participation rates: ages 15–64, 56.4%; female, n.a.; unemployed 47.4%).

Price index (2002 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	...	100.0	...	...	...	...	...

Household income and expenditure (2001–02). Average household size 5.8; income per household U.S.$226; sources of income: self-employment 50%, remittances 22.5%, wages 14%, rent/aid 13.5%; expenditure, n.a.

Gross national income (2007): U.S.$2,450,000,000 (U.S.$282 per capita).

Structure of gross domestic product and labour force

	2007 in value U.S.$'000,000	2007 % of total value	2001–02 labour force	2001–02 % of labour force
Agriculture	1,577	62.3	2,617,000	67.0
Mining, Public utilities	18	0.7		
Manufacturing, Construction	110	4.3	469,000	12.0
Transp. and commun.	253	10.0		
Trade, restaurants, Finance	279	11.0	820,000	21.0
Pub. admin., defense, Services	230	9.1		
Other	...	...	...	...
TOTAL	2,532	100.0	3,906,000	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism, n.a.; remittances (2007) *c.* 1,000; foreign direct investment (2004–06 avg.) 38; official development assistance (2006) 392. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.
Land use as % of total land area (2003): in temporary crops 1.7%, in permanent crops 0.04%, in pasture 68.5%; overall forest area (2005) 11.4%.

Foreign trade

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.$'000,000	–159	–263	–245	–324	–388	–422
% of total	31.8%	59.9%	48.5%	60.0%	49.5%	45.9%

Imports (2005): U.S.$671,000,000 (agricultural products 37.9%, of which cereals and cereal products 15.8%, sugar 10.3%; unspecified 62.1%). *Major import sources:* Djibouti *c.* 30%; Kenya *c.* 14%; India *c.* 8%; Brazil *c.* 7%; Oman *c.* 5%.
Exports (2005): U.S.$249,000,000 (goats 11.8%; cattle 9.0%; sheep 6.4%; unspecified 72.8%). *Major export destinations:* U.A.E. *c.* 48%; Yemen *c.* 21%; Oman *c.* 6%; India *c.* 4%; Saudi Arabia *c.* 3%.

Transport and communications

Transport. Railroads: none. Roads (2003): total length 13,650 mi, 22,000 km (paved 12%). Vehicles: passenger cars, n.a.; trucks and buses, n.a. Air transport (2003)[14]: passenger arrivals 50,096, passenger departures 41,979; cargo unloaded 3,817 metric tons, cargo loaded 152 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	108	14	PCs	2005	75	9.1
Telephones				Dailies	2005	4.5[15]	0.5[15]
Cellular	2007	600[16]	69[16]	Internet users	2007	98	11
Landline	2007	100	11	Broadband	2007	—	—

Education and health

Educational attainment: n.a. *Literacy* (2002): percentage of total population age 15 and over literate 19.2%; males literate 25.1%; females literate 13.1%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 6–14)	1,172	9,088	285,574	31.4
Secondary (age 15–18)	...	...	...	...
Voc., teacher tr.	...	...	...	...
Higher[17]	...	...	...	...

Health (2006): physicians[18] 34[19] (1 per 250,000 persons); hospital beds, n.a.; infant mortality rate per 1,000 live births (2005) 121.8; undernourished population, n.a.

Military

Total active duty personnel: no national army from 1991[20, 21]. *Military expenditure as percentage of GDP:* n.a.

[1]Proclamation of the "Republic of Somaliland" in May 1991 on territory corresponding to the former British Somaliland (which unified with the former Italian Trust Territory of Somalia to form Somalia in 1960) had not received international recognition as of November 2008. This entity represented about a quarter of Somalia's territory. [2]"New transitional government" from October 2004 (with its legislature based in Baidoa from February 2006) lacked effective control in December 2008. [3]Planned number. [4]The So.Sh. had limited availability and circulation in 2008; 1 U.S.$ = *c.* 34,000 So.Sh. (1 £ = *c.* 66,000 So.Sh.) at the "black market" rate of May 2008. [5]Somaliland's sole legal tender from 1995 is the Somaliland shilling; in June 2008 1 U.S.$ = 6,000 Somaliland shillings. [6]Part of "Republic of Somaliland" from 1991. [7]Part of "autonomous region" of Puntland from 1998. [8]Administered (in part) as part of Puntland. [9]Administration disputed (at least in part) between Puntland and Somaliland. [10]Detail does not add to total given because of rounding. [11]Estimate of *UN World Population Prospects (2006 Revision)* including Somaliland. [12]Including more than 300,000 evacuees displaced by fighting between November 2007 and May 2008. [13]Estimate of www.world-gazetteer.com. [14]Four Somaliland airports only. [15]Circulation of daily newspapers. [16]Subscribers. [17]Four small universities operated in Somaliland in 2008 along with 2 small universities in Puntland. [18]Meeting professional qualifications. [19]Calculated from ratio. [20]Ethiopian forces backing the transitional government were fighting Islamist forces from December 2006 through December 2008. [21]AU peacekeeping troops from Uganda and Burundi (December 2008) 3,000 (of planned 8,000).

Internet resource for further information:
- **UNDP in Somalia**
  http://www.so.undp.org

South Africa

Official name: Republic of South Africa (English).
Form of government: multiparty republic with two legislative houses (National Council of Provinces [90]; National Assembly [400]).
Head of state and government: President.
Capitals (de facto): Pretoria[1] (executive); Bloemfontein[2] (judicial); Cape Town (legislative).
Official languages: [3].
Official religion: none.
Monetary unit: rand (R); valuation (Sept. 8, 2008) 1 U.S.$ = R 8.03; 1 £ = R 14.19.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2008 estimate
Eastern Cape	Bisho	65,238	168,966	6,579,300
Free State	Bloemfontein	50,126	129,825	2,877,700
Gauteng	Johannesburg	6,389	16,548	10,447,100
KwaZulu-Natal	Pietermaritzburg	36,433	94,361	10,105,500
Limpopo	Polokwane	48,554	125,755	5,274,800
Mpumalanga	Nelspruit	29,535	76,495	3,590,000
North West	Mafikeng	41,125	106,512	3,425,000
Northern Cape	Kimberley	143,973	372,889	1,125,900
Western Cape	Cape Town	49,986	129,462	5,262,000
TOTAL		471,359	1,220,813	48,687,300

Demography

Population (2008): 48,783,000[4].
Density (2008): persons per sq mi 103.5, persons per sq km 40.0.
Urban-rural (2005): urban 59.28%; rural 40.72%.
Sex distribution (2007): male 49.24%; female 50.76%.
Age breakdown (2007): under 15, 31.9%; 15–29, 29.2%; 30–44, 19.3%; 45–59, 11.7%; 60–74, 6.3%; 75 and over, 1.6%.
Population projection: (2010) 49,109,000; (2020) 48,530,000.
Ethnic composition (2001): black 78.4%, of which Zulu 23.8%, Xhosa 17.6%, Pedi 9.4%, Tswana 8.2%, Sotho 7.9%, Tsonga 4.4%, Swazi 2.7%, other black 4.4%; white 9.6%; mixed white/black 8.9%; Asian 2.5%; other 0.6%.
Religious affiliation (2005): independent Christian 37.1%, of which Zion Christian 9.5%; Protestant 26.1%; traditional beliefs 8.9%; Roman Catholic 6.7%; Muslim 2.5%; Hindu 2.4%; nonreligious 3.0%; other/unknown 13.3%.
Major urban agglomerations (2005): Johannesburg 3,288,000; Cape Town 3,103,000; Ekurhuleni (East Rand[5]) 3,043,000; Ethekwini (Durban) 2,643,000; Tshwane (Pretoria[1]) 1,282,000.

Vital statistics

Birth rate per 1,000 population (2005): 18.5 (world avg. 20.3).
Death rate per 1,000 population (2005): 21.3 (world avg. 8.6).
Marriage/divorce rates per 1,000 population (2005): 3.9/0.7.
Total fertility rate (avg. births per childbearing woman; 2007): 2.69.
Life expectancy at birth (2008): male 50.3 years; female 53.9 years.
Adult population (ages 15–49) *living with HIV* (2007): 18.1% (world avg. 0.8%).
Major causes of death per 100,000 population (2004): infectious and parasitic diseases *c.* 286; circulatory diseases *c.* 170; respiratory diseases *c.* 165; accidents and injuries *c.* 112; malignant neoplasms (cancers) *c.* 73.

National economy

Budget (2005–06). Revenue: R 411,085,100,000 (personal income taxes 30.6%, VAT 28.0%, company income taxes 23.5%). Expenditures: R 417,819,200,000 (transfer to provinces 36.0%, debt payments 12.7%, police and prisons 9.0%, defense 5.4%, education 3.0%, health 2.4%).
Production (in metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 20,500,000, corn (maize) 7,338,738, potatoes 1,900,000, wheat 1,756,900, grapes 1,600,000, oranges 1,400,000; livestock (number of live animals) 25,000,000 sheep, 13,500,000 cattle; roundwood (2006) 30,063,000 cu m, of which fuelwood 40%; fisheries production (2006) 620,740 (from aquaculture, negligible); aquatic plants production (2006) 9,600 (from aquaculture 31%). Mining and quarrying (value of sales in R '000,000,000; 2007): platinum-group metals 79.9; coal 43.1; gold 39.0; iron ore 13.4; rough diamond production 15,249,000 carats. Manufacturing (value of sales in R '000,000; 2005): food products and beverages 153,496; transport equipment 137,870; chemicals 81,240; base metals 57,886; refined petroleum 57,697; fabricated metals 41,442. Energy production (consumption)[6]: electricity (kW-hr; 2005) 248,075,000,000 (248,975,000,000); coal (metric tons; 2005) 246,313,000 (176,736,000); crude petroleum (barrels; 2005) 10,576,000 (166,670,000); petroleum products (metric tons; 2005) 26,263,000 (20,104,000); natural gas (cu m; 2005) 2,126,000,000 (4,331,000,000).
Land use as % of total land area (2003): in temporary crops 12.1%, in permanent crops 0.8%, in pasture 69.1%; overall forest area (2005) 7.6%.
Population economically active (2005): total 16,788,000; activity rate of total population 35.8% (participation rates: ages 15–64, 56.5%; female 45.7%; unemployed 26.7%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.7	115.4	122.1	123.8	128.1	134.0	143.5

Household income and expenditure. Average household size (2004) 4.0; expenditure (2005): food, beverages, and tobacco 25.8%, transportation and communications 16.9%, household furnishings 9.7%, housing 9.6%.
Gross national income (GNI; 2007): U.S.$274,009,000,000 (U.S.$5,760 per capita); purchasing power parity GNI (U.S.$9,560 per capita).

Structure of gross domestic product and labour force

	2007 in value R '000,000	2007 % of total value	2005 labour force	2005 % of labour force
Agriculture, forestry, fishing	56,685	2.8	925,000	5.5
Mining	135,459	6.8	411,000	2.4
Manufacturing	321,790	16.1	1,706,000	10.2
Construction	51,810	2.6	935,000	5.6
Public utilities	43,673	2.2	100,000	0.6
Transp. and commun.	159,537	8.0	616,000	3.7
Trade, hotels	245,179	12.3	3,024,000	18.0
Finance, real estate	392,180	19.7	1,296,000	7.7
Pub. admin., defense	257,156	12.9	3,259,000	19.4
Services	104,752	5.3		
Other	225,674[7]	11.3[7]	4,516,000[8]	26.9[8]
TOTAL	1,993,894[9]	100.0	16,788,000	100.0

Public debt (external, outstanding; 2006): U.S.$13,940,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 7,876; remittances (2007) 834; foreign direct investment (FDI; 2004–06 avg.) 2,242; official development assistance (2006) 718. Disbursements for (U.S.$'000,000): tourism (2006) 3,384; remittances (2007) 1,186; FDI (2004–06 avg.) 2,985.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+3,061	−2,907	−7,340	−8,042	−16,015	−10,083
% of total	5.4%	4.4%	8.4%	7.9%	13.1%	6.8%

Imports (2006): U.S.$69,185,000,000 (machinery and apparatus 26.5%, crude petroleum 13.9%, road vehicles 9.6%, chemicals and chemical products 8.9%). *Major import sources:* Germany 12.5%; China 10.0%; U.S. 7.6%; Japan 6.5%; Saudi Arabia 5.3%.
Exports (2006): U.S.$53,170,000,000[10] (platinum-group metals 15.3%, iron and steel 10.8%, road vehicles 9.0%, metal ores 7.4%, coal 6.0%, pumps/compressors 4.7%, diamonds 4.6%). *Major export destinations:* Japan 11.9%; U.S. 11.5%; U.K. 8.8%; Germany 7.5%; The Netherlands 5.2%.

Transport and communications

Transport. Railroads: route length (2005) 20,872 km; (2001) passenger-km 3,930,000,000; (2001) metric ton-km cargo 106,786,000,000. Roads (2002): length 362,099 km (paved 20%). Vehicles (2005): passenger cars 4,574,972; trucks and buses 2,112,601. Air transport (2007): passenger-km 27,576,000,000; metric ton-km cargo 935,600,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	9,134	199	PCs	2005	3,966	85
Telephones				Dailies	2004	1,408[11]	30[11]
Cellular	2007	42,300[12]	871[12]	Internet users	2007	3,966	82
Landline	2007	4,642	96	Broadband	2007	378[12]	7.8[12]

Education and health

Educational attainment (2006). Percentage of population age 20 and over having: no formal schooling 10.4%; some primary education 21.1%; complete primary/some secondary 34.0%; complete secondary 24.9%; higher 9.1%.
Literacy (2007): total population age 15 and over literate 87.8%.

Education (2003)

	schools[13]	teachers	students	student/teacher ratio
Primary (age 6–12)	17,197	220,950	7,470,476	33.8
Secondary (age 13–17)	10,428[14]	141,648	4,186,882	29.6
Voc., teacher tr.	50	7,398	259,959	35.1
Higher	36[15]	43,023	717,793	16.7

Health: physicians (2006) 33,220 (1 per 1,427 persons); hospital beds (2004) 153,465 (1 per 303 persons); infant mortality rate (2007) 45.2; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 62,334 (army 66.3%, navy 9.3%, air force 14.7%, military health service 9.7%). *Military expenditure as percentage of GDP* (2005): 1.5%; per capita expenditure U.S.$76.

[1]Name of larger municipality including Pretoria is Tshwane. [2]Name of larger municipality including Bloemfontein is Mangaung. [3]Afrikaans; English; Ndebele; Pedi (North Sotho); Sotho (South Sotho); Swazi; Tsonga; Tswana (West Sotho); Venda; Xhosa; Zulu. [4]Estimate of the U.S. Bureau of the Census International Database (June 2008 update). [5]Within Ekurhuleni municipality. [6]Data include Botswana, Lesotho, Namibia, and Swaziland. [7]Taxes on products less subsidies on products. [8]Includes 4,487,000 unemployed. [9]Detail does not add to total given because of rounding. [10]Excluding gold export earnings estimated at U.S.$5,400,000,000 in 2006. [11]Circulation of daily newspapers. [12]Subscribers. [13]2002. [14]Includes combined and intermediate. [15]Public institutions only.

Internet resources for further information:
- **South African Reserve Bank http://www.reservebank.co.za**
- **Statistics South Africa http://www.statssa.gov.za**

Spain

Official name: Reino de España (Kingdom of Spain).
Form of government: constitutional monarchy with two legislative houses (Senate [264[1]]; Congress of Deputies [350]).
Chief of state: King.
Head of government: Prime Minister.
Capital: Madrid.
Official language: Castilian Spanish[2].
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 £ = €1.24.

Area and population

Autonomous communities	area sq km	population 2008[3] estimate	Autonomous communities	area sq km	population 2008[3] estimate
Andalusia	87,598	8,105,608	Galicia	29,574	2,738,098
Aragon	47,720	1,306,631	La Rioja	5,045	313,772
Asturias	10,604	1,059,089	Madrid	8,028	6,245,883
Balearic Islands	4,992	1,058,668	Murcia	11,313	1,430,986
Basque Country	7,235	2,138,453	Navarra	10,390	610,384
Canary Islands	7,447	2,061,499	Valencia	23,255	4,950,566
Cantabria	5,321	573,758			
Castile–La Mancha	79,462	2,001,643	**Autonomous cities**		
Castile-León	94,224	2,506,454	Ceuta	19	72,353
Catalonia	32,113	7,270,468	Melilla	13	69,347
Extremadura	41,635	1,079,725	TOTAL	505,990[4]	45,593,385

Demography

Population (2008): 45,661,000.
Density (2008): persons per sq mi 233.7, persons per sq km 90.2.
Urban-rural (2005): urban 76.7%; rural 23.3%.
Sex distribution (2008[3]): male 49.38%; female 50.62%.
Age breakdown (2008[3]): under 15, 14.7%; 15–29, 18.9%; 30–44, 25.4%; 45–59, 19.2%; 60–74, 13.4%; 75–84, 6.3%; 85 and over, 2.1%.
Population projection: (2010) 46,437,000; (2020) 50,516,000.
Ethnic composition (2000): Spaniard 44.9%; Catalonian 28.0%; Galician 8.2%; Basque 5.5%; Aragonese 5.0%; Rom (Gypsy) 2.0%; other 6.4%[5].
Religious affiliation (2006): Roman Catholic *c.* 77%, of which practicing weekly *c.* 19%; Muslim *c.* 2.5%; Protestant *c.* 1%; other (mostly nonreligious) *c.* 19.5%.
Major cities (2007): Madrid 3,132,463 (urban agglomeration 5,764,000); Barcelona 1,595,110 (urban agglomeration 5,057,000); Valencia 797,654; Sevilla 699,145; Zaragoza 654,390; Málaga 561,250.

Vital statistics

Birth rate per 1,000 population (2007): 10.8 (world avg. 20.3); (2006) within marriage 71.6%; outside of marriage 28.4%.
Death rate per 1,000 population (2007): 8.5 (world avg. 8.6).
Marriage/divorce rates per 1,000 population (2007): 4.5/2.8.
Total fertility rate (avg. births per childbearing woman; 2007): 1.37.
Life expectancy at birth (2007): male 77.3 years; female 83.8 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 265.1; malignant neoplasms (cancers) 223.2; diseases of the respiratory system 86.7; diseases of the digestive system 42.5.
Adult population (ages 15–49) *living with HIV* (2007): 0.5%[6] (world avg. 0.8%).

National economy

Budget (2007). Revenue: €147,545,000,000 (direct taxes 56.9%; indirect taxes 34.4%; transfers 3.9%; other 4.8%). Expenditures: €188,417,000,000 (current expenditures 63.8%, of which wages and salaries 12.6%, debt service 8.5%; capital expenditures 10.2%, of which transfers 4.9%; other 26.0%).
Public debt (2007): U.S.$520,918,000,000.
Gross national income (GNI; 2007): U.S.$1,321,756,000,000 (U.S.$29,450 per capita); purchasing power parity GNI (U.S.$30,820 per capita).

Structure of gross domestic product and labour force

	2007			
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	27,087	2.6	925,500	4.2
Mining and quarrying	140,937	13.4	60,100	0.3
Manufacturing			3,089,800	13.9
Public utilities	23,876	2.3	111,900	0.5
Construction	115,519	11.0	2,697,300	12.2
Transp. and commun			1,177,100	5.3
Trade, hotels			4,579,100	20.6
Finance, real estate	496,762	47.3	2,517,100	11.3
Services	137,821	13.1	3,957,700	17.8
Pub. admin., defense			1,238,400	5.6
Other	108,593[7]	10.3[7]	1,836,000[8]	8.3[8]
TOTAL	1,050,595	100.0	22,189,900[4]	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): barley 11,684,000, wheat 6,376,900, grapes 6,013,000, olives 5,787,600, sugar beets 5,141,000, corn (maize) 3,647,900, tomatoes 3,615,000, oranges 2,691,400, potatoes 2,502,300, tangerines, mandarins, and clementines 2,080,700, chilies and peppers 1,065,000, sunflower seeds 743,400, strawberries 263,900, almonds 201,100, garlic 142,400; livestock (number of live animals) 26,034,000 pigs, 21,847,050 sheep, 6,456,350 cattle, 2,500,000 beehives; roundwood (2006) 15,716,000 cu m, of which fuelwood 10%; fisheries production (2006) 1,242,802 (from aquaculture 24%). Mining and quarrying (2005): slate 1,200,000; sepiolite 800,000; fluorspar 133,495; gold 5,500 kg. Manufacturing (value added in U.S.$'000,000: 2004): food products 15,786; fabricated metal products 15,717; transportation equipment 14,508; chemicals and chemical products 12,444; cement, bricks, and ceramics 10,900; printing and publishing 8,124. Energy production (consumption): electricity (kW-hr; 2007–08) 303,278,000,000 (279,709,000,000); hard coal (metric tons; 2007) 10,995,000 (36,281,000); lignite (metric tons; 2007) 6,016,000 (6,016,000); crude petroleum (barrels; 2007–08) 1,133,400 (453,309,900); petroleum products (metric tons; 2007–08) 55,886,000 ([2005] 60,628,000); natural gas (cu m; 2007–08) 15,447,500 (39,414,926,000).
Population economically active (2007): total 22,189,900; activity rate of total population 49.7% (participation rates: ages 16–64, 72.6%; female 42.3%; unemployed [October 2007–September 2008] 10.0%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.6	106.8	110.0	113.4	117.2	121.3	124.7
Earnings index	103.8	108.1	112.7	118.8	122.1	128.1	132.2

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2007–08) 62,905; remittances (2007) 10,633; foreign direct investment (FDI; 2004–06 avg.) 23,266. Disbursements for (U.S.$'000,000): tourism (2007–08) 21,277; remittances (2007) 14,721; FDI (2004–06 avg.) 64,013.
Household income and expenditure (2005). Average household size 2.9; average annual net income per household (2004) €21,551 (U.S.$26,758); expenditure: housing 26.5%, food 17.8%, household expenses 7.5%, clothing/footwear 6.5%.
Land use as % of total land area (2003): in temporary crops 27.3%, in permanent crops 9.9%, in pasture 21.2%; overall forest area (2005) 35.9%.

Foreign trade[9]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	–41,975	–46,279	–60,670	–77,813	–92,396	–98,952
% of total	13.8%	14.4%	17.2%	20.2%	21.3%	21.4%

Imports (2006): €263,024,000,000 (machinery and apparatus 19.7%; mineral fuels 15.7%; road vehicles/parts 14.6%; chemicals and chemical products 11.0%; base and fabricated metals 7.6%). *Major import sources* (2007): Germany 15.2%; France 12.2%; Italy 8.7%; China 6.7%; U.K. 4.7%.
Exports (2006): €170,628,000,000 (road vehicles/parts 20.7%; machinery and apparatus 15.2%; food 10.9%, of which fruits and vegetables 5.8%; base and fabricated metals 8.9%). *Major export destinations* (2007): France 18.6%; Germany 10.8%; Portugal 8.6%; Italy 8.5%; U.K. 7.5%.

Transport and communications

Transport. Railroads (2007–08): route length (2006) 15,212 km; passenger-km 22,794,600,000; metric ton-km cargo 10,839,100,000. Roads (2006): length 681,224 km (paved 100%). Vehicles (2008[3]): cars 21,440,700; trucks, vans, and buses 5,273,000. Air transport (2007–08): passenger-km 81,252,000,000; metric ton-km cargo 1,169,204,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	24,228	564	PCs	2005	12,000	269
Telephones				Dailies	2007	6,183[10]	136[10]
Cellular	2007	48,813[11]	1,102[11]	Internet users	2007	20,097	454
Landline	2007	20,328	459	Broadband	2007	8,070[11]	182[11]

Education and health

Educational attainment (2007). Percentage of population age 16 and over having: no formal schooling through incomplete primary education 11.6%; complete primary 20.9%; secondary 44.4%; undergraduate degree 14.2%; graduate degree 8.9%. *Literacy* (2003): total population age 15 and over literate 97.9%; males 98.7%; females 97.2%.

Education (2007–08)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	12,428	623,974	2,603,175	13.9[12]
Secondary (age 12–17)	8,538		2,982,200	11.1[12]
Universities	74	107,905	1,381,749	12.8

Health (2008[13]): physicians 208,098 (1 per 218 persons); hospital beds 160,292 (1 per 283 persons); infant mortality rate (2007) 3.7; undernourished population (2002–04) less than 2.5% of total population.

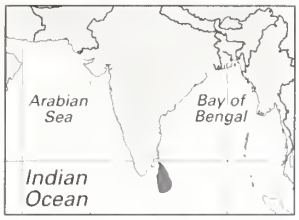
Military

Total active duty personnel (November 2007): 149,150 (army 64.1%, navy 15.6%, air force 14.0%, other 6.3%). *Military expenditure as percentage of GDP* (2005): 1.1%; per capita expenditure U.S.$268.

[1]Includes 56 indirectly elected seats. [2]The constitution states that "Castilian is the Spanish official language of the State," but that "all other Spanish languages (including Euskera [Basque], Catalan, and Galician) will also be official in the corresponding Autonomous Communities." [3]July 1. [4]Detail does not add to total given because of rounding. [5]Foreign residents (2007): 4.5 million, of which Moroccan 13%, Romanian 12%, Ecuadorian 9%. [6]Statistically derived midpoint within range. [7]Taxes less subsidies. [8]Includes 1,833,900 unemployed. [9]Imports c.i.f.; exports f.o.b. [10]Circulation of daily newspapers. [11]Subscribers. [12]2004. [13]January 1.

Internet resources for further information:
- **Banco de España http://www.bde.es**
- **National Institute of Statistics http://www.ine.es/welcome_en.htm**

Sri Lanka



Official name: Śri Lanka Prajatantrika Samajavadi Janarajaya (Sinhala); Ilangai Jananayaka Śocialisa Kudiarasu (Tamil) (Democratic Socialist Republic of Sri Lanka).
Form of government: unitary multiparty republic with one legislative house (Parliament [225]).
Head of state and government: President assisted by Prime Minister.
Capitals: Colombo (executive and judicial); Sri Jayewardenepura Kotte (Colombo suburb; legislative).
Official languages: Sinhala; Tamil[1].
Official religion: none[2].
Monetary unit: Sri Lankan rupee (LKR); valuation (Sept. 8, 2008) 1 U.S.$ = LKR 107.85; 1 £ = LKR 190.54.

Area and population

Districts	area sq km	population 2006 estimate[3]	Districts	area sq km	population 2006 estimate[3]
Ampara	4,415	627,000	Kurunegala	4,816	1,511,000
Anuradhapura	7,179	791,000	Mannar	1,996	100,000
Badulla	2,861	837,000	Matale	1,993	471,000
Batticaloa	2,854	556,000	Matara	1,283	804,000
Colombo	699	2,421,000	Monaragala	5,639	420,000
Galle	1,652	1,040,000	Mullaitivu	2,617	145,000
Gampaha	1,387	2,125,000	Nuwara Eliya	1,741	735,000
Hambantota	2,609	547,000	Polonnaruwa	3,293	382,000
Jaffna	1,025	595,000	Puttalam	3,072	745,000
Kalutara	1,598	1,102,000	Ratnapura	3,275	1,073,000
Kandy	1,940	1,361,000	Trincomalee	2,727	395,000
Kegalle	1,693	797,000	Vavuniya	1,967	164,000
Kilinochchi	1,279	142,000	TOTAL	65,610	19,886,000

Demography

Population (2008): 19,394,000[4].
Density (2008): persons per sq mi 765.6, persons per sq km 295.6.
Urban-rural (2005): urban 15.1%; rural 84.9%.
Sex distribution (2005)[4]: male 49.42%; female 50.58%.
Age breakdown (2005)[4]: under 15, 24.1%; 15–29, 26.6%; 30–44, 21.4%; 45–59, 18.1%; 60–74, 7.4%; 75–84, 1.9%; 85 and over, 0.5%.
Population projection: (2010) 19,576,000; (2020) 20,229,000.
Ethnic composition (2000): Sinhalese 72.4%; Tamil 17.8%; Sri Lankan Moor 7.4%; other 2.4%.
Religious affiliation (2005): Buddhist *c.* 70%; Hindu *c.* 15%; Christian (mostly Roman Catholic) *c.* 8%; Muslim (nearly all Sunnī) *c.* 7%.
Major cities (2004): Colombo 669,700 (greater Colombo 2,490,300); Dehiwala–Mount Lavinia 218,800[5]; Moratuwa 184,800[5]; Jaffna 172,300; Negombo 127,200; Sri Jayewardenepura Kotte 120,800[5]; Kandy 114,800.

Vital statistics

Birth rate per 1,000 population (2006): 18.7 (world avg. 20.3).
Death rate per 1,000 population (2006): 5.8 (world avg. 8.6).
Marriage/divorce rates per 1,000 population (2004): 9.9/n.a.
Total fertility rate (avg. births per childbearing woman; 2005): 2.11.
Life expectancy at birth (2005): male 72.5 years; female 76.5 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 252; malignant neoplasms (cancers) 101; diseases of the respiratory system 82; injuries, accidents, and violence 81.

National economy

Budget (2005). Revenue: LKR 584,783,000,000 (tax revenue 57.6%, of which VAT 23.7%, excises 13.2%; domestic borrowings 21.2%; foreign loans/grants 13.8%; nontax revenue 7.4%). Expenditures: LKR 584,783,000,000 (interest payments 20.5%; welfare 15.9%; education 10.9%; defense 10.5%; health 7.7%; transport and communication 7.4%; tsunami expenditure 4.1%).
Public debt (external, outstanding; 2006): U.S.$10,140,000,000.
Household income and expenditure. Average household size (2006–07)[6] 4.1; average annual income per household (2006–07)[6] LKR 315,432 (U.S.$2,941); sources of income (2002): wages 42.0%, nonmonetary income 18.9%, agriculture 7.8%, other 31.3%; expenditure (2002): food and nonalcoholic beverages 44.5%, housing 12.6%, transportation and communication 7.1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 410; remittances (2007) 2,700; foreign direct investment (FDI; 2004–06 avg.) 328; official development assistance (2006) 796. Disbursements for (U.S.$'000,000): tourism (2006) 373; remittances (2007) 283.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 3,131,000, coconuts 954,000, sugarcane 785,510, plantains 518,720, tea 304,600, natural rubber 117,600, peppercorns 19,390, cinnamon 13,360; livestock (number of live animals) 1,222,990 cattle, 318,920 buffalo; roundwood (2006) 6,277,917 cu m, of which fuelwood 89%; fisheries production (2006) 234,346 (from aquaculture 2%). Mining and quarrying (2006): kaolin 9,500; graphite 3,200; sapphires 790,000 carats; diamonds, n.a. Manufacturing (value added in LKR '000,000; 2007): food, beverages, and tobacco 282,843; textiles and apparel 131,522; rubber and plastic products 45,753. Energy production (consumption): electricity (kW-hr; 2005) 8,769,000,000 (8,769,000,000); coal (metric tons; 2005) none (95,000); crude petroleum (barrels; 2005) none (14,500,000); petroleum products (metric tons; 2005) 1,824,000 (3,405,000).
Gross national income (GNI; 2007): U.S.$30,785,000,000 (U.S.$1,540 per capita); purchasing power parity GNI (U.S.$4,210 per capita).

Structure of gross domestic product and labour force

	2007 in value LKR '000,000	2007 % of total value	2005 labour force	2005 % of labour force
Agriculture	418,353	11.7	2,306,000	28.3
Mining	56,645	1.6	[7]	[7]
Public utilities	87,951	2.5	[7]	[7]
Manufacturing	661,983	18.5	1,385,000	17.0
Construction	264,104	7.4	458,000	5.6
Transp. and commun	422,872	11.8	485,000	6.0
Trade, hotels, restaurants	807,995	22.6	1,043,000	12.8
Finance, real estate	454,370	12.7	234,000	2.9
Pub. admin., defense	334,261	9.3	1,607,000[7]	19.7[7]
Services	68,905	1.9		
Other	—	—	623,000[8]	7.7[8]
TOTAL	3,577,438[9]	100.0	8,141,000[10]	100.0

Population economically active (2006): total 7,602,000; activity rate 38.2% (participation rates: ages 15–59 [2000] 60.6%; female 36.3%; unemployed 6.5%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	114.2	125.1	133.0	143.0	159.7	175.7	203.5
Minimum wage index	104.9	112.7	120.5	123.3	.	.	.

Land use as % of total land area (2003): in temporary crops 14.2%, in permanent crops 15.5%, in pasture 6.8%; overall forest area (2005) 29.9%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
LKR '000,000	−134,706	−148,324	−227,171	−253,083	−350,110	−394,327
% of total	13.0%	13.0%	16.3%	16.5%	19.6%	18.7%

Imports (2007): LKR 1,251,135,000,000 (cotton yarn and textiles 14.4%, machinery and apparatus 13.9%, refined petroleum 13.0%, crude petroleum 9.1%, food and beverages 7.3%, base metals 7.3%). *Major import sources:* India 22.3%; Singapore 9.6%; China 7.9%; Iran 7.2%; Hong Kong 6.2%.
Exports (2007): LKR 856,808,000,000 (garments 40.6%; tea 13.3%, of which black 11.5%; gemstones 5.7%, of which diamonds 4.5%; rubber tires 4.5%; coconut products 1.8%; fish 1.6%; rubber 1.4%; cinnamon 1.0%). *Major export destinations:* U.S. 24.5%; U.K. 12.7%; India 6.4%; Germany 5.5%; Belgium 5.0%.

Transport and communications

Transport. Railroads (2004): route length 1,449 km; passenger-km 4,684,000,000; metric ton-km cargo 134,000,000. Roads (2003): total length 97,286 km (paved 81%). Vehicles (2005[12]): passenger cars 293,747; trucks and buses 453,610[13]. Air transport (2007): passenger-km 9,768,000,000; metric ton-km cargo 345,720,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	2,400	117	PCs	2005	734	35
Telephones				Dailies	2005	591[14]	30[14]
Cellular	2007	7,984[15]	414[15]	Internet users	2007	772	40
Landline	2007	2,742	142	Broadband	2007	63[15]	3.3[15]

Education and health

Educational attainment: n.a. *Literacy* (2003–04)[6]: percentage of population age 5 and over literate 93.0%; males literate 94.9%; females literate 91.3%.

Education (2002–03)

	schools	teachers	students	student/teacher ratio
Primary (age 5–10) / Secondary (age 11–17)	10,475	194,931	4,096,886	21.0
Voc., teacher tr	36	535	18,074	33.8
Higher	13	3,386	59,734	17.6

Health (2004): physicians 8,749 (1 per 2,351 persons); hospital beds 60,328 (1 per 341 persons); infant mortality rate (2003) 11.2; undernourished population (2002–04) 4,200,000 (22% of total population based on the consumption of a minimum daily requirement of 1,860 calories).

Military

Total active duty personnel (November 2007): 150,900 (army 78.1%, navy 9.9%, air force 12.0%)[16]. *Military expenditure as percentage of GDP* (2005): 2.6%; per capita expenditure U.S.$30.

[1]English has official status as "the link language" between Sinhala and Tamil. [2]Buddhism has special recognition. [3]As reported by the Registrar General's Department. [4]Estimate of *UN World Population Prospects (2006 Revision)*. [5]Within greater Colombo. [6]Excludes 7 districts in northern and eastern Sri Lanka. [7]Pub. admin., defense and Services include Mining and Public utilities. [8]Unemployed. [9]Detail does not add to total given because of rounding. [10]Excludes 231,000 foreign workers, of whom a significant number are housemaids in Saudi Arabia and U.A.E. [11]Imports c.i.f.; exports f.o.b. [12]January 1. [13]Includes dual-purpose vehicles. [14]Circulation of daily newspapers. [15]Subscribers. [16]Excludes 58,200 paramilitary forces; opposition Tamil group to government (from 1983) numbered 8,000–11,000 in March 2006.

Internet resources for further information:
- **Central Bank of Sri Lanka http://www.cbsl.gov.lk**
- **Department of Census and Statistics http://www.statistics.gov.lk**

Sudan, The

Official name: Jumhūrīyat as-Sūdān (Republic of the Sudan).
Form of government: military-backed interim regime with Council of States (50[1]); National Assembly (450[2])[3].
Head of state and government: President assisted by Vice Presidents[3].
Capital: Khartoum[4].
Official languages: Arabic[5]; English[5].
Official religion: [6].
Monetary unit: Sudanese pound (SDG); valuation (Sept. 8, 2008) 1 U.S.$ = SDG 2.12; 1 £ = SDG 3.75.[7]

Area and population

northern Sudan	area sq km	population 2006 estimate[8]
States	1,840,687	27,028,641
Blue Nile	45,844	1,193,293
Darfur, Northern	296,420	1,583,179[9]
Darfur, Southern	127,300	2,890,348[9]
Darfur, Western	79,460	1,006,801[9]
al-Jazīrah	23,373	2,796,330
Kassalā	36,710	1,171,118
Khartoum	22,142	4,350,096
Kordofan, Northern	185,302	2,529,370
Kordofan, Southern[11]	79,470	1,111,859
Kordofan, Western	111,373	1,320,405
Nile	122,123	1,027,534
Northern	348,765	833,743
al-Qadārif	75,263	1,369,300
Red Sea	218,887	1,124,473
Sinnār	37,844	1,532,085
White Nile	30,411	1,188,707

Territory of Southern Sudan	area sq km	population 2006 estimate[8]
States	619,745	8,818,766
Bahr el-Ghazal, Northern[10]	33,558	826,646
Bahr el-Ghazal, Western	93,900	1,467,870
Equatoria, Central	22,956	334,827
Equatoria, Eastern	82,542	225,872
Equatoria, Western	79,319	1,731,341
Junqalī	122,479	1,189,330
Lakes	40,235	567,329
Unity	35,956	262,787
Upper Nile	77,773	1,212,979
Warab	31,027	999,785
TOTAL	2,460,432[12]	35,847,407

Demography

Population (2008): 39,445,000[13].
Density (2008): persons per sq mi 40.8, persons per sq km 15.7.
Urban-rural (2006): urban 37.6%; rural 62.4%.
Sex distribution (2006): male 50.69%; female 49.31%.
Age breakdown (2006): under 15, 42.1%; 15–29, 28.4%; 30–44, 16.9%; 45–59, 8.4%; 60–74, 3.6%; 75–84, 0.5%; 85 and over, 0.1%.
Population projection: (2010) 41,230,000; (2020) 50,027,000.
Ethnic composition (2003): black *c.* 52%; Arab *c.* 39%; Beja *c.* 6%; foreigners *c.* 2%; other *c.* 1%.
Religious affiliation (2005): Sunnī Muslim 68.4%; traditional beliefs 10.8%; Roman Catholic 9.5%; Protestant 8.8%, of which Anglican 5.4%; other 2.5%.
Major cities (1993): Omdurman 1,271,403; Khartoum 947,483[14]; Khartoum North 700,887; Port Sudan 308,195; Kassalā 234,622; Juba (in Southern Sudan) 114,980.

Vital statistics

Birth rate per 1,000 population (2006): 35.3 (world avg. 20.3).
Death rate per 1,000 population (2006): 15.2 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 4.79.
Life expectancy at birth (2006): male 47.1 years; female 48.8 years.
Major causes of death per 100,000 population (2002): ischemic heart disease 81; malaria 63; HIV/AIDS 58; diarrheal diseases 55; measles 49.
Adult population (ages 15–49) *living with HIV* (2007): 1.4%[15] (world avg. 0.8%).

National economy

Budget (2007). Revenue: SDG 18,555,000,000 (nontax revenue 66.1%, of which government receipts for crude petroleum 58.7%; tax revenue 31.1%, of which taxes on international trade 11.8%, VAT 7.2%). Expenditures: SDG 21,414,000,000 (federal government 65.6%; transfers to: northern states 18.7%; Southern Sudan 15.7%).
Public debt (external, outstanding; 2006): U.S.$11,609,000,000.
Gross national income (GNI; 2007): U.S.$37,031,000,000 (U.S.$960 per capita); purchasing power parity GNI (U.S.$1,880 per capita).

Structure of gross domestic product and labour force

	2006 in value SDD '000,000,000[16]	2006 % of total value	2004 labour force[17]	2004 % of labour force[17]
Agriculture	2,965	31.1	7,925,000	57.4
Petroleum	955	10.0		
other Mining	20	0.2		
Manufacturing	885	9.3		
Construction	410	4.3		
Public utilities	115	1.2		
Transp. and commun.	1,135	11.9	5,881,000	42.6
Trade, hotels	1,485	15.6		
Finance, real estate	715	7.5		
Services	210	2.2		
Pub. admin., defense	535	5.6		
Other	100	1.1		
TOTAL	9,530	100.0	13,806,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 7,500,000, cow's milk 5,300,000, sorghum 5,048,000, goat's milk 1,450,000, millet 792,000, wheat 642,000, tomatoes 580,000, peanuts (groundnuts) 460,000, cattle meat 340,000, dates 330,000, sesame seeds 260,000, seed cotton 240,000, gum arabic (2005–06) 11,600; livestock (number of live animals) 49,000,000 sheep, 42,000,000 goats, 39,500,000 cattle, 3,700,000 camels; roundwood (2006) 20,074,000 cu m, of which fuelwood 89%; fisheries production (2006) 64,600 (from aquaculture 2%). Mining and quarrying (2006): marble 11,470 cu m; gold 3,246 kg. Manufacturing (2006): diesel 1,817,000; flour 1,200,000; benzene 1,139,000; sugar 730,000; cement 227,000; soap 75,000; animal hides and skins 9,400,000 units. Energy production (consumption): electricity (kW-hr; 2006) 4,521,000,000 (3,458,000,000); crude petroleum (barrels; 2007) 176,700,000 ([2006] 34,300,000); petroleum products (metric tons; 2006) 3,912,000 (3,623,000); natural gas, none (none).
Population economically active (2006)[18]: total 11,504,000; activity rate of total population 30.5% (participation rates: ages 15–64, 52.0%; female 30.3%; unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.8	114.6	123.5	133.9	145.3	155.7	168.2

Household income and expenditure. Average household size (2004) 6.2.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 126; remittances (2007) 1,156; foreign direct investment (2004–06 avg.) 2,452; official development assistance (2006) 2,058. Disbursements for (U.S.$'000,000): tourism (2006) 1,403; remittances (2007) 2.
Land use as % of total land area (2003): in temporary crops 7.2%, in permanent crops 0.2%, in pasture 49.3%; overall forest area (2005) 28.4%.

Foreign trade[19]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−497	−340	−297	−1,940	−2,417	+104
% of total	11.3%	6.3%	3.8%	16.7%	17.6%	0.6%

Imports (2007): U.S.$8,775,000,000 (machinery and equipment 36.4%; manufactured goods 22.1%; transport equipment 16.7%; foodstuffs 8.4%, of which wheat and wheat flour 4.1%). *Major import sources:* China 27.8%; EU 12.5%; African countries 8.5%; Saudi Arabia 7.5%; India 6.2%; U.A.E. 5.5%.
Exports (2007): U.S.$8,879,000,000 (crude petroleum 90.7%; refined petroleum 4.1%; sesame seeds 1.0%; livestock [mainly sheep and camels] 0.9%; cotton 0.8%; gold 0.7%; gum arabic 0.6%). *Major export destinations:* China 82.0%; Japan 8.5%; U.A.E. 2.5%; Saudi Arabia 1.1%; The Netherlands 1.1%.

Transport and communications

Transport. Railroads (2006): route length 4,578 km; passenger-km 49,000,000; metric ton-km cargo 893,000,000. Roads (2000): total length 11,900 km (paved 36%). Vehicles (2002): passenger cars 47,300; trucks and buses 62,500. Air transport (2004): passenger-km 758,000,000; metric ton-km cargo 100,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	12,886	352	PCs	2005	...	...
Telephones				Dailies	2005	...[20]	...[20]
Cellular	2007	7,464[21]	194[21]	Internet users	2007	1,500	39
Landline	2007	345	8.9	Broadband	2006	3.5[21]	0.09[21]

Education and health

Educational attainment: n.a. *Literacy* (2003): total population age 15 and over literate 60.9%; males 71.6%; females 50.4%.

Education (2005–06)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–13)	16,729	143,327	4,624,302	32.3
Secondary (age 14–16)	2,459	35,994	639,827	17.8
Higher[22]	75	...	446,998	...

Health (2006): physicians 8,799 (1 per 4,384 persons); hospital beds 26,577 (1 per 1,451 persons); infant mortality rate 96.8; undernourished population (2002–04) 8,700,000 (26% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2007): 109,300 (army 96.1%, navy 1.2%, air force 2.7%)[23]. *Military expenditure as percentage of GDP* (2005): 1.8%; per capita expenditure U.S.$13.

[1]Excludes two observers with no voting rights. [2]All appointed. [3]Comprehensive peace agreement ending 21-year-long war in southern Sudan signed Jan. 9, 2005; interim constitution from July 9, 2005, to be effective for 6 years. [4]Council of States meets in Khartoum; National Assembly meets in Omdurman; Juba is an alternating seat of "the interim power-sharing government." [5]Official working language per 2005 interim constitution. [6]Islamic law and custom are applicable to Muslims only. [7]The Sudanese pound (SDG) replaced the Sudanese dinar (SDD) on Jan. 10, 2007; 1 SDG = 100 SDD. [8]Estimate of online World Gazetteer. [9]2.5 million people in Darfur were internally displaced in mid-2008; more than 200,000 were refugees in eastern Chad. [10]Excludes disputed Abyei area. [11]Includes disputed Abyei area. [12]Summed total; reported total is 2,505,810 sq km, including a water area of 129,810 sq km. [13]Estimate of *UN World Population Prospects (2006 Revision)*. [14]Population of 2008 urban agglomeration (including Omdurman and Khartoum North) is 8.0 million including 1.2 to 1.5 million internally displaced persons. [15]Statistically derived midpoint within range. [16]Derived estimates from % of total value. [17]FAO estimate. [18]Estimates of ILO. [19]Imports c.i.f.; exports f.o.b. [20]Press censorship from 1989 was still imposed in October 2008. [21]Subscribers. [22]2004–05. [23]Foreign troops (t), police (p; September 2008): Southern Sudan—UN peacekeeping force (t) 8,700, (p) 600; Darfur—African Union/UN hybrid peacekeeping force (t) 8,300, (p) 2,000.

Internet resources for further information:
- **Bank of Sudan http://www.cbos.gov.sd**
- **Central Bureau of Statistics http://cbs.gov.sd**

Suriname

Official name: Republiek Suriname (Republic of Suriname).
Form of government: multiparty republic with one legislative house (National Assembly [51]).
Head of state and government: President.
Capital: Paramaribo.
Official language: Dutch.
Official religion: none.
Monetary unit: Suriname dollar (SRD)[1]; valuation (Sept. 8, 2008) 1 U.S.$ = SRD 2.75; 1 £ = SRD 4.85.

Area and population

Districts	Capitals	area sq mi	area sq km	population 2004 census
Brokopondo	Brokopondo	2,843	7,364	14,215
Commewijne	Nieuw Amsterdam	908	2,353	24,649
Coronie	Totness	1,507	3,902	2,887
Marowijne	Albina	1,786	4,627	16,642
Nickerie	Nieuw Nickerie	2,067	5,353	36,639
Para	Onverwacht	2,082	5,393	18,749
Saramacca	Groningen	1,404	3,636	15,980
Sipaliwini	[2]	50,412	130,567	34,136
Wanica	Lelydorp	171	443	85,986
Town district				
Paramaribo	Paramaribo	70	182	242,946
TOTAL		63,251[3, 4]	163,820[3]	492,829

Demography

Population (2008): 516,000.
Density (2008): persons per sq mi 8.2, persons per sq km 3.1.
Urban-rural (2005): urban 73.9%; rural 26.1%.
Sex distribution (2006): male 49.71%; female 50.29%.
Age breakdown (2006): under 15, 28.5%; 15–29, 26.8%; 30–44, 24.3%; 45–59, 12.0%; 60–74, 6.2%; 75 and over, 2.2%.
Population projection: (2010) 528,000; (2020) 583,000.
Doubling time: 58 years.
Ethnic composition (2004): Indo-Pakistani ("Hindustani") 27.4%; Suriname Creole ("Afro-Surinamese") 17.7%; Maroon (descendants of runaway slaves living in the interior) 14.7%; Javanese ("Indonesian") 14.6%; mixed race 12.5%; Amerindian *c.* 1.5%; other/unknown *c.* 11.6%.
Religious affiliation (2004): Christian (mostly Roman Catholic and Moravian) 40.7%; Hindu 19.9%; Muslim 13.5%; nonreligious 4.4%; traditional beliefs 3.3%; other 2.5%; unknown 15.7%.
Major cities (1996–97): Paramaribo 222,800 (urban agglomeration 289,000); Lelydorp 15,600; Nieuw Nickerie 11,100; Mungo (Moengo) 6,800; Meerzorg 6,600.

Vital statistics

Birth rate per 1,000 population (2006): 17.6 (world avg. 20.3).
Death rate per 1,000 population (2006): 5.5 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 12.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 2.05.
Marriage/divorce rates per 1,000 population (2004): 4.0/1.3.
Life expectancy at birth (2006): male 70.3 years; female 75.8 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 265; communicable diseases 172; malignant neoplasms (cancers) 87; injuries 76; diabetes mellitus 32.
Adult population (ages 15–49) *living with HIV* (2007): 2.4%[5] (world avg. 0.8%).

National economy

Budget (2007). Revenue: SRD 2,002,000,000 (tax revenue 79.1%, of which corporate taxes 22.0%, taxes on international trade 21.5%, income tax 15.4%; nontax revenue 16.0%; grants 4.9%). Expenditures: SRD 1,806,500,000 (current expenditures 87.5%, of which wages and salaries 37.6%, transfers 12.0%, interest 5.2%; capital expenditures 12.5%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 195,000, sugarcane 120,000, bananas 44,000, oranges 13,050, plantains 12,000, coconuts 9,000, cassava 4,350; livestock (number of live animals) 137,000 cattle, 24,500 pigs, 3,800,000 chickens; roundwood (2006) 239,362 cu m, of which fuelwood 19%; fisheries production (2006) 30,801 (from aquaculture 1%). Mining and quarrying (2007): bauxite 5,331,000; alumina 2,152,000; gold (2005) 10,619 kg[6]. Manufacturing (value of production at factor cost in SRG; 1993): food products 992,000,000; beverages 558,000,000; tobacco 369,000,000; chemical products 291,000,000; pottery and earthenware 258,000,000; wood products 180,000,000. Energy production (consumption): electricity (kW-hr; 2005) 1,571,000,000 (1,571,000,000); coal, none (none); crude petroleum (barrels; 2006) 4,800,000 ([2005] 3,378,000); petroleum products (metric tons; 2005) 390,000 (609,000); natural gas, none (none).
Population economically active (2004): total 173,130; activity rate of total population 35.1% (participation rates: ages 15–64, 56.0%; female 36.7%; unemployed 9.5%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	138.6	160.1	196.9	216.7	238.3	265.2	283.0

Gross national income (GNI; 2007): U.S.$2,166,000,000 (U.S.$4,730 per capita); purchasing power parity GNI (U.S.$7,510 per capita).

Structure of gross domestic product and labour force

	2006 in value SRD '000,000	2006 % of total value	2004 labour force	2004 % of labour force
Agriculture, forestry, fishing	272,799	4.7	12,593	7.3
Mining and quarrying	687,804	11.9	9,308	5.4
Manufacturing	749,826	12.9	10,971	6.3
Construction	176,858	3.1	14,031	8.1
Public utilities	274,092	4.7	1,659	1.0
Transp. and commun.	459,316	7.9	8,711	5.0
Trade, hotels	633,094	10.9	29,845	17.2
Finance, real estate	600,206	10.3	9,073	5.2
Pub. admin., defense	553,809	9.5	27,995	16.2
Services	66,952	1.2	25,063	14.5
Informal sector[7]	808,561	13.9		. .
Other	519,148[8]	9.0[8]	23,881[9]	13.8[9]
TOTAL	5,802,465	100.0	173,130	100.0

Public debt (external, outstanding; 2007): U.S.$161,100,000.
Household income and expenditure (2004). Average household size 4.0; average disposable income per household SRD 32,150 (U.S.$11,760); sources of income: n.a.; expenditure (2000)[10]: food and beverages 40.0%, housing, energy, and household furnishings 23.6%, clothing and footwear 11.0%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 95; remittances (2007) 140; foreign direct investment (FDI; 2004–06 avg.) 336; official development assistance (2006) 64. Disbursements for (U.S.$'000,000): tourism (2006) 18; remittances (2007) 65.
Land use as % of total land area (2003): in temporary crops 0.4%, in permanent crops 0.06%, in pasture 0.1%; overall forest area (2005) 94.7%.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006
U.S.$'000,000	+52.5	−30.2	+170.4	−115.8	+93.7
% of total	5.2%	2.3%	10.8%	5.9%	3.5%

Imports (2005): U.S.$1,099,900,000 (machinery and transport equipment 26.8%, mineral fuels 15.6%, food products 9.1%, chemicals and chemical products 6.9%). *Major import sources* (2007): U.S. 31.7%; The Netherlands 20.4%; Trinidad and Tobago 17.9%; China 5.5%; Japan 3.6%.
Exports (2005): U.S.$929,100,000 (alumina 48.1%; gold 36.4%; shrimp and fish 6.1%; crude petroleum 5.8%; rice 1.5%). *Major export destinations* (2007): Canada 23.0%; Norway 14.4%; U.S. 12.1%; Trinidad and Tobago 7.2%; France 5.4%.

Transport and communications

Transport. Railroads (2003)[12]: length 98 mi, 157 km; passengers, n.a.; cargo, n.a. Roads (2003): total length 2,674 mi, 4,304 km (paved 26%). Vehicles (2004): passenger cars 76,466; trucks and buses 29,946. Air transport (2005)[13]: passenger-km 1,745,800,000; metric ton-km cargo 27,100,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	118	243	PCs	2001	20	45
Telephones				Dailies	2006	. .[14]	. .[14]
Cellular	2006	320[15]	634[15]	Internet users	2007	44	96
Landline	2006	82	162	Broadband	2006	2.7[15]	5.3[15]

Education and health

Educational attainment: n.a. *Literacy* (2004): total population age 15 and over literate 89.6%; males literate 92.0%; females literate 87.2%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	308[16]	3,520	65,527	18.6
Secondary (age 12–18)	141[16]	1,526	24,307	15.9
Voc., teacher tr		1,770	21,511	12.2
Higher[17]	1	286	3,081	10.8

Health: physicians (2001) 236 (1 per 2,000 persons); hospital beds (2005) 1,797 (1 per 278 persons); infant mortality rate per 1,000 live births (2006) 20.8; undernourished population (2002–04) 40,000 (8% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

Military

Total active duty personnel (November 2007): 1,840[18] (army 76.1%, navy 13.0%, air force 10.9%). *Military expenditure as percentage of GDP* (2005): 1.6%; per capita expenditure U.S.$43.

[1]The Suriname dollar (SRD) replaced the Suriname guilder (SRG) on Jan. 1, 2004, at a rate of 1 SRD = SRG 1,000. [2]No capital; administered from Paramaribo. [3]Area excludes 6,809 sq mi (17,635 sq km) of territory disputed with Guyana. [4]Detail does not add to total given because of rounding. [5]Statistically derived midpoint within range. [6]Recorded production; unrecorded production may be as high as 30,000 kg. [7]Smuggling or unregulated activities in such areas as gold mining and tree removal. [8]Indirect taxes less subsidies and less imputed bank service charges. [9]Includes 16,425 unemployed. [10]Weights of consumer price index components. [11]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [12]There are no public railways operating in Suriname; 52 mi (83 km) of the private railroad were operational in 2003. [13]Scheduled flights only. [14]Circulation data for three daily newspapers is unavailable. [15]Subscribers. [16]2001–02. [17]Anton de Kom University of Suriname; 2001–02. [18]All services are part of the army.

Internet resource for further information:
- **General Bureau of Statistics http://www.statistics-suriname.org**

Swaziland

Official name: Umbuso weSwatini (Swazi); Kingdom of Swaziland (English).
Form of government: monarchy[1] with two legislative houses (Senate [30[2]]; House of Assembly [65[3]]).
Head of state and government: King, assisted by Prime Minister.
Capitals: Mbabane (administrative and judicial); Lobamba (legislative)[4].
Official languages: Swati (Swazi); English.
Official religion: none.
Monetary unit: lilangeni[5] (plural emalangeni [E]); valuation (Sept. 8, 2008) 1 U.S.$ = E 8.03; 1 £ = E 14.19.

Area and population

Districts	Capitals	area sq mi	area sq km	population 2007 census
Hhohho	Mbabane	1,378	3,569	263,761
Lubombo	Siteki	2,296	5,947	193,817
Manzini	Manzini	1,571	4,068	293,260
Shiselweni	Nhlangano	1,459	3,780	202,686
TOTAL		6,704	17,364	953,524[6]

Demography

Population (2008): 1,018,000.
Density (2008): persons per sq mi 151.8, persons per sq km 58.6.
Urban-rural (2007): urban 22.1%; rural 77.9%.
Sex distribution (2007): male 47.27%; female 52.73%.
Age breakdown (2007): under 15, 40.3%; 15–29, 33.9%; 30–44, 12.9%; 45–59, 7.6%; 60–74, 4.1%; 75 and over, 1.2%.
Population projection: (2010) 1,018,000; (2020) 1,018,000.
Ethnic composition (2000): Swazi 82.3%; Zulu 9.6%; Tsonga 2.3%; Afrikaner 1.4%; mixed (black-white) 1.0%; other 3.4%.
Religious affiliation (2000): Christian *c.* 87%, of which African indigenous *c.* 43%, unaffiliated Christian *c.* 19%, Protestant *c.* 18%, Roman Catholic *c.* 5%; traditional beliefs *c.* 11%; Muslim *c.* 1%; nonreligious *c.* 1%.
Major towns (2006): Manzini (urban agglomeration; 115,200); Mbabane 78,700; Big Bend 10,400; Malkerns 10,000; Nhlangano 9,400.

Vital statistics

Birth rate per 1,000 population (2007): 27.0 (world avg. 20.3).
Death rate per 1,000 population (2007): 30.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): –3.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 3.43.
Life expectancy at birth (2007): male 31.8 years; female 32.6 years.
Adult population (ages 15–49) *living with HIV* (2007): 26.1%[7] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): infectious and parasitic diseases *c.* 1,846, of which HIV/AIDS-related *c.* 1,560, tuberculosis *c.* 94; cardiovascular diseases *c.* 138; respiratory infections *c.* 126; malignant neoplasms (cancers) *c.* 71.

National economy

Budget (2007–08). Revenue: E 8,341,100,000 (receipts from Customs Union of Southern Africa 59.8%, individual income taxes 13.5%, sales taxes 8.7%, taxes on companies 6.3%). Expenditures: E 6,992,900,000 (education 24.1%, police/defense 18.2%, general administration 16.9%, transportation and communications 9.6%, health 8.9%).
Gross national income (GNI; 2007): U.S.$2,951,000,000 (U.S.$2,580 per capita); purchasing power parity GNI (U.S.$4,930 per capita).

Structure of gross domestic product and labour force

	2007 in value E '000,000	2007 % of total value	2005 labour force[8]	2005 % of labour force[8]
Agriculture	1,277.3	6.3	42,455[9]	12.8[9]
Mining	60 4	0.3	1,283	0.4
Manufacturing	7,717.1	37 8	20,272	6.1
Construction	666.3	3.3	5,115	1.5
Public utilities	148 8	0.7	859	0.3
Transp. and commun.	1,243.6	6.1	3,007	0.9
Trade, hotels	1,483.7	7.3	11,454	3.5
Finance, real estate	1,248 1	6.1	6,430	1.9
Pub. admin., defense	3,395.0	16 6	27,228	8.2
Services	525.1	2.6		
Other	2,621.0[10]	12.9[10]	213,697[11]	64.4[11]
TOTAL	20,386.4	100 0	331,800	100.0

Population economically active (2006): total 337,200; activity rate of total population 32.8% (participation rates: ages 15 and over, n.a.; female, n.a.; unemployed, *c.* 30%).

Price index (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	105 9	118 7	127.3	131.7	138.0	145.3

Public debt (external; March 2008): U.S.$403,100,000.
Land use as % of total land area (2003): in temporary crops 10.3%, in permanent crops 0.8%, in pasture 69.8%; overall forest area (2005) 31.5%.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 5,000,000, corn (maize) 68,000, grapefruit and pomelos 37,000, oranges 36,000, pineapples 31,000, seed cotton 7,200, potatoes 6,000, peanuts (groundnuts) 4,100; livestock (number of live animals) 585,000 cattle, 276,000 goats, 3,200,000 chickens; roundwood (2006) 1,325,511 cu m, of which fuelwood 75%; fisheries production (2006) 70 (from aquaculture, negligible). Mining and quarrying (2007): ferrovanadium (2006) 491; crushed stone 207,535 cu m. Manufacturing (value of exports in U.S.$'000; 2007): apparel and clothing accessories (2002) 173,500; sugar 159,821; unbleached wood pulp 97,099; preserved fruit (significantly pineapples) 21,404; wood furniture (2002) 11,800. Energy production (consumption): electricity (kW-hr; 2007) 134,200,000 (1,151,900,000); coal (metric tons; 2007) 241,200 ([2003] 372,000); crude petroleum, none (none); petroleum products, none (n.a.); natural gas, none (none).
Household income and expenditure. Average household size (2006–07) 4.6[12]; average annual income per household (2002) *c.* U.S.$1,540; sources of income, n.a.; expenditure (1996)[13]: food 24.5%, housing 15.9%, household furnishings and operation 13.2%, clothing and footwear 11.0%, transportation and communications 8.2%, education 6.1%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 74; remittances (2007) 99; foreign direct investment (2004–06 avg.) 19; official development assistance (2006) 35. Disbursements for (U.S.$'000,000): tourism (2006) 48; remittances (2007) 17; foreign direct disinvestment (2004–06 avg.) –8.0.

Foreign trade[14]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	–81.5	+51.5	+126.6	+90.9	+16.1	+15.0
% of total	3.8%	2.4%	3.9%	2.6%	0.4%	0.4%

Imports (2005): U.S.$1,654,000,000 (food 15.1%; chemicals and chemical products 13.5%; machinery and apparatus 13.0%; refined petroleum 10.2%; road vehicles/parts 7.6%). *Major import sources:* South Africa 88.3%; unspecified Asia (probably Taiwan) 2.8%; China 2.3%.
Exports (2005): U.S.$1,570,000,000 (essential oils 38.4%; food 16.2%, of which raw[9] sugar 8.8%; apparel/clothing accessories 12.0%; pulp and waste paper 4.0%). *Major export destinations:* South Africa 74.6%; U.S. 7.5%; Mozambique 5.4%.

Transport and communications

Transport. Railroads (2006): route length 187 mi, 301 km; passenger-km, n.a.[15]; metric ton-km cargo (2004) 710,000,000. Roads (2002): total length 2,233 mi, 3,594 km (paved 30%). Vehicles (2004[16]): passenger cars 44,113; trucks and buses 47,761. Air transport: (2000) passenger-km 68,000,000; metric ton-km cargo 6,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	38	34	PCs	2006	42	37
Telephones				Dailies	2004	29[17]	28[17]
Cellular	2007	380[18]	333[18]	Internet users	2006	42	41
Landline	2006	44	43	Broadband	2007	.	...

Education and health

Educational attainment: n.a. *Literacy* (2007): total population age 15 and over literate 84.0%; males literate 84.7%; females literate 83.4%.

Education (2006)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	541[19]	6,741	221,596	32.9
Secondary (age 13–17)	.	4,241	71,124	16.8
Voc., teacher tr.[20]	..	68	686	10.1
Higher	3[20]	462	5,692[21]	12.8

Health (2004): physicians 171 (1 per 6,047 persons); hospital beds (2000) 1,570[22] (1 per 665 persons); infant mortality rate per 1,000 live births (2007) 70.7; undernourished population (2002–04) 250,000 (22% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (2006): *c.* 3,000 troops. *Military expenditure as percentage of GDP* (2004): 1.8%; per capita expenditure U.S.$39.

[1]Controversial constitution became effective by royal decree on Feb. 8, 2006. [2]Includes 20 nonelective seats. [3]Includes 10 nonelective seats. [4]Lozitha and Ludzidzini, royal residences close to Lobamba, have national symbolic significance. [5]The lilangeni is at par with the South African rand. [6]Preliminary de jure figure; undefined final census figure equals 1,018,449. [7]Statistically derived midpoint of range. [8]Rough estimates. [9]Includes informally employed. [10]Indirect taxes less imputed bank service charges and less subsidies. [11]Includes unemployed. [12]Based on the Swaziland Demographic and Health Survey 2006–07, comprising 9,143 people in 4,843 households. [13]Weights of consumer price index components. [14]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [15]Scheduled passenger train service was terminated in January 2001. [16]January 1. [17]Circulation of daily newspapers. [18]Subscribers. [19]2001. [20]2004. [21]2007. [22]Excludes National Psychiatric Hospital.

Internet resources for further information:
- **Central Bank of Swaziland**
  http://www.centralbank.org.sz
- **Swaziland Government**
  http://www.gov.sz

Sweden

Official name: Konungariket Sverige (Kingdom of Sweden).
Form of government: constitutional monarchy with one legislative house (Riksdag, or Parliament [349]).
Chief of state: King.
Head of government: Prime Minister.
Capital: Stockholm.
Official language: Swedish.
Official religion: none.
Monetary unit: Swedish krona (SEK); valuation (Sept. 8, 2008) 1 U.S.$ = SEK 6.64; 1 £ = SEK 11.73.

Area and population

Counties	area sq km	population 2008[1] estimate	Counties	area sq km	population 2008[1] estimate
Blekinge	3,055	151,900	Södermanland	6,607	265,190
Dalarna	30,404	275,618	Stockholm	6,789	1,949,516
Gävleborg	19,756	275,556	Uppsala	7,206	323,270
Gotland	3,184	57,122	Värmland	19,388	273,826
Halland	5,719	291,393	Västerbotten	59,284	257,593
Jämtland	54,100	126,937	Västernorrland	23,107	243,449
Jönköping	11,253	333,610	Västmanland	6,614	249,193
Kalmar	11,694	233,834	Västra Gotaland	25,389	1,547,298
Kronoberg	9,429	180,787	TOTAL LAND AND SMALL LAKES AREA	441,348[2]	
Norrbotten	106,012	250,602	4 LARGE LAKES	8,926[2]	
Örebro	9,343	276,067	OTHER UNDISTRIBUTED	21	
Östergötland	11,646	420,809	TOTAL	450,295	9,182,927
Skåne	11,369	1,199,357			

Demography

Population (2008): 9,214,000.
Density (2008)[3]: persons per sq mi 58.2, persons per sq km 22.5.
Urban-rural (2005): urban 84.4%; rural 15.6%.
Sex distribution (2008[1]): male 49.70%; female 50.30%.
Age breakdown (2007[1]): under 15, 17.0%; 15–29, 18.8%; 30–44, 20.7%; 45–59, 19.5%; 60–74, 15.2%; 75–84, 6.2%; 85 and over, 2.6%.
Population projection: (2010) 9,335,000; (2020) 9,878,000.
Ethnic composition (2006[1])[4]: Swedish 83.8%; other European 10.1%, of which Finnish 2.9%, pre-1991 Yugoslav 2.2%; Asian 4.1%; other 2.0%.
Religious affiliation (2005): Church of Sweden (including nonpracticing) *c.* 77%; other Protestant *c.* 4.5%; Muslim *c.* 4%; Roman Catholic *c.* 1.5%; Orthodox *c.* 1%; other *c.* 12%.
Major cities (2008[1]): Stockholm 795,163; Göteborg 493,502; Malmö 280,801; Uppsala 187,541; Linköping 140,367; Västerås 133,728.

Vital statistics

Birth rate per 1,000 population (2007): 11.7 (world avg. 20.3); (2007) within marriage 45.3%; outside of marriage 54.7%.
Death rate per 1,000 population (2007): 10.0 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 1.88.
Marriage/divorce rates per 1,000 population (2007): 5.2/2.3.
Life expectancy at birth (2007): male 78.9 years; female 83.0 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 474.9, of which ischemic heart disease 221.7, cerebrovascular disease 112.1; malignant neoplasms (cancers) 238.9.

National economy

Budget (2005). Revenue: SEK 718,249,000,000 (taxes on goods and services 45.6%, statutory social security fees 37.9%, income/profits/capital gains taxes 9.5%, property taxes 5.2%). Expenditures: SEK 750,965,000,000 (social insurance 40.0%, defense 5.9%, education 5.8%, health 5.1%, debt service 4.7%).
Public debt (September 2007): U.S.$175,055,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 2,254,700, sugar beets 2,000,000, barley 1,439,000, oats 892,300, potatoes 790,100, triticale 276,300, rapeseed 223,000; livestock (number of live animals) 1,694,570 pigs, 1,560,670 cattle, 505,466 sheep, (2004) 250,500 reindeer; roundwood (2006) 62,000,000 cu m, of which fuelwood 10%; fisheries production (2006) 276,800 (from aquaculture 3%). Mining and quarrying (2006): iron ore 16,000,000[5]; zinc 208,551[5]; copper 86,700[5]; silver 292,000 kg[5]. Manufacturing (value added in SEK '000,000; 2005[6]): electrical machinery, telecommunications equipment, and electronics 108,909; road vehicles/parts 65,211; chemicals and chemical products 62,320; nonelectrical machinery 61,004; paper and paper products 44,198; food, beverages, and tobacco 34,544; fabricated metals 32,673; printing and publishing 25,060. Energy production (consumption): electricity (kW-hr; 2005) 154,981,000,000 (147,587,000,000); coal (metric tons; 2005) none (3,070,000); crude petroleum (barrels; 2005) none (146,700,000); petroleum products (metric tons; 2005) 17,620,000 (11,442,000); natural gas (cu m; 2005) none (1,005,000,000).
Household income and expenditure. Average household size (2006) 2.1; average annual disposable income per household (2004) SEK 258,900 (U.S.$35,230); sources of gross income (2004): wages and salaries 60.2%, transfer payments 30.7%, self-employment 2.8%; expenditure (2005): housing and energy 20.7%, transportation 16.6%, recreation and culture 15.5%, food and nonalcoholic beverages 13.3%, household furnishings 7.5%.
Land use as % of total land area (2003): in temporary crops 6.5%, in permanent crops 0.01%, in pasture 12.0%; overall forest area (2005) 66.9%.
Gross national income (GNI; 2007): U.S.$421,342,000,000 (U.S.$46,060 per capita); purchasing power parity GNI (U.S.$36,590 per capita).

Structure of gross domestic product and labour force

	2007 in value SEK '000,000	2007 % of total value	2006 labour force[7]	2006 % of labour force[7]
Agriculture	40,418	1.3	86,000	1.9
Mining	16,263	0.5	8,000	0.2
Manufacturing	541,264	17.6	653,000	14.2
Public utilities	80,491	2.6	25,000	0.5
Construction	135,733	4.4	270,000	5.9
Transp. and commun.	175,997	5.7	274,000	6.0
Trade, hotels	346,730	11.3	664,000	14.5
Finance, real estate	646,181	21.0	687,000	15.0
Pub. admin., defense	575,190	18.7	249,000	5.4
Services	131,804	4.3	1,414,000	30.8
Other	380,520[8]	12.4[8]	256,000[9]	5.6[9]
TOTAL	3,070,591	100.0[10]	4,586,000	100.0

Population economically active (2006): total 4,586,000[7]; activity rate of total population 50.5% (participation rates: ages 16–64, 78.7%; female 47.6%; unemployed [October 2008] 5.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.4	104.6	106.6	107.0	107.5	109.0	111.4
Hourly earnings index	102.9	106.4	109.4	112.3	115.7	119.2	123.3

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 9,133; remittances (2007) 336; foreign direct investment (FDI; 2004–06 avg.) 16,288. Disbursements for (U.S.$'000,000): tourism (2006) 11,543; remittances (2007) 589; FDI (2004–06 avg.) 24,298.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
SEK '000,000	+149,100	+146,500	+165,600	+143,500	+159,300	+120,400
% of total	10.2%	9.7%	10.1%	7.9%	8.1%	5.6%

Imports (2006): SEK 908,300,000,000 (road vehicles 10.9%; crude and refined petroleum 10.8%; nonelectrical machinery and apparatus 10.1%; office machines/telecommunications equipment 9.9%; base metals 6.8%). *Major import sources:* Germany 17.9%; Denmark 9.4%; Norway 8.7%; The Netherlands 6.3%; U.K. 6.2%; Finland 5.9%.
Exports (2006): SEK 1,067,600,000,000 (nonelectrical machinery and apparatus 14.4%; road vehicles 13.6%; telecommunications equipment 8.5%; paper and paper products 6.8%; medicines and pharmaceuticals 6.0%; iron and steel 5.7%). *Major export destinations:* Germany 9.9%; U.S. 9.4%; Norway 9.3%; U.K. 7.2%; Denmark 7.0%; Finland 6.1%.

Transport and communications

Transport. Railroads (2005[1]): length 6,866 mi, 11,050 km; (2005) passenger-km 8,922,000,000; metric ton-km cargo 21,675,000,000. Roads (2005): total length 264,320 mi, 425,383 km (paved 31%). Vehicles (2006[1]): passenger cars 4,154,000; trucks and buses 474,000. Air transport (2007)[12]: passenger-km 4,896,000,000; metric ton-km cargo 2,580,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	8,645	965	PCs	2005	7,548	836
Telephones				Dailies	2004	4,312[13]	480[13]
Cellular	2007	10,371[14]	1,137[14]	Internet users	2007	7,000	768
Landline	2007	5,506	604	Broadband	2007	3,280[14]	360[14]

Education and health

Educational attainment (2006[1]). Percentage of population age 15–74 having: incomplete or complete primary education 24.1%; incomplete or complete secondary 50.4%; incomplete or complete higher 23.9%; unknown 1.6%.

Education (2004–05)

	schools	teachers	students	student/teacher ratio
Primary/lower secondary (age 7–15)	4,963	108,233[15]	1,023,634	9.5
Upper secondary (age 16–18)	...	37,640[15]	347,713	9.2
Higher	64	36,413[16]	397,679[17]	11.4[16]

Health (2005): physicians 27,600 (1 per 327 persons); hospital beds 26,540 (1 per 340 persons); infant mortality rate per 1,000 live births (2007) 2.5; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 24,000 (army 42.5%, navy 32.9%, air force 24.6%). *Military expenditure as percentage of GDP* (2005): 1.5%; per capita expenditure U.S.$612.

[1]January 1. [2]Area of small lakes equals 31,034 sq km; total inland water area including 4 large lakes equals 39,960 sq km. [3]Density based on land area only (410,335 sq km). [4]Foreign-born persons or those with both parents born abroad are identified by country of origin. [5]Metal content. [6]At constant prices of 2000. [7]Ages 16–64 only. [8]Taxes less subsidies. [9]Includes 246,000 unemployed. [10]Detail does not add to total given because of rounding. [11]Imports c.i.f.; exports f.o.b. [12]Includes SAS international and domestic traffic applicable to Sweden only. [13]Circulation of daily newspapers. [14]Subscribers. [15]Includes part-time teachers and teachers on leave. [16]2002–03. [17]2003–04.

Internet resource for further information:
• **Statistics Sweden http://www.scb.se**

Switzerland

Official name: Swiss Confederation[1].
Form of government: federal state with two legislative houses (Council of States [46]; National Council [200]).
Head of state and government: President of the Federal Council.
Capital: Bern[2].
Official languages: French; German; Italian; Romansh (locally).
Official religion: none.
Monetary unit: Swiss franc (CHF); valuation (Sept. 8, 2008) 1 U.S.$ = CHF 1.11; 1 £ = CHF 1.96.

Area and population

Cantons	area sq km	population 2008[3] estimate	Cantons	area sq km	population 2008[3] estimate
Aargau	1,404	581,100	Nidwalden[4]	276	40,400
Appenzell Ausser-Rhoden[4]	243	52,900	Obwalden[4]	491	34,100
Appenzell Inner-Rhoden[4]	172	15,500	Sankt Gallen	2,026	465,900
Basel-Landschaft[4]	518	269,000	Schaffhausen	298	74,500
Basel-Stadt[4]	37	185,000	Schwyz	908	141,000
Bern	5,959	962,700	Solothurn	791	250,400
Fribourg	1,671	264,000	Thurgau	991	238,200
Genève	282	437,400	Ticino	2,812	328,700
Glarus	685	38,100	Uri	1,077	34,900
Graubunden	7,105	188,400	Valais	5,224	298,900
Jura	838	69,600	Vaud	3,212	671,700
Luzern	1,493	363,000	Zug	239	109,000
Neuchâtel	803	170,000	Zurich	1,729	1,307,300
			TOTAL	41,284	7,591,400[5, 6]

Demography

Population (2008): 7,617,000.
Density (2008): persons per sq mi 477.9, persons per sq km 184.5.
Urban-rural (2005): urban 75.2%; rural 24.8%.
Sex distribution (2008[3]): male 49.08%; female 50.92%.
Age breakdown (2008[3]): under 15, 15.5%; 15–29, 18.3%; 30–44, 23.0%; 45–59, 20.9%; 60–74, 14.4%; 75–84, 5.7%; 85 and over, 2.2%.
Population projection: (2010) 7,720,000; (2020) 8,216,000.
National composition (2008[3]): Swiss 78.9%; Italian 3.8%; German 2.7%; Serb/Montenegrin 2.5%; Portuguese 2.4%; Turkish 1.0%; other 8.7%.
Religious affiliation (2000): Roman Catholic 41.8%; Protestant 33.0%; Muslim 4.3%; Orthodox 1.8%; Jewish 0.2%; other Christian 2.7%; nonreligious 11.1%; other 0.8%; unknown 4.3%.
Major urban agglomerations (2007[3]): Zurich 1,111,909; Geneva 497,386; Basel 486,952; Bern 344,724; Lausanne 313,074; Luzern 200,282.

Vital statistics

Birth rate per 1,000 population (2007): 9.9 (world avg. 20.3); within marriage 83.8%; outside of marriage 16.2%.
Death rate per 1,000 population (2007): 8.0 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 1.45.
Marriage/divorce rates per 1,000 population (2007): 5.3/2.6.
Life expectancy at birth (2007): male 79.4 years; female 84.2 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 307.4; malignant neoplasms (cancers) 207.3; diseases of the respiratory system 57.4; accidents, suicide, violence 46.5.

National economy

Budget (2007)[7]. Revenue: CHF 165,097,000,000 (tax revenue 59.1%, of which taxes on income and wealth 39.6%; nontax revenue 22.2%; social security obligations 18.7%). Expenditures: CHF 170,738,000,000 (social security 19.0%; social welfare 16.2%; education 16.2%; health 11.3%; transportation 8.4%; defense 2.9%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 4,000,000, sugar beets 1,584,000, wheat 562,200, potatoes 490,000, apples 250,000, pig meat 250,000, cattle meat 135,000, grapes 130,000, pears 80,000; livestock (number of live animals) 1,650,000 pigs, 1,565,000 cattle; roundwood (2006) 5,702,000 cu m, of which fuelwood 25%; fisheries production (2006) 2,636 (from aquaculture 46%). Mining (2006): salt 560,000.[8] Manufacturing (value added in CHF '000,000; 2006): chemicals/chemical products/refined petroleum 18,260; professional and scientific equipment/watches 13,488; nonelectrical machinery and apparatus 12,804; fabricated metal products 8,564; food products, beverages, and tobacco 8,325. Energy production (consumption): electricity (kW-hr; 2007) 65,918,000,000 ([2005] 65,962,000,000); hard coal (metric tons; 2005) none (183,000); crude petroleum (barrels; 2005) none (35,000,000); petroleum products (metric tons; 2005) 4,756,000 (10,702,000); natural gas (cu m; 2005) none (3,318,000,000).
Population economically active (2006): total 4,220,000[9]; activity rate of total population 55.8% (participation rates: ages 15–64, 81.2%; female 45.7%; unemployed [May 2007–April 2008] 2.6%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.0	101.7	102.3	103.1	104.3	105.4	106.1
Annual earnings index	102.5	104.3	105.8	106.7	107.8	...	..

Household income and expenditure (2004). Average household size 2.3; average gross income per household CHF 102,072 (U.S.$82,084); sources of income: work 64.7%, transfers 24.0%; expenditure (2006): housing and energy 23.6%, health 14.6%, food and nonalcoholic beverages 10.6%, recreation and culture 8.2%, transportation 8.1%, restaurants and hotels 8.0%.
Gross national income (GNI; 2007): U.S.$452,121,000,000 (U.S.$59,880 per capita); purchasing power parity GNI (U.S.$43,870 per capita).

Structure of gross domestic product and labour force

	2006 in value CHF '000,000	2006 % of total value	2007 labour force	2007 % of labour force
Agriculture, forestry, fishing	5,441	1.1	160,000	3.7
Mining	779	0.2	5,000	0.1
Manufacturing	91,121	18.7	684,000	15.7
Public utilities	9,315	1.9	24,000	0.5
Construction	25,543	5.2	297,000	6.8
Transp. and commun.	29,554	6.1	253,000	5.8
Trade, restaurants	71,299	14.6	806,000	18.4
Finance, insurance[10]	106,037	21.8	672,000	15.4
Pub. admin., defense	48,720	10.0	158,000	3.6
Services	70,344	14.4	837,000	19.2
Other	28,888[11]	5.9[11]	473,000	10.8
TOTAL	487,041	100.0[5]	4,369,000	100.0

Public debt (December 2006): U.S.$188,701,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 10,640; remittances (2007) 2,077; foreign direct investment (FDI; 2004–06 avg.) 8,398. Disbursements for (U.S.$'000,000): tourism (2006) 9,919; remittances (2007) 15,422; FDI (2004–06 avg.) 54,029.
Land use as % of total land area (2003): in temporary crops 10.2%, in permanent crops 0.6%, in pasture 27.3%; overall forest area (2005) 30.9%.

Foreign trade[12]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CHF '000,000	+7,534	+6,877	+9,325	+7,883	+8,095	+13,892
% of total	2.9%	2.6%	3.3%	2.6%	2.2%	3.6%

Imports (2006): CHF 177,287,000,000 (machinery and apparatus 18.8%, medicine and pharmaceuticals 10.5%, base and fabricated metals [excluding gold] 10.2%, mineral fuels 7.9%, road vehicles 6.5%). *Major import sources* (2007): Germany 31.5%; Italy 10.4%; France 9.0%; U.S. 4.8%; The Netherlands 4.4%.
Exports (2006): CHF 185,382,000,000 (medicine and pharmaceuticals 21.1%, nonelectrical machinery and equipment 15.1%, wrist watches 6.9%, organic chemicals 6.8%). *Major export destinations* (2007): Germany 20.8%; U.S. 9.3%; Italy 8.9%; France 8.4%; U.K. 4.8%.

Transport and communications

Transport. Railroads (2005): length 3,145 mi, 5,062 km; passenger-km 16,144,000,000; metric ton-km cargo 10,149,000,000. Roads (2007[3]): total length 44,337 mi, 71,353 km. Vehicles (2007): passenger cars 3,955,787; trucks and buses 324,153. Air transport (2006): passenger-km 22,788,000,000; metric ton-km cargo 1,039,032,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	4,300	576	PCs	2005	6,430	857
Telephones				Dailies	2004	2,486[13]	333[13]
Cellular	2007	8,096[14]	1,072[14]	Internet users	2007	4,610	611
Landline	2007	5,000	662	Broadband	2007	2,400[14]	318[14]

Education and health

Educational attainment (2006). Percentage of resident Swiss and resident alien population age 25–64 having: compulsory education 17.9%; secondary 52.2%; higher 29.9%.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary/lower secondary	5,954	76,800	806,905	10.5
Upper secondary/vocational	982	11,500	317,417	27.6
Higher	344	76,547	206,404	2.7

Health: physicians (2005) 28,251 (1 per 263 persons); hospital beds (2006) 40,347 (1 per 185 persons); infant mortality rate per 1,000 live births (2007) 3.9; undernourished population (2002–04) less than 2.5% of total population.

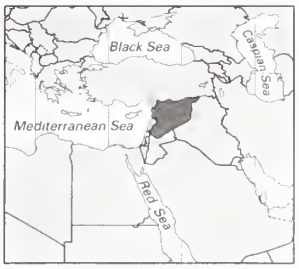
Military

Total active duty personnel (November 2007): 22,600[15]. *Military expenditure as percentage of GDP* (2005): 1.0%; per capita expenditure U.S.$464.

[1]Official long-form name in French is Confédération Suisse; in German, Schweizerische Eidgenossenschaft; in Italian, Confederazione Svizzera; in Romansh, Confederaziun Svizra. [2]The federal supreme court is located in Lausanne. [3]January 1. [4]Demicanton; functions as a full canton. [5]Detail does not add to total given because of rounding. [6]Includes nonresident population of 1,601,900. [7]Combines federal, cantonal, and communal budgets. [8]Polished diamond exports (2006): U.S.$661,000,000. [9]Foreign workers account for *c.* 26% of population economically active. [10]Includes consulting services. [11]Taxes less subsidies. [12]Imports c.i.f.; exports f.o.b. [13]Circulation of daily newspapers. [14]Subscribers. [15]Excludes 218,200 reservists (army 74.0%, air force 14.3%, other 11.7%); the 105,000-member civil defense forces are not part of the armed forces.

Internet resources for further information:
- **Swiss National Bank http://www.snb.ch/en**
- **Swiss Federal Statistical Office http://www.statistik.admin.ch**

Syria



Official name: Al-Jumhūrīyah al-ʿArabīyah as-Sūrīyah (Syrian Arab Republic).
Form of government: unitary multiparty republic with one legislative house (People's Assembly [250]).
Head of state and government: President.
Capital: Damascus.
Official language: Arabic.
Official religion: none[1].
Monetary unit: Syrian pound (S.P); valuation (Sept. 8, 2008) 1 U.S.$ = S.P 51.03; 1 £ = S.P 90.15.

Area and population

Governorates	area sq km	population 2007[2] estimate	Governorates	area sq km	population 2007[2] estimate
Dar'ā	3,730	890,000	Al-Lādhiqīyah	2,297	928,000
Dayr az-Zawr	33,060	1,061,000	Al-Qunaytirah	1,861[3]	76,000
Dimashq	18,032	2,406,000	Ar-Raqqah	19,616	833,000
Halab	18,500	4,281,000	As-Suwaydā'	5,550	341,000
Hamāh	8,883	1,458,000	Tartūs	1,892	739,000
Al-Hasakah	23,334	1,345,000	**Municipality**		
Hims	42,223	1,610,000	Damascus	105	1,647,000
Idlib	6,097	1,326,000	TOTAL	185,180[3]	18,941,000[4]

Demography

Population (2008): 19,639,000[4].
Density (2008): persons per sq mi 274.7, persons per sq km 106.1.
Urban-rural (2005): urban 50.6%; rural 49.4%.
Sex distribution (2007): male 51.11%; female 48.89%.
Age breakdown (2006): under 15, 37.0%; 15–29, 31.1%; 30–44, 18.7%; 45–59, 8.4%; 60–74, 3.7%; 75 and over, 1.1%.
Population projection: (2010) 20,582,000; (2020) 24,563,000.
Ethnic composition (2000): Syrian Arab 74.9%; Bedouin Arab 7.4%; Kurd 7.3%; Palestinian Arab 3.9%; Armenian 2.7%; other 3.8%.
Religious affiliation (2000): Muslim *c.* 86%, of which Sunnī *c.* 74%, ʿAlawite (Shīʿī) *c.* 11%; Christian *c.* 8%, of which Orthodox *c.* 5%, Roman Catholic *c.* 2%; Druze *c.* 3%; nonreligious/atheist *c.* 3%.
Major cities (2004): Aleppo 1,975,200; Damascus 1,614,500; Homs (Ḥimṣ) 800,400; Latakia 468,700; Ḥamāh 366,800.

Vital statistics

Birth rate per 1,000 population (2006): 27.8 (world avg. 20.3).
Death rate per 1,000 population (2006): 4.8 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 3.40.
Marriage/divorce rates per 1,000 population (2004)[5]: 10.0/1.0.
Life expectancy at birth (2006): male 69.0 years; female 71.7 years.
Major causes of death per 100,000 population (2002); diseases of the circulatory system 156, of which ischemic heart disease 64, cerebrovascular disease 44; malignant neoplasms (cancers) 56; accidents, injuries 38.

National economy

Budget (2005). Revenue: S.P 377,100,000,000 (petroleum royalties and taxes 33.2%; nonpetroleum nontax revenues 27.0%; nonpetroleum tax on income and profits 13.5%; taxes on international trade 6.7%). Expenditures: S.P 436,500,000,000 (current expenditures 61.4%, capital expenditures 38.6%).
Public debt (external, outstanding; 2006): U.S.$5,576,000,000.
Gross national income (GNI; 2007): U.S.$34,993,000,000 (U.S.$1,760 per capita); purchasing power parity GNI (U.S.$4,370 per capita).

Structure of gross domestic product and labour force

	2006 in value S.P '000,000	2006 % of total value	2003[6] labour force	2003[6] % of labour force
Agriculture	347,361	20.3	1,168,743	23.3
Mining, Manufacturing, Public utilities	466,859	27.3	608,705	12.1
Construction	45,450	2.7	500,384	10.0
Transp. and commun.	192,504	11.3	265,487	5.3
Trade, restaurants, hotels	349,380	20.4	677,229	13.5
Finance, real estate	103,359	6.0	89,747	1.8
Pub. admin.	175,762	10.3	1,158,279	23.1
Services	43,419	2.5		
Other	−15,349[7]	−0.9[7]	548,438[8]	10.9[8]
TOTAL	1,708,745	100.0[9]	5,017,012	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 4,500,000, sugar beets 1,150,000, seed cotton 1,100,000, tomatoes 950,000, barley 730,000, potatoes 640,000, olives 550,000, oranges 430,000, apples 365,000, grapes 310,000, grapefruit 290,000, eggplants 156,000, almonds 132,000; livestock (number of live animals) 21,000,000 sheep, 1,350,000 goats, 1,150,000 cattle; roundwood (2006) 64,347 cu m, of which fuelwood 38%; fisheries production (2006) 17,166 (from aquaculture 52%). Mining and quarrying (2006): phosphate rock 3,664,000; gypsum 443,800. Manufacturing (value added in S.P '000,000; 2002): food, beverages, and tobacco 23,788; textiles and clothing 20,344; fabricated metals 15,462; cement, bricks, and tiles 11,194. Energy production (consumption): electricity (kWhr; 2006) 37,453,000,000 (37,453,000,000); coal, none (none); crude petroleum (barrels; 2006) 147,825,000 (83,950,000); petroleum products (metric tons; 2005) 10,246,000 (11,005,000); natural gas (cu m; 2006) 8,500,000,000 (5,100,000,000).
Population economically active (2006): total 7,880,000; activity rate of total population 40.4% (participation rates: ages 15–64, 66.8%; female 30.9%; unemployed 8.5%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.0	102.9	108.8	113.7	121.9	134.1	138.6
Earnings index[10]	118.2	134.1	139.0	147.6	.	.	.

Household income and expenditure. Average household size (2004): 5.2; income per household: n.a.; sources of income (2003–04)[11]: wages 49.2%, self-employment 39.8%; expenditure: n.a.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 2,025; remittances (2007) 824; foreign direct investment (FDI; 2004–06 avg.) 458; official development assistance (2006) 27. Disbursements for (U.S.$'000,000): tourism (2006) 540; remittances (2007) 235; FDI (2004–06 avg.) 55.
Land use as % of total land area (2003): in temporary crops 25.4%, in permanent crops 4.5%, in pasture 45.4%; overall forest area (2005) 2.5%.

Foreign trade[12]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	+495	+2,049	+620	−1,666	−1,448	−569
% of total	5.2%	18.6%	5.7%	13.4%	10.1%	2.5%

Imports (2006): U.S.$11,488,000,000 (refined petroleum 24.4%; food 10.7%; road vehicles 8.6%; iron and steel 8.3%; nonelectrical machinery and equipment 7.3%). *Major import sources:* Russia 10.2%; China 6.5%; Ukraine 5.3%; Egypt 5.2%; Saudi Arabia 5.1%; unspecified 15.6%.
Exports (2006): U.S.$10,919,000,000 (crude petroleum 33.6%; food and live animals 14.9%, of which vegetables and fruit 6.0%; apparel/clothing accessories 7.9%; textile yarn, fabrics, and made-up articles 7.5%; refined petroleum 6.7%). *Major export destinations:* Italy 19.6%; France 8.8%; Saudi Arabia 8.7%; Iraq 6.4%; U.K. 4.3%; unspecified 10.8%.

Transport and communications

Transport. Railroads (2006): route length 2,711 km; passenger-km 658,605,000; metric ton-km cargo 2,458,088,000. Roads (2006): total length 51,967 km (paved 75%). Vehicles (2006): passenger cars 358,032; trucks and buses 527,177. Air transport (2006)[13]: passenger-km 2,340,000,000; metric ton-km cargo 16,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,093	178	PCs	2005	800	44
Telephones				Dailies	2006	175[14]	9.4[14]
Cellular	2007	6,700[15]	336[15]	Internet users	2007	3,470	174
Landline	2007	3,452	173	Broadband	2007	7.0[15]	0.3[15]

Education and health

Educational attainment (2003–04)[11]. Percentage of population having: no formal education (illiterate) 14.3%; no formal education (literate) 9.9%; primary education 45.8%; secondary 22.5%; incomplete higher 3.9%; higher 3.6%. *Literacy* (2005): percentage of population age 15 and over literate 78.4%; males literate 90.6%; females literate 66.1%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 6–9)	15,095	124,665	2,192,764	17.6
Secondary (age 10–17)	1,735[16]	52,673	2,249,116	42.7
Voc., teacher tr.				
Higher[17]	4	7,712	191,328	24.8

Health (2006): physicians 27,636 (1 per 671 persons); hospital beds 27,443 (1 per 676 persons); infant mortality rate (2006) 28.6; undernourished population (2002–04) 600,000 (4% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

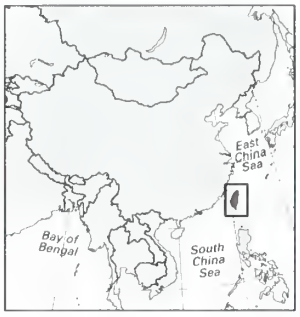
Military

Total active duty personnel (November 2007): 292,600 (army 73.5%, navy 2.6%, air force 10.3%, air defense 13.6%). UN peacekeeping troops in Golan Heights (September 2008) 1,043. *Military expenditure as percentage of GDP* (2005): 7.2%; per capita expenditure U.S.$80.

[1]Islam is required to be the religion of the head of state and is the basis of the legal system. [2]January 1. [3]Includes 1,176 sq km (454 sq mi) of territory in the Golan Heights recognized internationally as part of Syria but occupied by Israel or UN peacekeepers. [4]Excludes 1,400,000 Iraqi refugees and Syrians abroad in mid-2008. [5]Syrian Arabs only. [6]Syrian population only, excluding the armed forces. [7]Import duties and indirect taxes less subsidies and less imputed bank service charges. [8]Unemployed. [9]Detail does not add to total given because of rounding. [10]Manufacturing only. [11]Based on the Household Income and Expenditure Survey with a survey population of 124,525. [12]Imports c.i.f.; exports f.o.b. [13]SyrianAir only. [14]Circulation of eight daily newspapers only. [15]Subscribers. [16]2002–03. [17]Al-Baath, Aleppo, Damascus, and Tishreen universities only.

Internet resources for further information:
- **Central Bureau of Statistics http://www.cbssyr.org**
- **Central Bank of Syria http://www.banquecentrale.gov.sy/index.html**

Taiwan



Official name: Chung-hua Min-kuo (Republic of China).
Form of government: multiparty republic with one legislative body (Legislative Yuan [113[1]]).
Chief of state: President.
Head of government: Premier.
Capital: Taipei.
Official language: Mandarin Chinese.
Official religion: none.
Monetary unit: New Taiwan dollar (NT$); valuation (Sept. 8, 2008) 1 U.S.$ = NT$31.89; 1 £ = NT$56.34.

Area and population

Taiwan area Counties	area sq km	population 2008[2] estimate
Chang-hua	1,074	1,314,354
Chia-i	1,902	551,345
Hsin-chu	1,428	495,821
Hua-lien	4,628	343,302
I-lan	2,144	460,398
Kao-hsiung	2,793	1,244,313
Miao-li	1,820	560,163
Nan-t'ou	4,106	533,717
P'eng-hu	127	92,390
P'ing-tung	2,776	889,563
T'ai-chung	2,051	1,550,896
T'ai-nan	2,016	1,105,403
T'ai-pei	2,052	3,798,015
T'ai-tung	3,515	233,660
T'ao-yuan	1,221	1,934,968
Yun-lin	1,291	725,672
Special municipalities		
Kao-hsiung	154	1,520,555
Taipei	272	2,629,269
Municipalities		
Chi-lung	133	390,397
Chia-i	60	273,075
Hsin-chu	104	399,035
T'ai-chung	163	1,055,898
T'ai-nan	176	764,658
Non-Taiwan area Counties		
Kinmen (Quemoy)	153	81,547
Lienchiang (Matsu)	29	9,946
TOTAL	36,188[3]	22,958,360

Demography

Population (2008): 22,996,000.
Density (2008): persons per sq mi 1,646, persons per sq km 635.4.
Urban-rural (2005): urban 81%; rural 19%.
Sex distribution (2008[2]): male 50.57%; female 49.43%.
Age breakdown (2008[2]): under 15, 17.6%; 15–29, 23.2%; 30–44, 24.4%; 45–59, 21.2%; 60–74, 9.3%; 75–84, 3.5%; 85 and over, 0.8%.
Population projection: (2010) 23,179,000; (2020) 23,376,000.
Ethnic composition (2003): Taiwanese *c.* 84%; mainland Chinese *c.* 14%; indigenous tribal peoples *c.* 2%, of which Ami 0.6%.
Religious affiliation (2002): Buddhism 23.8%; Taoism 19.7%; Christian 4.5%, of which Protestant 2.6%, Roman Catholic 1.3%; I-kuan Tao 3.7% (syncretistic religion); Muslim 0.6%; other (mostly Chinese folk-religionist or non-religious) 47.7%.
Major cities/metropolitan areas (2008[2]): Taipei 2,629,269/6,698,319; Kao-hsiung 1,520,555/2,767,655; T'ai-chung 1,055,898/2,218,527; T'ao-yüan 391,822/1,905,973; T'ai-nan 764,658/1,255,450.

Vital statistics

Birth rate per 1,000 population (2007): 8.9 (world avg. 20.3); within marriage 95.6%; outside of marriage 4.4%.
Death rate per 1,000 population (2007): 6.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 2.7 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.10.
Marriage/divorce rates per 1,000 population (2007): 5.8/2.5.
Life expectancy at birth (2007): male 75.1 years; female 81.9 years.
Major causes of death per 100,000 population (2007): malignant neoplasms (cancers) 142.6; heart disease 44.4; cerebrovascular diseases 43.8; diabetes mellitus 35.5; accidents 27.9; pneumonia 19.6; chronic liver disease and cirrhosis 18.4.

National economy

Budget (2006; general government). Revenue: NT$2,172,436,000,000 (tax revenue 71.7%; income from public enterprises 14.3%; fees 4.2%). Expenditures: NT$2,261,958,000,000 (education, science, and culture 21.6%; economic development 17.0%; general administration 15.3%; social welfare 13.6%; defense 10.5%).
Population economically active (2006): total 10,522,000; activity rate of total population 46.3% (participation rates: ages 15–64, 57.9%; female 42.4%; unemployed [2007] 3.9%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	100.0	99.8	99.5	101.1	103.5	104.1	106.0
Annual earnings index	100.2	99.4	100.8	102.6	104.0	105.2	107.6

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 1,363,458, pineapples 476,811, bamboo shoots 291,709, mangoes 215,292, pears 150,429, betel nuts 134,497, grapes 90,081, tea 17,502; livestock (number of live animals; 2006) 7,068,621 pigs, 134,793 cattle; roundwood 36,200 cu m, of which fuelwood 25%; fisheries production 1,498,197 (from aquaculture 22%). Mining and quarrying (2006): marble 25,493,000. Manufacturing (value added in NT$'000,000,000; 2006): electronic parts and components 610; base metals 288; base chemicals 230; refined petroleum/coal products 206; computers, telecommunications, video electronics 191; nonelectrical machinery and equipment 164. Energy production (consumption): electricity (kW-hr; 2005) 210,300,000,000 (201,580,000,000); coal (metric tons; 2006) none (66,000,000); crude petroleum (barrels; 2007) 292,000 ([2006] 347,000,000); natural gas (cu m; 2007) 396,000,000 (11,298,000,000).
Gross national income (2007): U.S.$393,200,000,000 (U.S.$17,169 per capita).

Structure of gross domestic product and labour force

	2007 in value NT$'000,000,000	2007 % of total value	2006 labour force[4]	2006 % of labour force[4]
Agriculture	182	1.4	554,000	5.3
Mining, quarrying	51	0.4	7,000	0.1
Manufacturing	2,991	23.8	2,777,000	26.4
Construction	273	2.2	829,000	7.9
Public utilities	147	1.2	88,000	0.8
Transp. and commun.	748	5.9	626,000	5.9
Trade, restaurants	2,609	20.7	2,424,000	23.0
Finance, real estate	2,290	18.2	473,000	4.5
Pub. admin., defense	1,281	10.2	333,000	3.2
Services	1,515	12.0	2,000,000	19.0
Other	502[5]	4.0[5]	411,000[6]	3.9[6]
TOTAL	12,589	100.0	10,522,000	100.0

Household income and expenditure (2007). Average household size 3.4; average annual income per household NT$1,108,674 (U.S.$33,703); sources of income: wages and salaries 57.8%, transfers 16.9%, self-employment 14.5%; expenditure: food 22.4%, housing 20.7%, health care 14.3%, education, recreation, and culture 12.5%, transportation and communication 12.5%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 5,136; remittances (2006) 355; foreign direct investment (FDI; 2004–06 avg.) 3,649. Disbursements for (U.S.$'000,000): tourism (2006) 8,746; remittances (2006) 1,370; FDI (2004–06 avg.) 6,857.
Land use as % of total land area (2001): in temporary crops 16.1%, in permanent crops 6.6%, in pasture 0.3%; overall forest area 58.1%.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+22,072	+22,590	+13,613	+15,817	+21,319	+27,425
% of total	8.9%	8.1%	3.9%	5.6%	5.0%	5.9%

Imports (2007): U.S.$219,252,000,000 (mineral fuels 20.9%, electronic goods/parts 16.6%, base and fabricated metals 12.1%, chemicals and chemical products 11.3%). *Major import sources:* Japan 21.0%; U.S. 12.1%; China 11.3%; South Korea 6.9%; Saudi Arabia 4.5%.
Exports (2007): U.S.$246,677,000,000 (nonelectrical machinery, electrical machinery, and electronic goods 47.8%; base and fabricated metals 11.3%; precision instruments, watches, and musical instruments 8.1%; plastics and rubber products 7.7%). *Major export destinations:* China 21.0%; Hong Kong 15.4%; U.S. 13.0%; Japan 6.5%; Singapore 4.3%.

Transport and communications

Transport. Railroads (2006)[8]: route length 1,118 km; passenger-km (2007) 15,769,000,000, metric ton-km cargo (2007) 890,000,000. Roads (2006): total length 39,286 km (paved, n.a.). Vehicles (2007): passenger cars 5,713,000; trucks and buses 1,003,000. Air transport (2006)[9]: passenger-km 59,108,000,000; metric ton-km cargo 11,470,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1999	9,200	418	PCs	2005	13,098	575
Telephones				Dailies	2003	6,530[10]	289[10]
Cellular	2007	24,302[11]	1,061[11]	Internet users	2007	14,760	644
Landline	2007	14,313	625	Broadband	2007	4,794[11]	209[11]

Education and health

Educational attainment (2003). Percentage of population age 15 and over having: no formal schooling 4.6%; primary 19.8%; vocational 23.7%; secondary 26.8%; some college 12.0%; higher 13.1%. *Literacy* (2006): population age 15 and over literate 97.5%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–12)	2,651	100,692	1,798,436	17.9
Secondary (age 13–18)	1,210	100,498	1,757,352	17.5
Vocational, Higher	163	50,388	1,263,977	25.1

Health (2007): physicians 35,849[12] (1 per 639 persons); hospital beds 150,628 (1 per 152 persons); infant mortality rate per 1,000 live births (2007) 4.7; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 290,000 (army 69.0%, navy 15.5%, air force 15.5%). *Military expenditure as percentage of GDP* (2005): 2.2%; per capita expenditure U.S.$324.

[1]Includes 6 elected seats reserved for aboriginal peoples. [2]January 1. [3]Total area per most recent survey is 36,190 sq km (13,973 sq mi). [4]Civilian persons only. [5]Import duties, VAT, and other producers. [6]Unemployed. [7]Imports c.i.f.; exports f.o.b. [8]Taiwan Railway Administration only. [9]China Airlines, EVA, and Far Eastern Air transport only. [10]Circulation of top 10 dailies only. [11]Subscribers. [12]Excludes 4,862 doctors of Chinese medicine.

Internet resource for further information:
- **Statistical Yearbook of the Republic of China**
  http://eng.stat.gov.tw/public/data/dgbas03/bs2/yearbook_eng/y011l.pdf

Tajikistan

Official name: Jumhurii Tojikiston (Republic of Tajikistan).
Form of government: parliamentary republic with two legislative houses (National Assembly [34[1]]; House of Representatives [63]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Dushanbe.
Official language: Tajik (Tojik).
Official religion: none.
Monetary unit: somoni (TJS); valuation (Sept. 8, 2008) 1 U.S.$ = TJS 3.44; 1 £ = TJS 6.09.

Area and population

Oblasts	Capitals	area sq mi	area sq km	population 2007[2] estimate
Khatlon	Kurgan-Tyube	9,600	24,800	2,519,600
Sughd	Khujand	9,800	25,400	2,095,700
Autonomous oblast				
Kühistoni Badakhshon (Gorno-Badakhshan)	Khorugh	24,800	64,200	220,400
City				
Dushanbe	—	40	100	660,900
No oblast administration	—	11,050	28,600	1,567,200
TOTAL		55,300[3, 4]	143,100[3]	7,063,800[5]

Demography

Population (2008): 6,839,000[5, 6].
Density (2008): persons per sq mi 123.7, persons per sq km 47.8.
Urban-rural (2007): urban 26.3%; rural 73.7%.
Sex distribution (2007): male 49.74%; female 50.26%.
Age breakdown (2007): under 15, 35.0%; 15–29, 31.5%; 30–44, 18.8%; 45–59, 9.7%; 60–74, 3.8%; 75 and over, 1.2%.
Population projection: (2010) 7,062,000; (2020) 8,342,000.
Doubling time: 35 years.
Ethnic composition (2000): Tajik 80.0%; Uzbek 15.3%; Russian 1.1%; Tatar 0.3%; other 3.3%.
Religious affiliation (2005): Sunnī Muslim *c.* 78%; Shī'ī Muslim *c.* 6%; nonreligious *c.* 12%; other (mostly Christian) *c.* 4%.
Major cities (2007[2]): Dushanbe 660,900; Khujand 154,700; Kulyab 91,900; Kurgan-Tyube 69,900; Ura-Tyube 59,200.

Vital statistics

Birth rate per 1,000 population (2007): 27.3 (world avg. 20.3); (1994) legitimate 90.8%; illegitimate 9.2%.
Death rate per 1,000 population (2007): 7.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 20.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 3.09.
Marriage/divorce rates per 1,000 population (2006): 8.2/0.4.
Life expectancy at birth (2007): male 61.6 years; female 67.8 years.
Major causes of death per 100,000 population (2001): diseases of the circulatory system 189.4, of which ischemic heart disease 62.9; diseases of the respiratory system 58.3; infectious and parasitic diseases 30.6; malignant neoplasms (cancers) 28.4; violence, poisoning, and accidents 25.8.

National economy

Budget (2006). Revenue: TJS 1,566,000,000 (tax revenue 87.7%, of which taxes on goods and services 46.5%, customs duties 16.1%, payroll tax 11.0%, income tax 10.0%; nontax revenue 9.8%; grants 2.3%). Expenditures: TJS 1,944,000,000 (education 17.3%; defense 12.3%; social security and welfare 12.2%; general administrative services 9.5%; health 5.5%).
Public debt (external, outstanding; 2006): U.S.$982,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 659,900, wheat 612,000, raw seed cotton 419,700, tomatoes 241,000, onions 217,000, corn (maize) 157,500, grapes 116,600; livestock (number of live animals) 1,922,000 sheep, 1,418,000 cattle, 1,250,000 goats, 42,000 camels; roundwood, n.a.; fisheries production (2006) 210 (from aquaculture 12%). Mining and quarrying (2005): antimony (metal content) 2,000; silver 5,000 kg; gold 3,000 kg. Manufacturing (value of production in TJS '000,000[7]; 2007): nonferrous metals (nearly all aluminum) 585,103; food 301,156; textiles 209,375; grain mill products 94,649; basic chemicals 17,209. Energy production (consumption): electricity (kW-hr; 2007–08) 16,294,200,000 ([2007] 17,600,000,000); hard coal (metric tons; 2007) 165,000 ([2005] 91,000); lignite (metric tons; 2005) 15,000 (15,000); crude petroleum (barrels; 2007) 190,600 ([2005] 124,600); petroleum products (metric tons; 2005) none (1,377,000); natural gas (cu m; 2007) 15,000,000 (689,000,000).
Population economically active (2007): total 2,201,000; activity rate of total population 30.5% (participation rates: ages 15–62 [male], 15–57 [female] 51.7%; female [1996] 46.5%; officially unemployed 2.3%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	137.0	150.7	176.3	188.7	203.8	228.2	277.3
Monthly earnings index	150.9	209.1	286.5	397.0	536.8	746.7	1,048.6

Gross national income (GNI; 2007): U.S.$3,103,000,000 (U.S.$460 per capita); purchasing power parity GNI (U.S.$1,710 per capita).

Structure of gross domestic product and labour force

	2007 in value TJS '000,000	% of total value	labour force	% of labour force
Agriculture	2,525.9	19.8	1,430,000	65.0
Mining, Public utilities, Manufacturing	1,966.9	15.4	114,000	5.2
Construction	1,115.6	8.7	63,000	2.9
Transp. and commun.	646.4	5.0	62,000	2.8
Trade, hotels	2,529.3	19.8	115,000	5.2
Finance, real estate	46.3	0.4	. .	
Pub. admin., defense	297.3	2.3	34,000	1.5
Services	2,132.3	16.7	332,000	15.1
Other	1,519.7[8]	11.9[8]	51,700[9]	2.3[9]
TOTAL	12,779.7	100.0	2,201,000[4]	100.0

Land use as % of total land area (2003): in temporary crops 6.6%, in permanent crops 0.9%, in pasture 22.8%; overall forest area (2005) 2.9%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2004) 1.0; remittances (2007) 1,250; foreign direct investment (FDI; 2004–06 avg.) 237; official development assistance (2006) 240. Disbursements for (U.S.$'000,000): tourism (2004) 3.0; remittances (2007) 395; FDI (2004–06 avg.) negligible.
Household income and expenditure (2007). Average household size (2004) 5.2; average disposable income per household (2005) TJS 3,462 (U.S.$1,111); sources of income: wages and salaries 42.3%, self-employment 22.1%, transfers 3.8%; expenditure: food 58.4%, household furnishings 9.4%, clothing 9.4%, transportation and communications 7.0%.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+18.0	–83.7	–276.0	–421.1	–326.0	–1,079.0
% of total	1.2%	5.0%	13.1%	18.8%	10.4%	26.9%

Imports (2007): U.S.$2,547,000,000 (petroleum products 10.8%; grain and flour 5.3%; electricity 2.6%; natural gas 2.6%; other [significantly alumina] 78.7%). *Major import sources:* Russia 19.8%; China 19.4%; Kazakhstan 8.8%; Uzbekistan 8.3%; Azerbaijan 6.5%.
Exports (2007): U.S.$1,468,000,000 (cotton fibre 9.4%, electricity 4.1%, other [significantly alumina] 86.5%). *Major export destinations:* Norway 10.4%; Turkey 8.9%; Italy 6.8%; Iran 6.8%; Russia 5.8%.

Transport and communications

Transport. Railroads (2006): length 299 mi, 482 km; passenger-km (2003) 50,000,000; metric ton-km cargo (2003) 1,087,000,000. Roads (2000): total length 17,254 mi, 27,767 km (paved [1996] 83%). Vehicles (2007): passenger cars, n.a.; trucks and buses, n.a. Air transport (2005)[11]: passenger-km 1,030,000,000; metric ton-km cargo 7,031,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	2,350	357	PCs	2005	. .	. .
Telephones				Dailies	2005	89[12]	13[12]
Cellular	2005	265[13]	40[13]	Internet users	2005	20	3.1
Landline	2005	280	43	Broadband	2003	10[13]	1.6[13]

Education and health

Educational attainment (2007), n.a. *Literacy* (2007): percentage of total population age 15 and over literate 99.6%; males literate 99.8%; females literate 99.5%.

Education (2006–07)

	schools[14]	teachers	students	student/teacher ratio
Primary (age 6–13)	662	31,482	680,308	21.6
Secondary (age 14–17)	3,139	58,108	988,991	17.0
Voc., teacher tr.	52	3,078	23,284	7.6
Higher	33	7,761	147,294	19.0

Health (2008[2]): physicians 13,400 (1 per 510 persons); hospital beds 38,800 (1 per 176 persons); infant mortality rate per 1,000 live births (2007) 43.6; undernourished population (2002–04) 3,500,000 (56% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

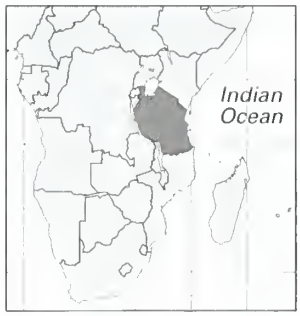
Military

Total active duty personnel (November 2007): 8,800 (army 83%, air force 17%); Russian troops (November 2007) 5,500. *Military expenditure as percentage of GDP* (2004): 2.2%; per capita expenditure U.S.$7.

[1]Includes 8 members appointed by the President and 1 seat reserved for the former president. [2]January 1. [3]Includes *c.* 400 sq mi (*c.* 1,035 sq km) ceded to China in May 2002. [4]Detail does not add to total given because of gross rounding. [5]Includes at least 1 million Tajik workers abroad (particularly in Russia). [6]Estimate of *UN World Population Prospects (2006 Revision).* [7]At 1998 constant prices. [8]Indirect taxes less subsidies. [9]Unemployed. [10]Imports c.i.f.; exports f.o.b. [11]Tajikistan Airlines only. [12]Circulation of daily newspapers. [13]Subscribers. [14]2007–08.

Internet resources for further information:
- **State Committee on Statistics**
  http://www.stat.tj/english/home.htm
- **National Bank of Tajikistan**
  http://nht.tj/en

Tanzania



Official name: Jamhuri ya Muungano wa Tanzania (Swahili); United Republic of Tanzania (English).
Form of government: unitary multiparty republic with one legislative house (National Assembly [323[1]]).
Head of state and government: President.
Capital: Dar es Salaam (acting)[2].
Official languages: Swahili; English.
Official religion: none.
Monetary unit: Tanzanian shilling (TZS); valuation (Sept. 8, 2008) 1 U.S.$ = TZS 1,156; 1 £ = TZS 2,042.

Area and population

Administrative regions	area sq km	population 2007 estimate
Mainland Tanzania (Tanganyika)		
Arusha	36,486	1,523,000
Dar es Salaam	1,393	2,882,000
Dodoma	41,311	1,951,000
Iringa	56,864	1,649,000
Kagera	28,388	2,293,000
Kigoma	37,037	1,602,000
Kilimanjaro	13,309	1,536,000
Lindi	66,046	870,000
Manyara	45,820	1,242,000
Mara	19,566	1,631,000
Mbeya	60,350	2,424,000
Morogoro	70,799	1,975,000
Mtwara	16,707	1,246,000
Mwanza	19,592	3,267,000
Pwani (Coast)	32,407	992,000
Rukwa	68,635	1,350,000
Ruvuma	63,498	1,268,000
Shinyanga	50,781	3,411,000
Singida	49,341	1,259,000
Tabora	76,151	2,086,000
Tanga	26,808	1,838,000
Autonomous territory		
Zanzibar[3]		
Pemba	906	441,000
Unguja (Zanzibar)	1,554	713,000
TOTAL LAND AREA	883,749	
INLAND WATER	59,050	
TOTAL	942,799[4]	39,446,000[5]

Demography

Population (2008): 40,213,000.
Density (2008)[6]: persons per sq mi 110.2, persons per sq km 42.5.
Urban-rural (2006): urban 38.5%; rural 61.5%.
Sex distribution (2006): male 49.46%; female 50.54%.
Age breakdown (2006): under 15, 44.3%; 15–29, 29.1%; 30–44, 14.6%; 45–59, 7.6%; 60–74, 3.6%; 75–84, 0.7%; 85 and over, 0.1%.
Population projection: (2010) 41,893,000; (2020) 49,989,000.
Ethnolinguistic composition (2000): 130 different Bantu tribes 95%, of which Sukuma 9.5%, Hehe and Bena 4.5%, Gogo 4.4%, Haya 4.2%, Nyamwezi 3.6%, Makonde 3.3%, Chagga 3.0%, Ha 2.9%; other 5%.
Religious affiliation (2005): Muslim *c.* 35%, of which Sunnī *c.* 30%, Shīʿī *c.* 5%; Christian *c.* 35%; other (significantly traditional beliefs) *c.* 30%; Zanzibar only is 99% Muslim.
Major urban areas (2002): Dar es Salaam 2,339,910; Arusha 270,485; Mbeya 232,596; Mwanza 209,806; Morogoro 209,058; Unguja (Zanzibar) 205,870.

Vital statistics

Birth rate per 1,000 population (2007): 41.6 (world avg. 20.3).
Death rate per 1,000 population (2007): 14.9 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 4.93.
Life expectancy at birth (2006): male 48.5 years; female 50.9 years.
Adult population (ages 15–49) *living with HIV* (2007): 6.2% (world avg. 0.8%).

National economy

Budget (2006–07). Revenue: TZS 3,691,247,900,000 (tax revenue 68.5%, of which excise tax 27.6%, income tax 19.4%; nontax revenue 5.7%; grants 25%). Expenditures: TZS 4,474,680,900,000 (current expenditure 70.1%, of which interest payments on debt 4.8%; capital expenditure 29.9%).
Gross national income (GNI; 2007): U.S.$16,287,000,000[7] (U.S.$400 per capita); purchasing power parity GNI (U.S.$1,200 per capita).

Structure of gross domestic product and labour force

	2006		2002	
	in value TZS '000,000[7]	% of total value[7]	labour force[8]	% of labour force[8]
Agriculture, fishing	4,950,008	27.9	11,592,000	81.1
Mining	576,363	3.2	71,000	0.5
Manufacturing	1,395,282	7.9	272,000	1.9
Construction	1,399,609	7.9	157,000	1.1
Public utilities	352,724	2.0	43,000	0.3
Transp. and commun	1,144,071	6.4	129,000	0.9
Trade, restaurants	2,504,005	14.1	1,101,000	7.7
Finance, real estate	2,023,306	11.4	29,000	0.2
Pub. admin., defense	1,440,913	8.1		
Services	661,604	3.7	901,000	6.3
Other	1,301,690[9]	7.3[9]		
TOTAL	17,749,575	100.0[10]	14,294,000[10]	100.0

Public debt (external, outstanding; 2006): U.S.$2,929,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 6,600,000, corn (maize) 3,400,000, rice 1,240,000, sweet potatoes 960,000, sorghum 900,000, coconuts 370,000, seed cotton 210,000, cashew nuts 92,000, tobacco leaves 53,000, coffee 52,000, tea 31,000, cloves 9,900; livestock (number of live animals) 18,000,000 cattle, 12,550,000 goats, 3,550,000 sheep; roundwood (2006) 24,227,959 cu m, of which fuelwood 90%; fisheries production (2006) 341,120 (from aquaculture, negligible); aquatic plants production (2006) 320 (from aquaculture, 100%). Mining and quarrying (2006): gold 47,000 kg; garnets 5,900 kg; tanzanites 3,400 kg; rubies 2,700 kg; diamonds 272,200 carats. Manufacturing (2005): cement 1,281,000; wheat flour 347,296; sugar 202,200; soft drinks 36,566,355 hectolitres; *konyagi* (a Tanzanian liquor) 41,050 hectolitres; cigarettes 4,308,000,000 units. Energy production (consumption): electricity (kW-hr; 2005) 3,036,000,000 (3,172,000,000); coal (metric tons; 2005) 75,000 (75,000); petroleum products (metric tons; 2005) none (1,149,000).
Population economically active (2002): total 14,841,000; activity rate 43.1% (participation rates: over age 9, 64.9%; female 48.0%; officially unemployed 3.7%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.1	106.2	109.9	110.0	119.4	127.1	136.0

Household income and expenditure. Average household size (2004) 5.0; annual income per household (2000–01)[7] TZS 1,055,000 (U.S.$1,310); sources of income (2000–01)[7]: agricultural income 51.4%, self-employment 20.6%, wages and salaries 12.0%, transfer payments 7.8%; expenditure (2001)[11]: food 55.9%, transportation 9.7%, energy 8.5%, beverages and tobacco 6.9%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 914; remittances (2007) 15; foreign direct investment (FDI; 2004–06 avg.) 385; official development assistance (2006) 1,825. Disbursements for (U.S.$'000,000): tourism (2006) 534; remittances (2007) 30.
Land use as % of total land area (2003): in temporary crops 4.5%, in permanent crops 1.2%, in pasture 48.7%; overall forest area (2005) 39.9%.

Foreign trade[12]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
TZS '000,000,000	–512	–746	–1,093	–1,494	–2,678	–3,546
% of total	21.3%	22.8%	25.4%	28.8%	38.1%	41.7%

Imports (2006): TZS 5,558,000,000,000 (refined petroleum 23.7%, nonelectrical machinery and equipment 12.0%, chemicals and chemical products 11.5%, road vehicles 9.9%, food 6.5%). *Major import sources:* South Africa 12.3%; U.A.E. 11.3%; Bahrain 9.2%; China 7.0%; Saudi Arabia 5.7%.
Exports (2006): TZS 2,116,000,000,000 (gold 34.9%, other metal ores [including copper and silver] 11.0%, fish 10.2%, tobacco 6.2%, vegetables and fruit 4.7%, coffee 4.3%). *Major export destinations:* Switzerland 21.7%; South Africa 14.3%; China 8.9%; Germany 6.7%; The Netherlands 6.0%.

Transport and communications

Transport. Railroads (2001): length 3,690 km; passenger-km (2003) 1,305,000,000; metric ton-km cargo (2003) 4,461,000,000. Roads (2007): length 78,892 km (paved 6%). Vehicles: passenger cars (2000) 36,000; trucks and buses (1999) 98,800. Air transport (2007): passenger-km 228,000,000; metric ton-km (2006) 1,704,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,500	41	PCs	2005	356	9.3
Telephones				Dailies	2004	105[13]	2.9[13]
Cellular	2007	8,252[14]	204[14]	Internet users	2007	400	9.9
Landline	2007	237	5.8	Broadband	2007	—	—

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling 49.4%; primary education 44.0%; secondary 5.5%; postsecondary 0.9%; other 0.2%. *Literacy* (2006): percentage of population age 15 and over literate 69.4%; males 77.5%; females 62.2%.

Education (2007)

	schools	teachers	students	student/teacher ratio
Primary (age 7–13)	15,624	156,664	2,195,450	14.0
Secondary (age 14–19)	3,485	29,858	608,413	20.4
Voc., teacher tr.	60	1,062[15]	9,136[15]	8.6[15]
Higher	33	2,913	75,396	25.9

Health (2002): physicians 822 (1 per 42,085 persons); hospital beds 36,853 (1 per 939 persons); infant mortality rate (2006) 73.0; undernourished population (2002–04) 16,400,000 (44% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2007): 27,000 (army 85.2%, navy 3.7%, air force 11.1%). *Military expenditure as percentage of GDP* (2005): 1.1%; per capita expenditure U.S.$4.

[1]Includes 232 directly elected seats, 75 seats reserved for women, 5 seats indirectly elected, 10 appointed by the President, and 1 for the Attorney General. [2]Only the legislature meets in Dodoma, the longtime planned capital. [3]Has local internal government structure; Unguja (Zanzibar) island has 3 administrative regions, Pemba island has 2. [4]A recent survey indicates a total area of 945,090 sq km (364,901 sq mi). [5]Reported total; summed total is 39,449,000. [6]Based on land area only. [7]Mainland Tanzania only. [8]Employed only. [9]Net taxes less imputed bank service charge. [10]Detail does not add to total given because of rounding. [11]Weights of consumer price index components. [12]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [13]Circulation of daily newspapers. [14]Subscribers. [15]1998.

Internet resources for further information:
- **Bank of Tanzania http://www.bot-tz.org**
- **National Bureau of Statistics http://www.nbs.go.tz**

Thailand

Official name: Ratcha Anachak Thai (Kingdom of Thailand).
Form of government: constitutional monarchy[1] with two legislative houses (Senate [150]; House of Representatives [480]).
Chief of state: King.
Head of government: Prime Minister.
Capital: Bangkok.
Official language: Thai.
Official religion: none.
Monetary unit: baht (THB); valuation (Sept. 8, 2008) 1 U.S.$ = THB 34.60; 1 £ = THB 61.12.

Area and population

Regions[2]	Principal cities	area sq mi	area sq km	population 2006 estimate[3]
Bangkok and vicinities	Bangkok	2,997	7,762	9,948,392
Eastern	Chon Buri	14,094	36,503	4,401,785
Northeastern	Udon Thani	65,195	168,855	21,376,830
Northern	Chiang Mai	65,500	169,644	11,890,752
Southern	Surat Thani	27,303	70,715	8,600,436
Sub-central	Saraburi	6,407	16,594	2,957,143
Western	Ratchaburi	16,621	43,047	3,653,368
TOTAL		198,117	513,120	62,828,706

Demography

Population (2008): 64,316,000.
Density (2008): persons per sq mi 324.6, persons per sq km 125.3.
Urban-rural (2006): urban 29.9%; rural 70.1%.
Sex distribution (2006): male 49.35%; female 50.65%.
Age breakdown (2006): under 15, 20.9%; 15–29, 23.6%; 30–44, 25.6%; 45–59, 17.3%; 60–74, 7.8%; 75–84, 2.0%; 85 and over, 0.5%; unknown/not citizen 2.3%.
Population projection: (2010) 65,125,000; (2020) 67,990,000.
Ethnic composition (2000): Tai peoples 81.4%, of which Thai (Siamese) 34.9%, Lao 26.5%; Han Chinese 10.6%; Malay 3.7%; Khmer 1.9%; other 2.4%.
Religious affiliation (2005): Buddhist *c.* 83%; Muslim (nearly all Sunnī) *c.* 9%; traditional beliefs *c.* 2.5%; nonreligious *c.* 2%; other (significantly Christian) *c.* 3.5%.
Major cities (2000): Bangkok (2007) 6,704,000; Samut Prakan 378,741; Nonthaburi 291,555; Udon Thani 222,425; Nakhon Ratchasima 204,641.

Vital statistics

Birth rate per 1,000 population (2006): 13.9 (world avg. 20.3).
Death rate per 1,000 population (2006): 7.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 6.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.84.
Marriage/divorce rates per 1,000 population (2005): 5.5/1.4.
Life expectancy at birth (2006): male 69.9 years; female 74.7 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases *c.* 170, of which HIV/AIDS-related *c.* 91; cardiovascular diseases *c.* 135; malignant neoplasms (cancers) *c.* 97; accidents *c.* 52.
Adult population (ages 15–49) *living with HIV* (2007): 1.4% (world avg. 0.8%).

National economy

Budget (2007). Revenue: THB 1,703,700,000,000 (tax revenue 87.9%, of which VAT 25.5%, corporate income tax 22.6%, excise tax 16.9%, personal income tax 11.3%; nontax revenue 12.1%). Expenditures: THB 1,575,000,000,000 (current expenditure 78.7%; capital expenditure 21.3%).
Public debt (external, outstanding; 2006): U.S.$11,914,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 64,365,682, rice 27,879,000, cassava 26,411,233, oil palm fruit 7,642,598, corn (maize) 3,619,021, natural rubber 3,121,883, pineapples 2,319,791, bananas 2,000,000, mangoes 1,800,000, coconuts 1,701,446, tangerines 670,000[4]; livestock (number of live animals) 8,381,122 pigs, 6,480,876 cattle, 209,105,000 chickens; roundwood 28,436,000 cu m, of which fuelwood 69%; fisheries production 4,162,096 (from aquaculture 33%). Mining and quarrying (2006): gypsum 8,355,000; feldspar 1,068,000; dolomite 899,512; zinc [metal content] 32,100; gemstones (significantly rubies and sapphires) 81,000 carats; gold 3,500 kg. Manufacturing (value added in U.S.$'000,000; 2000): textiles and wearing apparel 1,905; electronics 1,817; food products 1,311; motor vehicles 1,225; office machines and computers 1,045; electrical machinery and parts 964; tobacco products 821. Energy production (consumption): electricity (kW-hr; 2007) 142,538,000,000 (138,609,000,000); hard coal (metric tons; 2005) none (6,703,000); lignite (metric tons; 2006) 19,056,000 ([2005] 21,046,000); crude petroleum (barrels; 2007) 39,000,000 (250,000,000); petroleum products (metric tons; 2005) 43,347,000 (39,345,000); natural gas (cu m; 2007) 26,254,000,000 ([2005] 29,066,000,000).
Land use as % of total land area (2003): in temporary crops 27.7%, in permanent crops 7.0%, in pasture 1.6%; overall forest area (2005) 28.4%.
Population economically active (2006; end of 3rd quarter): total 36,867,200; activity rate of total population 56.4% (participation rates: ages 15–59, 78.5%; female 46.0%; unemployed [2007] 1.4%).

Price and earnings indexes (2001 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	100.0	100.6	102.4	105.3	110.0	115.2	117.8
Monthly earnings index	100.0	115.9	105.0	..	..	143.4	132.3

Gross national income (GNI; 2007): U.S.$217,348,000,000 (U.S.$3,400 per capita); purchasing power parity GNI (U.S.$7,880 per capita).

Structure of gross domestic product and labour force

	2007 in value THB '000,000,000	2007 % of total value	2006 labour force[5]	2006 % of labour force[5]
Agriculture, fishing	967.1	11.4	15,315,300	41.6
Mining	276.1	3.3	54,600	0.2
Manufacturing	2,960.1	34.9	5,306,600	14.4
Construction	248.7	2.9	2,038,900	5.5
Public utilities	243.4	2.9	99,300	0.3
Transp. and commun.	616.5	7.3	1,052,900	2.9
Trade, hotels	2,269.4	26.7	7,616,800	20.7
Services			2,614,900	7.1
Finance, real estate	520.3	6.1	1,009,000	2.7
Pub. admin., defense	383.6	4.5	1,170,100	3.2
Other	—	—	516,100[6]	1.4[6]
TOTAL	8,485.2	100.0	36,794,500	100.0

Household income and expenditure (2006). Average household size (2004) 3.5; average annual income per household THB 213,444 (U.S.$5,634); sources of income: wages and salaries 39.9%, self-employment 32.6%, nonmonetary income 16.2%, transfers 9.4%; expenditure: food and nonalcoholic beverages 33.2%, housing, energy, and household furnishings 24.6%, transportation and communications 24.3%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 12,432; remittances (2007) 1,635; foreign direct investment (FDI; 2004–06 avg.) 8,190. Disbursements for (U.S.$'000,000): tourism (2006) 4,632; remittances, n.a.; FDI (2004–06 avg.) 473.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
THB '000,000,000	+149.1	+186.9	+72.6	−315.3	−5.6	+383.0
% of total	2.6%	2.9%	0.9%	3.4%	0.1%	3.8%

Imports (2007): THB 4,872,000,000,000 (mineral fuels 18.4%, of which crude petroleum 13.9%; base and fabricated metals 12.4%; electronic parts 11.3%; electrical machinery 9.0%; nonelectrical machinery and equipment 7.0%). *Major import sources:* Japan 20.3%; China 11.6%; U.S. 6.8%; Malaysia 6.2%; U.A.E. 4.9%.
Exports (2007): THB 5,255,000,000,000 (integrated circuits/parts/related goods 12.8%; computers/parts 10.3%; vehicles/parts 8.4%; agricultural products 7.8%; electrical machinery and apparatus 7.5%; nonelectrical machinery and equipment 5.1%). *Major export destinations:* U.S. 12.6%; Japan 11.9%; China 9.7%; Singapore 6.2%; Hong Kong 5.7%; Malaysia 5.1%.

Transport and communications

Transport. Railroads (2006): route length 4,044 km; passenger-km 8,824,000,000; metric ton-km cargo 3,508,000,000. Roads (2004): total length 57,403 km (paved 99%). Vehicles (2006): passenger cars 3,312,941; trucks and buses 4,568,895. Air transport (2006)[8]: passenger-km 56,891,000,000; metric ton-km cargo 2,107,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	17,971	289	PCs	2005	4,408	70
Telephones				Dailies	2005	3,957	63
Cellular	2007	51,377[9]	804[9]	Internet users	2007	13,416	210
Landline	2007	7,024	110	Broadband	2007	913[9]	14[9]

Education and health

Educational attainment (2007). Percentage of employed population having: no formal schooling 4.9%; incomplete primary education 32.4%; complete primary 21.2%; lower secondary 29.6%; upper secondary/higher 11.4%; other/unknown 0.5%. *Literacy* (2007): population age 15 and over literate 94.1%; males literate 95.9%; females literate 92.6%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	..	321,930	5,248,713	16.3
Secondary (age 12–17)	..	227,929	4,365,958	19.2
Higher		66,431	2,503,572	37.7

Health: physicians (2004) 18,918 (1 per 3,307 persons); hospital beds (2005) 134,016 (1 per 470 persons); infant mortality rate (2005) 11.3; undernourished population (2002–04) 13,800,000 (22% of total population based on the consumption of a minimum daily requirement of 1,870 calories).

Military

Total active duty personnel (November 2007): 306,600 (army 62.0%, navy 23.0%, air force 15.0%). *Military expenditure as percentage of GDP* (2005): 1.1%; per capita expenditure U.S.$31.

[1]New constitution was promulgated on Aug. 24, 2007. The military structure supporting the government from October 2006 was disbanded in January 2008. [2]Actual local administration is based on 76 provinces. [3]Official government estimates. [4]Includes mandarins, clementines, and satsumas. [5]Third quarter. [6]Includes 449,900 unemployed. [7]Imports c.i.f.; exports f.o.b. [8]Thai and Bangkok airways. [9]Subscribers.

Internet resources for further information:
- **National Statistical Office Thailand http://web.nso.go.th/eng/index.htm**
- **Bank of Thailand http://www.bot.or.th**

Togo

Official name: République Togolaise (Togolese Republic).
Form of government: multiparty republic[1] with one legislative body (National Assembly [81]).
Head of state and government: President assisted by Prime Minister.
Capital: Lomé.
Official language: French.
Official religion: none.
Monetary unit: CFA franc (CFAF); valuation (Sept. 8, 2008) 1 U.S.$ = CFAF 459.85; 1 £ = CFAF 812.42.

Population

Regions Prefectures	population 2005[2] estimate	Regions Prefectures	population 2005[2] estimate
Centrale	510,446	Haho	194,917
Blitta	111,997	Kloto	192,763
Sotouboua	141,073	Moyen-Mono	75,382
Tchamba	83,997	Ogou	264,915
Tchaoudjo	173,379	Wawa	162,610
De la Kara	689,210[3]	Des Savanes	628,904[3]
Assoli	53,845	Kpendjal	120,612
Bassar	108,766	Oti	138,919
Binah	67,844	Tandjouaré	92,613
Dankpen	77,536	Tône	276,761
Doufelgou	87,228	Maritime	2,196,857
Kéran	73,229	Avé	91,536
Kozah	220,763	Golfe[4]	1,224,425
Des Plateaux	1,201,810[3]	Lacs	234,762
Agou	88,305	Vo	225,070
Amou	100,151	Yoto	159,380
Danyi	43,076	Zio	261,684
Est-Mono	79,690	TOTAL	5,227,227[5]

Demography

Area: 21,925 sq mi, 56,785 sq km.
Population (2008): 6,762,000[6].
Density (2008): persons per sq mi 308.4, persons per sq km 119.1.
Urban-rural (2007): urban 41.4%; rural 58.6%.
Sex distribution (2005): male 49.07%; female 50.93%.
Age breakdown (2005): under 15, 42.3%; 15–29, 29.9%; 30–44, 15.6%; 45–59, 8.0%; 60–74, 3.5%; 75 and over, 0.7%.
Population projection: (2010) 7,122,000; (2020) 8,984,000.
Ethnic composition (2000): Ewe 22.2%; Kabre 13.4%; Wachi 10.0%; Mina 5.6%; Kotokoli 5.6%; Bimoba 5.2%; Losso 4.0%; Gurma 3.4%; Lamba 3.2%; Adja 3.0%; other 24.4%.
Religious affiliation (2004): Christian 47.2%, of which Roman Catholic 27.8%, Protestant 9.5%, independent and other Christian 9.9%; traditional beliefs 33.0%; Muslim 13.7%; nonreligious 4.9%; other 1.2%.
Major cities (2005): Lomé 921,000 (urban agglomeration 1,337,000); Sokodé 106,300; Kara 100,400; Atakpamé 72,700; Kpalimé 71,400.

Vital statistics

Birth rate per 1,000 population (2005): 37.2 (world avg. 20.3).
Death rate per 1,000 population (2005): 10.0 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2005): 5.01.
Life expectancy at birth (2005): male 55.0 years; female 59.1 years.
Adult population (ages 15–49) *living with HIV* (2007): 3.3%[7] (world avg. 0.8%).
Major causes of death per 100,000 population (2002): infectious and parasitic diseases *c.* 572, of which HIV/AIDS-related *c.* 220, malaria *c.* 136; lower respiratory infections *c.* 180; perinatal conditions *c.* 86.

National economy

Budget (2005). Revenue: CFAF 175,600,000,000 (tax revenue 87.0%, of which taxes on international trade 41.5%; nontax revenue 7.0%; grants 6.0%). Expenditures: CFAF 168,400,000,000 (current expenditure 80.0%, capital expenditure 20.0%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 770,000, yams 630,000, corn (maize) 500,000, sorghum 200,000, rice 74,200, dry beans 52,000, peanuts (groundnuts) 37,000, coffee 10,080, cacao beans 7,000; livestock (number of live animals) 1,950,100 sheep, 1,499,000 goats; roundwood (2006) 5,981,549 cu m, of which fuelwood 97%; fisheries production (2006) 27,899 (from aquaculture 11%). Mining and quarrying (2006): limestone 2,400,000; phosphate rock 1,650,000; diamonds 28,200 carats. Manufacturing (value added in CFAF '000,000; 2006): food products, beverages, and tobacco manufactures 33,800; bricks, cement, and ceramics 19,300; base and fabricated metals 10,800; wood and wood products 7,300. Energy production (consumption): electricity (kW-hr; 2005) 187,000,000 (673,000,000); petroleum products (metric tons; 2005) none (308,000).
Household income and expenditure. Average household size (2004) 6.0; expenditure (2004)[8]: food products 36.1%, hotels and restaurants 12.9%, housing and energy 12.4%, transportation 8.5%, clothing and footwear 6.0%.
Population economically active (2003): total 2,295,000[9]; activity rate of total population 38.9%[9] (participation rates: over age 15, 70.2%[9]; female 37.0%[9]; unemployed [2004] *c.* 32%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.9	107.1	106.1	106.5	113.7	116.3	117.4

Gross national income (GNI; 2007): U.S.$2,383,000,000 (U.S.$360 per capita); purchasing power parity GNI (U.S.$800 per capita).

Structure of gross domestic product and labour force

	2006		2003	
	in value CFAF '000,000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	418.5	36.1	1,210,000	57.9
Mining	31.7	2.7		
Manufacturing	97.1	8.4		
Construction	37.1	3.2		
Public utilities	35.5	3.1		
Transp. and commun.	61.7	5.3	881,000	42.1
Trade, hotels	135.6	11.7		
Finance, real estate	119.2	10.3		
Pub. admin., defense	..	..		
Services	107.8	9.3		
Other	114.4[10]	9.9[10]		
TOTAL	1,158.6	100.0	2,091,000	100.0

Public debt (external, outstanding; 2006): U.S.$1,565,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 10; remittances (2007) 193; foreign direct investment (2004–06 avg.) 64; official development assistance (2006) 79. Disbursements for (U.S.$'000,000): tourism (2006) 3; remittances (2007) 35.
Land use as % of total land area (2003): in temporary crops 46.1%, in permanent crops 2.2%, in pasture 18.4%; overall forest area (2005) 7.1%.

Foreign trade[11]

Balance of trade (current prices)

	2001	2002	2003	2004	2005
U.S.$'000,000	−134.8	−154.7	−73.8	−149.5	−232.7
% of total	23.4%	23.6%	6.9%	15.5%	24.4%

Imports (2005): U.S.$592,600,000 (refined petroleum 28.5%; food 10.5%, of which cereals 5.5%; machinery and apparatus 10.1%; iron and steel 6.9%; cement clinker 6.3%; road vehicles 5.9%). *Major import sources:* France 17.6%; China 13.2%; Côte d'Ivoire 6.5%; Italy 4.5%; The Netherlands 3.9%.
Exports (2005): U.S.$359,900,000 (food 17.4%, of which cocoa 5.6%; cement clinker 16.3%; portland cement 11.1%; crude fertilizer 9.7%; iron and steel 9.0%; cotton 8.3%; plastic sacks and bags 8.1%). *Major export destinations:* Ghana 20.3%; Burkina Faso 18.4%; Benin 11.6%; Mali 7.4%; India 5.9%.

Transport and communications

Transport. Railroads (2004): route length 568 km; passenger-km (2001) 44,000,000; metric ton-km cargo (2001) 440,000,000. Roads (2001): total length 7,500 km (paved 24%). Vehicles (2002): passenger cars 51,400; trucks and buses 24,500. Air transport: passenger-km (2001) 130,000,000; metric ton-km cargo (2003) 7,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	650	107	PCs	2005	185	34
Telephones				Dailies	2004	8[12]	1.5[12]
Cellular	2007	1,190[13]	181[13]	Internet users	2006	320	51
Landline	2006	82	13	Broadband	2005	...	...

Education and health

Educational attainment (1998)[14]. Percentage of population age 25 and over having: no formal education 56.3%; primary education 24.5%; secondary and higher 18.3%; unknown 0.9%. *Literacy* (2007): total population age 15 and over literate 65.8%; males 79.1%; females 52.8%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	5,019[15]	22,210	984,846	44.3
Secondary (age 12–18)	791[15]	9,537	355,547	37.3
Vocational		1,492	19,838	13.3
Higher[15]	..	400	13,500	33.8

Health: physicians (2004) 225 (1 per 23,357 persons); hospital beds (2002) 4,991 (1 per 997 persons); infant mortality rate per 1,000 live births (2005) 62.2; undernourished population (2002–04) 1,200,000 (24% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

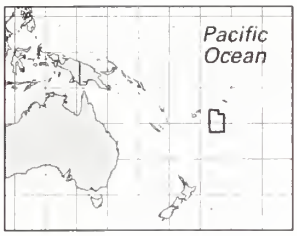
Military

Total active duty personnel (November 2007): 8,550 (army 94.7%, navy 2.3%, air force 3.0%). *Military expenditure as percentage of GDP* (2005): 1.5%; per capita expenditure U.S.$5.

[1]Transitional government ended with October 2007 elections. [2]January 1. [3]Detail does not add to total given because of rounding. [4]Golfe prefecture includes Lomé. [5]Official country estimate. [6]Estimate of *UN World Population Prospects (2006 Revision).* [7]Statistically derived midpoint of range. [8]Weights of consumer price index components. [9]Estimate of the ILO Employment Trends Unit. [10]Import duties and taxes. [11]Imports c.i.f.; exports f.o.b. [12]Circulation of daily newspapers. [13]Subscribers. [14]Based on the 1998 Togo Demographic and Health Survey, of which 14,075 respondents were age 25 and over. [15]2001–02.

Internet resources for further information:
- **Banque Centrale des Etats de l'Afrique de l'Ouest http://www.bceao.int**
- **DGSCN-Togo http://www.stat-togo.org**

Tonga



Official name: Pule'anga Fakatu'i 'o Tonga (Tongan); Kingdom of Tonga (English).
Form of government: hereditary constitutional monarchy with one legislative house (Legislative Assembly [32[1]]).
Chief of state: King[2].
Head of government: Prime Minister.
Capital: Nuku'alofa.
Official languages: Tongan; English.
Official religion: none.
Monetary unit: pa'anga (T$); valuation (Sept. 8, 2008) 1 U.S.$ = T$1.92; 1 £ = T$3.40.

Area and population

Divisions[3]	Principal towns	area sq mi	area sq km	population 2006 census
'Eua[4]	'Ohonua	33.7	87.4	5,206
Ha'apai[5]	Pangai	42.5	110.0	7,570
Niuas	Hihifo	27.7	71.7	1,665
Tongatapu[4]	Nuku'alofa	100.6	260.5	72,045
Vava'u[5]	Neiafu	46.0	119.2	15,505
TOTAL LAND AREA		278.1[6]	720.3[6]	
INLAND WATER		11.4	29.6	
TOTAL		289.5	749.9	101,991

Demography

Population (2008): 103,000.
Density (2008)[7]: persons per sq mi 370.4, persons per sq km 143.0.
Urban-rural (2006): urban 23.2%; rural 76.8%.
Sex distribution (2006): male 50.76%; female 49.24%.
Age breakdown (2006): under 15, 38.2%; 15–29, 26.3%; 30–44, 17.2%; 45–59, 10.1%; 60–74, 6.1%; 75 and over, 2.1%.
Population projection: (2010) 104,000; (2020) 109,000.
Doubling time: 37 years.
Ethnic composition (2006): Tongan 96.6%; Tongan/other 1.6%; white 0.6%; Chinese 0.4%; other 0.8%.
Religious affiliation (2006): Protestant 64.9%, of which Methodist-related denominations 55.9%; Mormon 16.8%; Roman Catholic 15.6%; Bahā'ī 0.7%; unknown 1.4%; other 0.6%.
Major towns (2006): Nuku'alofa (on Tongatapu) 23,658 (Greater Nuku'alofa [including rural population] 34,311); Neiafu (on Vava'u) 4,123; Haveloloto 3,405[8]; Tofoa-Koloua 3,213[8]; Pangai-Hihifo (in the Ha'apai Group) 2,523.

Vital statistics

Birth rate per 1,000 population (2007): 25.0 (world avg. 20.3).
Death rate per 1,000 population (2007): 5.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 19.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 3.30.
Marriage/divorce rates per 1,000 population (2004): 6.7/1.1.
Life expectancy at birth (2007): male 72.2 years; female 74.2 years.
Major causes of death per 100,000 population (2004)[10]: circulatory diseases 150.5; malignant neoplasms (cancers) 71.8; endocrine, nutritional, and metabolic disorders 51.8; respiratory diseases 39.9.

National economy

Budget (2005–06). Revenue: T$172,446,000 (tax revenue 72.9%; grants 15.1%; nontax revenue 12.0%). Expenditures: T$166,031,000 (current expenditure 93.0%; development expenditure 7.0%).
Public debt (external, outstanding; 2007[15]): U.S.$84,000,000.
Gross national income (GNI; 2007): U.S.$233,000,000 (U.S.$2,320 per capita); purchasing power parity GNI (U.S.$3,580 per capita).

Structure of gross domestic product and labour force

	2006–07 in value T$'000	2006–07 % of total value	2003 labour force	2003 % of labour force
Agriculture	112,732	22.3	10,990	30.1
Mining	1,634	0.3	60	0.2
Manufacturing	10,097	2.0	8,540	23.4
Construction	29,136	5.8	1,440	3.9
Public utilities	10,625	2.1	530	1.5
Transp. and commun.	23,606	4.7	1,580	4.3
Trade, restaurants	60,823	12.0	3,570	9.8
Finance, real estate	49,846	9.9	760	2.1
Pub. admin., defense	83,211	16.5	2,590	7.1
Services	42,657	8.4	4,500	12.4
Other	81,312[11]	16.1[11]	1,890[12]	5.2[12]
TOTAL	505,679	100.0[13]	36,450	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 58,500, pumpkins, squash, and gourds 21,000, cassava 9,700, sweet potatoes 6,800, yams 4,700, plantains 3,300, vanilla 150; livestock (number of live animals) 81,200 pigs, 12,600 goats, 11,500 horses, 11,250 cattle, 330,000 chickens; roundwood (2006) 2,100 cu m, of which fuelwood, none; fisheries production (2006) 2,505 (from aquaculture, negligible); aquatic plants production (2006) 356 (from aquaculture, negligible). Mining and quarrying: coral and sand for local use. Manufacturing (value of production in T$'000; 2005): food products and beverages 19,722; bricks, cement, and ceramics 4,109; chemicals and chemical products 2,044; printing and publishing 1,313; furniture 1,310; fabricated metal products 1,193. Energy production (consumption): electricity (kW-hr; 2007) 46,000,000 (42,000,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (38,000).
Population economically active (2003): total 36,450; activity rate 34.1% (participation rates: ages 15–64 (1996) 60.4%; female 41.9%; unemployed 5.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	108.3	119.5	133.4	148.1	160.4	170.1	180.8
Earnings index[14]	114.2	115.2	132.8	139.1	142.8	...	

Household income and expenditure (2000–01). Average household size (2006) 5.8; cash income per household[16] T$12,871 (U.S.$6,511); sources of cash income[16]: wages and salaries 35.6%, remittances from overseas 19.7%, sales of own produce 16.1%, other 28.6%; cash expenditure (2002)[17]: food and nonalcoholic beverages 44.4%, transportation 14.2%, alcoholic beverages, kava, and tobacco 12.3%, household furnishings and operation 12.0%, housing 5.3%, clothing and footwear 3.4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006–07) 13; remittances (2007) 77; foreign direct investment (2004–06 avg.) 11; official development assistance (2006) 21. Disbursements for (U.S.$'000,000): tourism (2006) 8; remittances (2007) 12.
Land use as % of total land area (2003): in temporary crops *c.* 21%, in permanent crops *c.* 15%, in pasture *c.* 6%; overall forest area (2005) *c.* 5%.

Foreign trade[18]

Balance of trade (current prices)

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07
T$'000,000	–94.9	–124.4	–140.8	–173.1	–214.4	–190.8
% of total	55.0%	61.7%	71.3%	73.6%	77.6%	78.1%

Imports (2006–07): T$245,200,000 (food and beverages 31.4%, refined petroleum 29.5%, machinery and transport equipment 14.2%). *Major import sources:* New Zealand 33.5%; Fiji 27.3%; Australia 13.8%; U.S. 10.3%.
Exports (2006–07): T$20,900,000 (fish 40.2%, squash 26.8%, root crops 13.9%, kava 6.7%). *Major export destinations:* Japan 35.2%; New Zealand 20.2%; U.S. 12.2%; Australia 6.1%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 680 km (paved 27%). Vehicles (2004): passenger cars 7,705; trucks and buses 5,297. Air transport (2002): passenger-km 14,000,000; metric ton-km cargo 1,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	7.1	70	PCs	2005	5.0	50
Telephones				Dailies	2005	0	0
Cellular	2007	47[19]	464[19]	Internet users	2007	8.4	84
Landline	2007	21	210	Broadband	2007	0.8[19]	7.8[19]

Education and health

Educational attainment (2006). Percentage of population age 25 and over having: no formal schooling 1.5%; primary education 29.5%; lower secondary 46.7%; upper secondary 11.0%; higher 11.0%, of which university 3.6%; other 0.3%. *Literacy* (2006): *c.* 99%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 5–10)	124	834[20]	16,940[20]	20.3[20]
Secondary (age 11–16)	42	1,012	12,911	13.9
Voc., teacher tr.	8		1,121	
Higher	. .		657	.

Health (2004): physicians 41 (1 per 2,447 persons); hospital beds 296 (1 per 332 persons); infant mortality rate per 1,000 live births (2006) 20.0; undernourished population, n.a.

Military

Total active duty personnel (October 2007): 450-member force includes air and coast guard elements. Tonga has defense cooperation agreements with both Australia and New Zealand. *Military expenditure as percentage of GDP* (2004): 1.0%; per capita expenditure U.S.$23.

[1]Includes 14 nonelective seats and 9 nobles elected by the 29 hereditary nobles of Tonga. [2]The king voluntarily ceded much of his power in July 2008. [3]Divisions have no administrative functions; 3 island councils constitute the local administrative framework (including a combined islands council for 'Eua, Niuas, and Tongatapu. [4]'Eua and Tongatapu together constitute Tongatapu island group. [5]Also the name of an island group. [6]Total includes 27.6 sq mi (71.5 sq km) of uninhabited islands. [7]Based on land area. [8]Within Nuku'alofa urban agglomeration. [9]Marriages on Tongatapu only. [10]Deaths occurring in hospitals only. [11]Indirect taxes less subsidies and less imputed bank service charges. [12]Unemployed. [13]Detail does not add to total given because of rounding. [14]Manufacturing only. [15]January 1. [16]Noncash annual income equals T$5,734 (U.S.$2,901), of which consumption of own produce 45.6%, imputed rent 43.1%. [17]Weights of consumer price index components. [18]Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [19]Subscribers. [20]2005.

Internet resources for further information:
- **Tonga Department of Statistics**
  http://www.spc.int/prism/Country/TO/stats
- **National Reserve Bank of Tonga**
  http://www.reservebank.to

Trinidad and Tobago

Official name: Republic of Trinidad and Tobago.
Form of government: multiparty republic with two legislative houses (Senate [31[1]]; House of Representatives [41]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Port of Spain.
Official language: English.
Official religion: none.
Monetary unit: Trinidad and Tobago dollar (TT$); valuation (Sept. 8, 2008) 1 U.S.$ = TT$6.22; 1 € = TT$10.99.

Area and population

	area sq km	population 2000 census
Trinidad	4,852	1,208,282
Regional corporations		
Couva/Tabaquite/ Talparo	720	162,779
Diego Martin	128	105,720
Mayaro/Rio Claro	853	33,480
Penal/Debe	247	83,609
Princes Town	621	91,947
San Juan/Laventille	220	157,295
Sangre Grande	899	64,343
Siparia	510	81,917
Tunapuna/Piarco	527	203,975
City corporations		
Port of Spain	13	49,031
San Fernando	19	55,419
Borough corporations		
Arima	11	32,278
Chaguanas	60	67,433
Point Fortin	24	19,056
Tobago[2]	303	54,084
TOTAL	5,155	1,262,366

Demography

Population (2008): 1,305,000.
Density (2008): persons per sq mi 655.8, persons per sq km 253.2.
Urban-rural (2005): urban 12.2%; rural 87.8%.
Sex distribution (2005): male 49.17%; female 50.83%.
Age breakdown (2005): under 15, 22.3%; 15–29, 30.2%; 30–44, 22.6%; 45–59, 15.4%; 60–74, 7.0%; 75–84, 2.0%; 85 and over, 0.5%.
Population projection: (2010) 1,315,000; (2020) 1,359,000.
Ethnic composition (2000): black 39.2%; East Indian 38.6%; mixed 16.3%; Chinese 1.6%; white 1.0%; other/not stated 3.3%.
Religious affiliation (2005): Roman Catholic *c.* 29%; Hindu *c.* 24%; Protestant *c.* 19%; independent and other Christian *c.* 7%; Muslim *c.* 7%; nonreligious *c.* 2%; other/unknown *c.* 12%.
Major cities/built-up areas (2006): Chaguanas 73,100; San Juan 57,100[3]; San Fernando 56,600; Port of Spain 49,800 (greater Port of Spain [2004] 264,000); Arima 35,600[3]; Scarborough (on Tobago) 4,600.

Vital statistics

Birth rate per 1,000 population (2006): 13.7 (world avg. 20.3).
Death rate per 1,000 population (2006): 7.7 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 6.0 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 1.63.
Marriage/divorce rates per 1,000 population (2002): 5.8/1.2.
Life expectancy at birth (2005): male 67.3 years; female 71.4 years.
Major causes of death per 100,000 population (2002): ischemic heart disease 163.1; HIV/AIDS-related 141.0; malignant neoplasms (cancers) 107.2; diabetes mellitus 102.0; cerebrovascular disease 94.8.

National economy

Budget (2006–07). Revenue: TT$40,064,000,000 (taxes on oil/natural gas corporations 40.5%; VAT 12.1%; nonoil company taxes 12.0%; personal income taxes 8.1%; nontax revenue 6.7%; import duties 5.0%). Expenditures: TT$37,766,000,000 (current expenditures 79.4%; development expenditures and net lending 20.6%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 358,000, chicken meat 60,000, bananas 7,000, oranges 5,250, pineapples 4,500, pig meat 3,000, cocoa 639, coffee 250; livestock (number of live animals) 60,000 goats, 45,000 pigs, 28,500,000 chickens; roundwood (2006) 99,000 cu m, of which fuelwood 35%; fisheries production (2006) 8,444 (from aquaculture, negligible). Mining and quarrying (2006): limestone 850,000; natural asphalt 16,200. Manufacturing (value added in U.S.$'000,000; 2003): refined petroleum products/natural gas products 732; base chemicals 515; food products 129; beverages 124; cement, bricks, and ceramics 79; iron and steel 61. Energy production (consumption): electricity (kW-hr; 2006) 7,110,000,000 ([2005] 7,058,000,000); coal, none (none); crude petroleum (barrels; 2007) 44,200,000 ([2005] 60,500,000); petroleum products (metric tons; 2005) 8,080,000 (887,000); natural gas (cu m; 2006) 37,973,000,000 ([2005] 13,086,000,000).
Household income and expenditure. Average household size (2004) 3.8; average income per household[4] TT$53,015 (U.S.$8,484); expenditure (2003): housing 20.4%, food and nonalcoholic beverages 18.0%, transportation 16.7%, recreation and culture 8.5%, energy 5.8%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 177; remittances (2007) 92; foreign direct investment (FDI; 2004–06 avg.) 909. Disbursements for (U.S.$'000,000): tourism (2006) 82; remittances, n.a.; FDI (2004–06 avg.) 245.
Land use as % of total land area (2003): in temporary crops 14.6%, in permanent crops 9.2%, in pasture 2.1%; overall forest area (2005) 44.1%.
Gross national income (GNI; 2007): U.S.$18,795,000,000 (U.S.$14,100 per capita); purchasing power parity GNI (U.S.$21,690 per capita).

Structure of gross domestic product and labour force

	2007 in value TT$'000,000	2007 % of total value	2006 labour force	2006 % of labour force
Agriculture	473	0.4	25,700	4.1
Petroleum, natural gas, other mining	56,829	43.0	20,400	3.2
Manufacturing	7,317	5.5	55,500	8.9
Construction	10,653	8.1	104,500	16.7
Public utilities	898	0.7		
Transp. and commun.	8,282	6.3	42,700	6.8
Trade	19,102[5]	14.4[5]	106,600	17.1
Finance, real estate	15,244	11.5	48,100	7.7
Pub. admin., defense	8,818	6.7	181,000	29.0
Services	4,925[6]	3.7[6]		
Other	–426[7]	–0.3[7]	40,600[8]	6.5[8]
TOTAL	132,115	100.0	625,200[9]	100.0

Population economically active (2005): total 623,700; activity rate of total population 48.2% (participation rates: ages 15–64, 70.1%; female 41.9%; unemployed [2007] 5.5%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.5	109.9	114.1	118.3	126.5	137.0	147.8

Public debt (external, outstanding; 2007): U.S.$1,265,000,000.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+192.3	+1,299.1	+1,647.6	+3,917.6	+7,541.0	+7,242.9
% of total	2.5%	14.2%	13.5%	25.6%	37.1%	32.7%

Imports (2006): U.S.$6,477,700,000 (crude petroleum 33.1%, nonelectrical machinery and equipment 11.5%, chemicals and chemical products 8.1%, base and fabricated metals 7.5%). *Major import sources:* United States 27.6%; Brazil 13.9%; Republic of the Congo 6.0%; Colombia 5.9%; Nigeria 5.9%.
Exports (2006): U.S.$14,018,700,000 (liquefied natural gas 31.2%, refined petroleum 27.3%, crude petroleum 15.0%, ammonia 6.4%, methanol 6.3%, iron and steel 3.7%). *Major export destinations:* United States 58.1%; Jamaica 5.8%; Spain 5.3%; Barbados 3.3%; France 3.2%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 8,320 km (paved 51%). Vehicles (2005): passenger cars 320,000; trucks and buses 71,000. Air transport (2005)[11]: passenger-km 3,101,000,000; metric ton-km cargo 47,883,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	461	359	PCs	2005	129	100
Telephones				Dailies	2006	212[12]	123[12]
Cellular	2007	1,008[13]	773[13]	Internet users	2007	431	331
Landline	2007	324	249	Broadband	2007	16[13]	12[13]

Education and health

Educational attainment (2000). Percentage of population age 15 and over having: no formal schooling 2.5%; primary education 35.4%; secondary 52.0%; university 4.6%; other/not stated 5.5%. *Literacy* (2002): total population age 15 and over literate 98.5%; males 99.0%; females 97.9%.

Education (2004)

	schools	teachers	students	student/ teacher ratio
Primary (age 5–11)	480[14]	7,839	137,313	17.5
Secondary (age 12–16)	101[14]	5,422	105,381	19.4
Higher	3	1,720	16,751	9.7

Health (2006): physicians 1,592 (1 per 815 persons); hospital beds 3,556 (1 per 365 persons); infant mortality rate per 1,000 live births (2005) 13.8; undernourished population (2002–04) 130,000 (10% of total population based on the consumption of a minimum daily requirement of 1,950 calories).

Military

Total active duty personnel (November 2007): 2,700 (army 74.1%, coast guard 25.9%). *Military expenditure as percentage of GNP* (2005): 0.2%; per capita expenditure U.S.$25.

[1]All seats are nonelected. [2]Semiautonomous island. [3]Within greater Port of Spain. [4]Approximately 2002; exact date of information is unknown. [5]Excludes hotels. [6]Includes hotels. [7]Net of VAT less imputed bank service charges. [8]Includes 39,000 unemployed. [9]Detail does not add to total given because of rounding. [10]Imports c.i.f.; exports f.o.b. [11]BWIA only; BWIA was replaced by Caribbean Airlines from Jan. 1, 2007. [12]Circulation of daily newspapers. [13]Subscribers. [14]2001–02.

Internet resources for further information:
- **Central Bank of Trinidad and Tobago http://www.central-bank.org.tt**
- **Central Statistical Office http://www.cso.gov.tt**

Tunisia

Official name: Al-Jumhūrīyah at-Tūnisīyah (Tunisian Republic).
Form of government: multiparty republic[1] with two legislative houses (Chamber of Councilors [126[2]]; Chamber of Deputies [189]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Tunis.
Official language: Arabic.
Official religion: Islam.
Monetary unit: dinar (TND); valuation (Sept. 8, 2008) 1 U.S.$ = TND 1.26; 1 £ = TND 2.22.

Area and population

Governorates	Capitals	area sq mi	area sq km	population 2008[3] estimate
Al-Arīānah	Al-Arīānah	192	498	473,100
Bājah	Bājah	1,374	3,558	304,300
Banzart	Bizerte (Banzart)	1,423	3,685	538,900
Bin 'Arūs	Bin 'Arūs	294	761	555,700
Jundūbah	Jundūbah	1,198	3,102	420,500
Al-Kāf	Al-Kāf	1,917	4,965	256,700
Madanīn	Madanīn	3,316	8,588	447,400
Al-Mahdīyah	Al-Mahdīyah	1,145	2,966	389,900
Manūbah	Manūbah	409	1,060	358,700
Al-Munastīr	Al-Munastīr	393	1,019	494,900
Nābul	Nābul	1,076	2,788	733,500
Qābis	Qābis	2,770	7,175	354,500
Qafṣah	Qafṣah	3,471	8,990	332,400
Al-Qaṣrayn	Al-Qaṣrayn	3,114	8,066	425,000
Al-Qayrawān	Al-Qayrawān	2,592	6,712	553,800
Qibilī	Qibilī	8,527	22,084	147,800
Ṣafāqis	Safāqis	2,913	7,545	904,900
Sīdī Bū Zayd	Sīdī Bū Zayd	2,700	6,994	405,900
Silīānah	Silīānah	1,788	4,631	233,200
Sūsah	Sūsah	1,012	2,621	590,400
Tatāuīn	Tatāuīn	15,015	38,889	144,700
Tawzar	Tawzar	1,822	4,719	101,300
Tūnis	Tunis (Tūnis)	134	346	993,000
Zaghwān	Zaghwān	1,069	2,768	167,100
TOTAL		63,170[4]	163,610[4]	10,327,800[5]

Demography

Population (2008): 10,325,000.
Density (2008): persons per sq mi 163.4, persons per sq km 63.1.
Urban-rural (2007): urban 66.1%; rural 33.9%.
Sex distribution (2007): male 50.30%; female 49.70%.
Age breakdown (2005): under 15, 25.9%; 15–29, 30.1%; 30–44, 22.1%; 45–59, 13.2%; 60–74, 6.6%; 75–84, 1.8%; 85 and over, 0.3%.
Population projection: (2010) 10,527,000; (2020) 11,562,000.
Ethnic composition (2000): Tunisian Arab 67.2%; Bedouin Arab 26.6%; Algerian Arab 2.4%; Amazigh (Berber) 1.4%; other 2.4%.
Religious affiliation (2005): Muslim *c.* 99%, of which Sunnī *c.* 97%; other *c.* 1%.
Major cities (2004): Tunis (2007) 745,000; Ṣafāqis 265,131; Al-Arīānah 240,749[6]; Sūsah 173,047; Ettadhamen 118,487[6].

Vital statistics

Birth rate per 1,000 population (2007): 17.4 (world avg. 20.3).
Death rate per 1,000 population (2007): 5.5 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 2.03.
Marriage/divorce rates per 1,000 population: (2007–08) 5.6/(1999) 0.1.
Life expectancy at birth (2007): male 72.4 years; female 76.3 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 267; accidents, injuries, and violence 62; malignant neoplasms (cancers) 57.

National economy

Budget (2007). Revenue: TND 13,880,700,000 (tax revenue 68.6%, of which VAT 19.2%, income tax 9.8%; grants and loans 17.5%; nontax revenue 13.9%). Expenditures: TND 15,089,000,000 (social services 40.9%; debt service 26.0%; economic services 17.4%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 1,442,800, tomatoes 1,000,000, olives 900,000, barley 535,100, potatoes 350,000, chilies and peppers 250,000, grapes 125,000, dates 120,000, almonds 58,000; livestock (live animals) 7,618,350 sheep, 1,550,650 goats, 710,130 cattle, 230,000 camels; roundwood (2006) 2,373,743 cu m, of which fuelwood 91%; fisheries production 105,100 (from aquaculture [2006] 2%). Mining and quarrying (2007–08): phosphate rock 7,659,300; iron ore 178,100. Manufacturing (value added in TND '000,000; 2007): textiles, leather, and clothing 2,574; electrical machinery 1,868; crude and refined petroleum (2005) 1,478; food products 1,295. Energy production (consumption): electricity (kW-hr; 2007–08) 13,485,700,000 (11,612,500,000); coal (metric tons; 2002) none (1,000); crude petroleum (barrels; 2007–08) 31,415,000 ([2005] 13,740,000); petroleum products (metric tons; 2007–08) 1,742,700 (3,844,000); natural gas (cu m; 2007–08) 2,038,700,000 (4,063,400,000).
Land use as % of total land area (2003): in temporary crops 18.0%, in permanent crops 13.8%, in pasture 31.2%; overall forest area (2005) 6.8%.
Household income and expenditure (2005). Average household size (2004) 4.5; income per household TND 8,211 (U.S.$6,329); expenditure: food and beverages 34.8%, housing and energy 22.8%, transportation 10.7%, health and personal care 10.3%, household furnishings 8.8%.
Gross national income (GNI; 2007): U.S.$32,820,000,000 (U.S.$3,200 per capita); purchasing power parity GNI (U.S.$7,130 per capita).

Structure of gross domestic product and labour force

	2007 in value TND '000	% of total value	labour force[7]	% of labour force
Agriculture	4,754,200	10.6	570,700	15.9
Mining	244,100	0.5		
Public utilities	3,455,400	7.7	1,002,700	27.9
Manufacturing	7,695,100	17.1		
Construction	2,501,300	5.6		
Transp. and commun.	5,026,100	11.2		
Trade, hotels	2,475,800	5.5		
Finance, real estate	9,816,900	21.8	1,511,700	42.1
Pub. admin., defense	5,930,100	13.2		
Services				
Other	3,087,200[8]	6.9[8]	508,100[9]	14.1[9]
TOTAL	44,986,000[5]	100.0[5]	3,593,200	100.0

Public debt (external, outstanding; 2007): U.S.$10,380,000,000.
Population economically active (2007): total 3,593,200; activity rate of total population 35.1% (participation rates: age 15 and over 46.8%; female 25.3%; unemployed 14.1%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.0	104.8	107.6	111.5	113.8	118.9	122.6
Hourly earnings index[10]	104.2	107.7	111.9	115.4		...	.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2007) 2,401; remittances (2007) 1,669; foreign direct investment (FDI; 2004–06 avg.) 1,578; official development assistance (2006) 432. Disbursements for (U.S.$'000,000): tourism (2006) 410; remittances (2007) 16; FDI (2004–06 avg.) 17.

Foreign trade[11]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
TND '000,000	–3,762	–3,696	–3,905	–3,498	–4,445	–5,029
% of total	16.2%	15.2%	13.9%	11.3%	12.5%	11.5%

Imports (2007): TND 24,438,700,000 (machinery and apparatus 42.7%; food products 10.7%; chemical products 9.3%; fabric 8.5%; refined petroleum products 7.9%). *Major import sources:* France 21.4%; Italy 19.3%; Germany 7.9%; Spain 4.7%; Russia 4.1%.
Exports (2007): TND 19,409,600,000 (machinery and apparatus 27.1%; clothing 17.8%; crude petroleum 13.6%; food products 9.7%; phosphate products [mostly fertilizers] 6.5%). *Major export destinations:* France 32.1%; Italy 23.3%; Germany 8.2%; Spain 5.2%; Libya 4.6%.

Transport and communications

Transport. Railroads (2007–08): route length (2006) 2,153 km; passenger-km 1,491,400,000; metric ton-km cargo 2,158,500,000. Roads (2004): total length 19,232 km (paved 66%). Vehicles (2004): passenger cars 825,990; trucks and buses 119,064. Air transport (2007)[12]: passenger-km 3,035,000,000; metric ton-km cargo 17,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	2,150	217	PCs	2005	568	56
Telephones				Dailies	2007	272[13]	27[13]
Cellular	2007	7,842[14]	759[14]	Internet users	2007	1,722	167
Landline	2007	1,273	123	Broadband	2007	114[14]	11[14]

Education and health

Educational attainment (2005). Percentage of population age 10 and over having: no formal schooling 22.0%; primary education 36.5%; secondary 33.1%; higher 8.4%. *Literacy* (2007): total population age 10 and over literate 77.9%; males literate 87.0%; females literate 68.7%.

Education (2007–08)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	4,581	59,977	1,036,445	17.3
Secondary (age 12–18)	2,537	81,105	1,126,764	13.9
Higher	190	18,608	335,649	18.0

Health (2007): physicians 10,554 (1 per 969 persons); hospital beds 17,998 (1 per 568 persons); infant mortality rate 18.5; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 35,800 (army 75.4%, navy 13.4%, air force 11.2%). *Military expenditure as percentage of GDP* (2005): 1.6%; per capita expenditure U.S.$29.

[1]A single party dominates the political system in practice. [2]Statutory number; 41 seats are nonelective. [3]July 1. [4]Total includes 3,506 sq mi (9,080 sq km) of saline lakes that are not distributed by governorate. [5]Detail does not add to total given because of rounding. [6]Within Tunis urban agglomeration. [7]Figures are rounded estimates. [8]Indirect taxes less subsidies and less imputed bank service charges. [9]Unemployed. [10]Minimum wage for 40-hour workweek. [11]Imports c.i.f.; exports f.o.b. [12]Tunis Air only. [13]Circulation of six top daily newspapers only. [14]Subscribers.

Internet resources for further information:
- **Central Bank of Tunisia http://www.bct.gov.tn**
- **National Statistics Institute (French only) http://www.ins.nat.tn**

Turkey

Official name: Türkiye Cumhuriyeti (Republic of Turkey).
Form of government: multiparty republic with one legislative house (Grand National Assembly of Turkey [550]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Ankara.
Official language: Turkish.
Official religion: none.
Monetary unit: New Turkish lira (YTL); valuation (Sept. 8, 2008) 1 U.S.$ = YTL 1.24; 1 £ = YTL 2.20.

Area and population

Geographic regions[1]	Largest cities	area sq mi	area sq km	population 2007 census
Aegean	Izmir	34,748	89,997	9,299,322
Black Sea	Samsun	44,881	116,240	7,462,451
Central Anatolia	Ankara	72,607	188,052	11,327,675
East Anatolia	Malatya	57,876	149,899	5,694,582
Marmara	Istanbul	28,196	73,028	20,724,950
Mediterranean	Adana	34,687	89,838	8,906,427
South Eastern Anatolia	Gaziantep	29,540	76,509	7,170,849
TOTAL		302,535	783,562[2]	70,586,256

Demography

Population (2008): 71,002,000.
Density (2008): persons per sq mi 234.7, persons per sq km 90.6.
Urban-rural (2007): urban 70.5%; rural 29.5%.
Sex distribution (2007): male 50.12%; female 49.88%.
Age breakdown (2005): under 15, 28.3%; 15–29, 27.7%; 30–44, 22.4%; 45–59, 13.4%; 60–74, 6.5%; 75–84, 1.5%; 85 and over, 0.2%.
Population projection: (2010) 72,708,000; (2020) 80,537,000.
Ethnic composition (2000): Turk 65.1%; Kurd 18.9%; Crimean Tatar 7.2%; Arab 1.8%; Azerbaijani 1.0%; Yoruk 1.0%; other 5.0%.
Religious affiliation (2005): Muslim *c.* 97.5%, of which Sunnī *c.* 82.5%, Shī'ī (mostly nonorthodox Alevi) *c.* 15.0%; nonreligious *c.* 2.0%; other (mostly Christian) *c.* 0.5%.
Major cities (2007): Istanbul 10,757,327; Ankara 3,763,591; Izmir 2,606,294; Bursa 1,431,172; Adana 1,366,027; Gaziantep 1,175,042.

Vital statistics

Birth rate per 1,000 population (2007): 19.4 (world avg. 20.3).
Death rate per 1,000 population (2007): 6.6 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 2.17.
Marriage/divorce rates per 1,000 population (2007): 9.1/1.3.
Life expectancy at birth (2007): male 69.3 years; female 74.2 years.
Major causes of death per 100,000 population (2005)[3]: diseases of the circulatory system 308; malignant neoplasms (cancers) 90; diseases of the respiratory system 61; infectious and parasitic diseases 15.

National economy

Budget (2005). Revenue: YTL 134,819,231,000 (tax revenue 79.3%, of which tax on income 22.5%; nontax revenue 17.2%; grants and other revenue 3.5%). Expenditures: YTL 141,020,860,000 (finances 51.8%; education 10.5%; labour and social security 10.2%; defense 7.2%).
Production (in '000 metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 17,678, sugar beets 14,800, tomatoes 9,920, barley 7,423, potatoes 4,281, grapes 3,923, corn (maize) 3,875, watermelons 3,445, seed cotton 2,500, apples 2,266, cucumbers and gherkins 1,876, cantaloupes 1,779[4], onions 1,779, olives 1,525, oranges 1,472, sunflower seeds 1,031, lentils 580, apricots 528, chickpeas 523, hazelnuts 499, green beans 499, cherries 392, figs 271, tea 192, tobacco 98; livestock (number of live animals) 25,400,000 sheep, 10,871,364 cattle, 344,820,000 chickens, (2004) 230,037 angora goats; roundwood (2006) 16,813,000 cu m, of which fuelwood 27%; fisheries production (2006) 662 (from aquaculture 20%). Mining (2006): magnesite 2,088; refined borates 1,021; chromite 458; copper ore (metal content) 46; marble 1,200,000 cu m. Manufacturing (value added in U.S.$'000,000; 2005)[5]: food products 8,800; telecommunications equipment, electronics 7,450; chemicals and chemical products 7,400; base metals 7,000; motor vehicles and parts 6,500; textiles 6,100. Energy production (consumption): electricity (kW-hr; 2005) 161,955,000,000 (160,793,000,000); hard coal (metric tons; 2005) 2,170,000 (19,421,000); lignite (metric tons; 2005) 56,170,000 (57,315,000); crude petroleum (barrels; 2006) 15,900,000 ([2005] 189,500,000); petroleum products (metric tons; 2005) 21,775,000 (24,474,000); natural gas (cu m; 2005) 923,000,000 (27,172,000,000).
Population economically active (2006): total 24,775,000; activity rate of total population 34.2% (participation rates: ages 15–64, 51.1%; female 26.1%; unemployed [May 2006–April 2007] 9.7%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	154.4	223.8	280.4	310.1	341.6	377.5	410.5

Household income and expenditure. Average household size (2004) 4.1; average annual income per household (2003) U.S.$7,174; sources of income (2004): wages and salaries 38.7%, self-employment 31.8%, transfers 21.2%; expenditure (2005): housing 25.9%, food and nonalcoholic beverages 24.9%, transportation 12.6%, household furnishings 6.8%.

Gross national income (GNI; 2007): U.S.$592,850,000,000 (U.S.$8,020 per capita); purchasing power parity GNI (U.S.$12,350 per capita).

Structure of gross domestic product and labour force

	2007 in value YTL '000	2007 % of total value	2006 labour force	2006 % of labour force
Agriculture, forestry, fishing	64,278,298	7.5	6,088,000	24.6
Mining	10,536,592	1.2	128,000	0.5
Manufacturing	142,125,440	16.6	4,186,000	16.9
Construction	40,992,321	4.8	1,267,000	5.1
Public utilities	16,126,298	1.9	93,000	0.4
Transp. and commun.	117,091,301	13.7	1,163,000	4.7
Trade, hotels	122,294,642	14.3	4,730,000	19.1
Finance, real estate	152,906,039	17.9	1,010,000	4.1
Pub. admin., defense	33,013,998	3.9	1,225,000	4.9
Services	54,612,263	6.4	2,440,000	9.8
Other	99,659,046[6]	11.7[6]	2,446,000[7]	9.9[7]
TOTAL	853,636,236[2]	100.0[2]	24,775,000[2]	100.0

Public debt (external, outstanding; June 2007): U.S.$65,310,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 21,503; remittances (2007) 1,200; foreign direct investment (FDI; 2004–06 avg.) 10,935; official development assistance (2006) 570. Disbursements for (U.S.$'000,000): tourism (2006) 2,743; remittances (2007) 107; FDI (2004–06 avg.) 957.
Land use as % of total land area (2003): in temporary crops 30.4%, in permanent crops 3.4%, in pasture 19.0%; overall forest area (2005) 13.2%.

Foreign trade[8]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−15,495	−22,087	−34,373	−43,298	−54,041	−62,844
% of total	17.7%	18.9%	21.4%	22.8%	24.0%	22.7%

Imports (2007): U.S.$170,057,000,000 (machinery and apparatus 21.1%, mineral fuels 20.6%, base and fabricated metals 15.2%, transportation equipment 8.5%). *Major import sources:* Russia 13.8%; Germany 10.3%; China 7.8%; Italy 5.9%; U.S. 4.8%; France 4.6%.
Exports (2007): U.S.$107,213,000,000 (textiles/clothing 21.4%, transportation equipment 17.0%, machinery and apparatus 15.1%, base and fabricated metals 14.6%, vegetables/fruits/nuts 4.1%). *Major export destinations:* Germany 11.2%; U.K. 8.1%; Italy 7.0%; France 5.6%; Russia 4.4%; U.S. 3.9%.

Transport and communications

Transport. Railroads (2006): length 8,697 km; passenger-km 5,277,000; metric ton-km cargo 9,676,000,000. Roads (2005): total length 426,914 km (paved [2004] 45%). Vehicles (2007): passenger cars 6,472,156; trucks and buses 3,181,390. Air transport (2006)[9]: passenger-km 37,512,000,000; metric ton-km cargo 391,831,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	29,440	424	PCs	2005	4,073	57
Telephones				Dailies	2004	4,948[10]	70[10]
Cellular	2007	61,976[11]	828[11]	Internet users	2007	21,141	282
Landline	2007	18,413	246	Broadband	2007	4,554[11]	61[11]

Education and health

Educational attainment (2003). Percentage of population age 25–64 having: no formal schooling through primary education 64%; lower secondary 10%; upper secondary/higher vocational 17%; university 9%. *Literacy* (2006): total population age 15 and over literate 88.1%; males literate 96.0%; females literate 80.4%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–10)	34,656	402,829	10,846,930	26.9
Secondary (age 11–16)	3,690	103,389	2,142,218	20.7
Voc., teacher tr.	4,244	84,276	1,244,499	14.8
Higher[12]	1,306	84,785	2,181,217	25.7

Health: physicians (2004) 104,226 (1 per 683 persons); hospital beds (2006) 180,767 (1 per 404 persons); infant mortality rate per 1,000 live births (2007) 21.7; undernourished population (2002–04) 2,100,000 (3% of total population based on the consumption of a minimum daily requirement of 1,970 calories).

Military

Total active duty personnel (November 2007): 510,600 (army 78.7%, navy 9.5%, air force 11.8%)[13,14]. *Military expenditure as percentage of GDP* (2005): 2.8%; per capita expenditure U.S.$143.

[1]Administratively divided into 81 provinces as of 2007. [2]Detail does not add to total given because of rounding. [3]Projected rates based on about 44% of total deaths. [4]Includes other melons except watermelons. [5]Rounded figures. [6]Import duties less imputed bank service charges. [7]Unemployed. [8]Imports c.i.f.; exports f.o.b. [9]Atlasjet, Turkish, Pegasus, and Sun Express airlines only. [10]Circulation of daily newspapers. [11]Subscribers. [12]2005–06. [13]Turkish troops in Turkish Republic of Northern Cyprus (November 2007) 36,000. [14]U.S. troops in Turkey (June 2008) 1,570.

Internet resources for further information:
- **Central Bank of Turkey http://www.tcmb.gov.tr/yeni/eng**
- **Turkish Statistical Institute http://www.turkstat.gov.tr/Start.do**

Turkmenistan

Official name: Türkmenistan (Turkmenistan).
Form of government[1]: unitary single-party[2] republic with one legislative body (Mejlis/Assembly; 125[3]).
Head of state and government: President.
Capital: Ashgabat.
Official language: Turkmen.
Official religion: none.
Monetary unit: manat[4] (m); valuation (Sept. 8, 2008) 1 U.S.$ = m 14,267; 1 £ = m 25,206.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2001 estimate
Ahal	Ashgabat	36,700	95,100	767,700
Balkan	Balkanabat	53,500	138,500	468,900
Daşoguz	Daşoguz	28,400	73,600	1,165,000
Lebap	Türkmenabat (Chärjew)	36,200	93,800	1,130,700
Mary	Mary	33,500	86,800	1,251,300
City				
Ashgabat	—	100	300	695,300
TOTAL		188,500[5]	488,100	5,478,900

Demography

Population (2008): 5,180,000[6].
Density (2008): persons per sq mi 27.5, persons per sq km 10.6.
Urban-rural (2005): urban 47.3%; rural 52.7%.
Sex distribution (2005): male 49.24%; female 50.76%.
Age breakdown (2005): under 15, 31.8%; 15–29, 30.0%; 30–44, 20.6%; 45–59, 11.4%; 60–74, 4.6%; 75–84, 1.4%; 85 and over, 0.2%.
Population projection[6]: (2010) 5,345,000; (2020) 6,148,000.
Doubling time: 37 years.
Ethnic composition (2000): Turkmen 79.2%; Uzbek 9.0%; Russian 3.0%; Kazakh 2.5%; Tatar 1.1%; other 5.2%.
Religious affiliation (2000): Muslim (mostly Sunnī) 87.2%; Russian Orthodox 1.7%; nonreligious 9.0%; other 2.1%.
Major cities (1999): Ashgabat (2007) 744,000; Türkmenabat 203,000; Daşoguz 165,000; Mary 123,000; Balkanabat 108,000.

Vital statistics

Birth rate per 1,000 population (2006): 25.6 (world avg. 20.3); (1998) within marriage 96.2%; outside of marriage 3.8%.
Death rate per 1,000 population (2006): 6.3 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 19.3 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 3.19.
Marriage/divorce rates per 1,000 population: (1998) 5.4/(1994) 1.5.
Life expectancy at birth (2006): male 64.9 years; female 71.3 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 462.1, of which ischemic heart diseases 243.4, hypertensive heart disease 105.7; lower respiratory infections 77.6; infectious and parasitic diseases 65.6; malignant neoplasms (cancers) 60.9.

National economy

Budget (2006)[7]. Revenue: m 22,474,000,000,000 (tax revenue 93.8%; nontax revenue 6.2%). Expenditures: m 16,631,000,000,000 (current expenditure 94.2%; development expenditure 5.8%).
Public debt (external, outstanding; 2006): U.S.$725,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 2,700,000, cow's milk 1,332,800, seed cotton 946,000, tomatoes 256,000, watermelons 240,000, grapes 175,000, cattle meat 102,000, sheep meat 90,200, wool 20,200; livestock (number of live animals) 15,500,000 sheep, 1,948,000 cattle; roundwood (2006) 3,000 cu m, of which fuelwood 100%; fisheries production (2006) 15,016 (from aquaculture, negligible). Mining and quarrying (2005): iodine 270,000, salt 215,000, gypsum 100,000. Manufacturing (2004): distillate fuel (gas-diesel oil) 2,511,000; residual fuel oils 1,745,000; motor spirits (gasoline) 1,265,000; wheat flour (2003) 503,000; cement 450,000. Energy production (consumption): electricity (kW-hr; 2005) 12,820,000,000 (9,902,000,000); coal, none (none); crude petroleum (barrels; 2007) 65,700,000 (40,200,000); petroleum products (metric tons; 2005) 6,466,000 (3,533,000); natural gas (cu m; 2006) 62,000,000,000 ([2005] 14,619,000,000).
Household income and expenditure. Average household size (2002) 5.7; income per household: n.a.; sources of income (1998): wages and salaries 70.6%, pensions and grants 20.9%, self-employment (mainly agricultural income) 2.3%, nonwage income of workers 1.1%; expenditure (1998): food 45.2%, clothing and footwear 16.8%, furniture 13.3%, transportation 7.6%, health 7.0%.
Population economically active (2006): total 2,181,000[8]; activity rate of total population 44.5%[8] (participation rates: ages 15–64, 68.5%[8]; female 46.9%[8]; unofficially unemployed, n.a.).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	111.6	121.4	128.2	135.8	150.3	166.1	181.0

Gross national income (2007): U.S.$6,820,000,000 (U.S.$1,374 per capita).

Structure of gross domestic product and labour force

	2007 in value U.S.$'000,000	2007 % of total value	1998 labour force	1998 % of labour force
Agriculture	1,599.9	22.1	892,400	48.5
Mining, Manufacturing, Public utilities	2,501.7	34.5	226,800	12.3
Public utilities			48,300	2.6
Construction	531.2	7.3	108,200	5.9
Transp. and commun.	441.3	6.1	90,700	4.9
Trade, hotels	278.7	3.8	115,800	6.4
Finance			12,600	0.7
Public administration, defense, Services, Other	1,900.4	26.2	28,800	1.6
Services			284,900	15.5
Other			30,200	1.6
TOTAL	7,253.2	100.0	1,838,700	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism, n.a.; remittances (2006) 4[9]; foreign direct investment (2004–06 avg.) 501; official development assistance (2006) 26. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances (2006) 1[9].
Land use as % of total land area (2003): in temporary crops 4.7%, in permanent crops 0.1%, in pasture 65.3%; overall forest area (2005) 8.8%.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+1,030	+1,270	+705	+1,997	+4,598	+5,216
% of total	21.9%	20.6%	10.1%	25.3%	47.3%	41.2%

Imports (2003): U.S.$2,450,000,000 (machinery and transport equipment 45.9%, basic manufactures 19.9%, chemicals and chemical products 11.1%, food products 5.3%). *Major import sources* (2007): U.A.E. c. 15%; Turkey c. 11%; China c. 10%; Ukraine c. 9%; Russia c. 8%; Iran c. 7%.
Exports (2003): U.S.$3,720,000,000 (natural gas 49.7%, petrochemicals 18.3%, crude petroleum 8.9%, cotton fibre 3.2%, cotton yarn 2.2%). *Major export destinations* (2007): Ukraine c. 49%; Iran c. 18%; Azerbaijan c. 5%; Turkey c. 5%.

Transport and communications

Transport. Railroads (2006): length 1,852 mi, 2,980 km; (1999) passenger-km 701,000,000; (2002) metric ton-km cargo 7,476,000,000. Roads (2001): total length 22,000 km (paved 82%). Vehicles (1995): passenger cars 220,000; trucks and buses 58,200. Air transport (2005)[11]: passenger-km 1,913,000,000; metric ton-km cargo 25,997,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	855	182	PCs	2005	348	72
Telephones				Dailies	2004	57[12]	12[12]
Cellular	2006	217[13]	43[13]	Internet users	2007	70	14
Landline	2005	398	81	Broadband	2007		

Education and health

Educational attainment (2000)[14]. Percentage of population age 25 and over having: no formal schooling 3.0%; incomplete primary to complete standard secondary education 60.1%; vocational secondary 23.5%; higher 13.2%; unknown 0.2%. *Literacy* (2007): total population age 15 and over literate 99.5%; males literate 99.7%; females literate 99.3%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 7–9)				
Secondary (age 10–16)	1,705			
Vocational	15			
Higher	16			

Health: physicians (2004) 12,722 (1 per 381 persons); hospital beds (2002) 23,524 (1 per 199 persons); infant mortality rate per 1,000 live births (2006) 55.2; undernourished population (2002–04) 300,000 (7% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

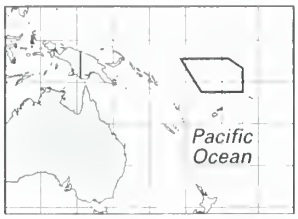
Military

Total active duty personnel (November 2007): 22,000 (army 84.1%, navy 2.3%, air force 13.6%). *Military expenditure as percentage of GDP* (2005): 3.7%; per capita expenditure U.S.$93.

[1]Implementation status of new constitution adopted on Sept. 26, 2008, unclear in November 2008. [2]Single party in practice if not in principle. [3]125 seats per elections of Dec. 14, 2008. [4]The manat is to be redenominated on Jan. 1, 2009. As of this date 1,000 (old) manat = 1 (new) manat. [5]Detail does not add to total given because of rounding. [6]Estimate of U.S. Bureau of the Census International Database (July 2007 update); official Turkmen estimates are significantly higher. [7]Budget statistics are unreliable because the government spends large amounts of extra-budgetary funds. [8]Estimate of the ILO Employment Trends Unit. [9]2nd quarter only; from/to Russia only. [10]Imports c.i.f.; exports f.o.b. [11]Turkmenistan Airlines only. [12]Circulation of daily newspapers. [13]Subscribers. [14]Based on 2000 Turkmenistan Demographic and Health Survey of 13,566 people age 25 and over.

Internet resource for further information:
- **Asia Development Bank: Turkmenistan**
  http://www.adb.org/Turkmenistan/default.asp

Tuvalu



Official name: Tuvalu.
Form of government: constitutional monarchy with one legislative house (Parliament [15]).
Chief of state: British Monarch, represented by Governor-General.
Head of government: Prime Minister.
Capital: government offices are at Vaiaku, Fongafale islet, of Funafuti atoll.
Official language: none.
Official religion: none.
Monetary units: Tuvaluan dollar = Australian dollar ($T = $A)[1]; valuation (Sept. 8, 2008) 1 U.S.$ = $A 1.24; 1 £ = $A 2.19.

Area and population

Islands[2]	Capitals	area sq mi	area sq km	population 2002 census
Funafuti	Fongafale	1.08	2.79	4,492
Nanumaga	Tonga	1.07	2.78	589
Nanumea	Lolua	1.49	3.87	664
Niulakita	—	0.16	0.42	35
Niutao	Kua	0.98	2.53	663
Nui	Tanrake	1.09	2.83	548
Nukufetau	Savave	1.15	2.99	586
Nukulaelae	Fangaua	0.70	1.82	393
Vaitupu	Asau	2.16	5.60	1,591
TOTAL		9.90[3, 4]	25.63[3]	9,561

Demography

Population (2008): 9,700.
Density (2008): persons per sq mi 979.8, persons per sq km 378.5.
Urban-rural (2004): urban 55.2%; rural 44.8%.
Sex distribution (2007): male 48.84%; female 51.16%.
Age breakdown (2007): under 15, 29.7%; 15–29, 27.9%; 30–44, 20.0%; 45–59, 14.9%; 60–74, 5.7%; 75 and over, 1.8%.
Population projection: (2010) 9,800; (2020) 10,200.
Doubling time: 45 years.
Ethnic composition (2004–05)[5]: Tuvaluan (Polynesian) 95.1%; mixed (Tuvaluan/other) 3.4%; I-Kiribati 1.1%; other 0.4%.
Religious affiliation (2002): Christian 97.0%, of which Church of Tuvalu (Congregational) 91.0%, Seventh-day Adventist 2.0%, Roman Catholic 1.0%; Bahâ'î 1.9%; other 1.1%.
Major locality (2002): Fongafale islet of Funafuti atoll 4,492.

Vital statistics

Birth rate per 1,000 population (2007): 22.4 (world avg. 20.3); (2005) within marriage 92.7%; outside of marriage 7.3%.
Death rate per 1,000 population (2007): 7.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 15.4 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 2.96.
Marriage/divorce rates per 1,000 population (2007): n.a./n.a.
Life expectancy at birth (2007): male 66.4 years; female 71.0 years.
Major causes of death per 100,000 population (2007): cardiac arrest 82.9; diabetes mellitus 51.8; pneumonia 41.5; hypertension 31.1; congestive heart failure 31.1; cerebrovascular diseases 20.7.

National economy

Budget (2007). Revenue: $A 19,126,000 (tax revenue 33.1%, nontax revenue[6] 48.1%, grants 18.8%). Expenditures: $A 23,682,000 (current expenditure 91.6%, development expenditure 8.4%).
Public debt (external; 2002): U.S.$5,000,000.
Gross national income (2006): U.S.$26,000,000 (U.S.$2,441 per capita).

Structure of gross domestic product and labour force

	2002 in value $A '000	% of total value	labour force[7]	% of labour force[7]
Agriculture, fishing	4,565	16.9	1,259[8]	36.4[8]
Manufacturing, handicrafts	1,016	3.8		
Mining	237	0.9		
Construction	1,370	5.1	435	12.6
Public utilities	1,433	5.3		
Transp. and commun.	3,429	12.7	178	5.1
Trade, hotels, and restaurants	3,700	13.7	198	5.7
Finance, real estate	4,055	15.0	395	11.4
Pub. admin., defense	7,188	26.7	712	20.6
Services	1,794	6.7		
Other	–1,841[9]	–6.8[9]	286[10]	8.3[10]
TOTAL	26,945[4]	100.0	3,463	100.0[4]

Production (metric tons except as noted). Agriculture[11], forestry, fishing (2007): coconuts 1,700, vegetables 540, bananas 280, roots and tubers 150, other agricultural products include breadfruit, *pulaka* (taro), pandanus fruit, sweet potatoes, and pawpaws; livestock (number of live animals) 13,600 pigs, 45,000 chickens, 15,000 ducks; roundwood, n.a.; fisheries production (2006) 2,201 (from aquaculture, negligible). Mining and quarrying: n.a. Manufacturing (value added in $A '000; 2002): local cigarettes 755, cottage industries (including handicrafts and garments) 158. Energy production (consumption): electricity (kW-hr; 2006) n.a. (4,235,100); coal, none (none); crude petroleum, none (none); petroleum products, none (none); natural gas, none (none).
Population economically active (2004): total 4,302[7]; activity rate of total population 44.8% (participation rates: ages 15 and over [2002] 58.2%; female [2002] 43.4%; unemployed 16.3%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.5	106.7	110.2	113.3	117.0	121.4	124.1

Household income and expenditure (2004–05). Average household size 5.3; average annual net income per household $A 13,007 (U.S.$9,746); sources of income: wages and salaries 47.0%, rents, interest, bonuses, and other 28.7%, self-employment 12.1%, overseas remittances 9.1%; expenditure: food and nonalcoholic beverages 48.9%, housing 18.8%, household furnishings and energy 12.2%, education, health, and recreation 9.5%, transportation 6.3%, alcohol and tobacco 2.6%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (1998) 0.2; remittances (2006) 3.0; foreign direct investment (FDI; 2004–06 avg.) none; official development assistance (2006) 15. Disbursements for (U.S.$'000,000): tourism (2007) n.a.; remittances (2007) n.a.; FDI (2004–06 avg.) negligible.
Land use as % of total land area (2003): in temporary crops, n.a., in permanent crops *c.* 67%; in pasture, n.a.; overall forest area (2005) *c.* 33%.

Foreign trade[12]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
$A '000	–20,086	–23,896	–15,317	–16,828	–17,773	–18,277
% of total	97.3%	98.8%	97.7%	99.1%	98.6%	98.8%

Imports (2007): $A 18,386,120 (food products [including live animals] 30.2%; mineral fuels 16.1%, of which diesel fuel 9.1%; telecommunications equipment 4.4%; clothing 4.1%; base and fabricated metals 3.9%; wood products 3.4%). *Major import sources:* Australia 24.9%; Fiji 24.6%; Singapore 13.5%; New Zealand 11.3%; China 7.7%.
Exports (2007): $A 109,413 ([2005] precision instruments 18.6%; machinery and apparatus 17.4%; base and fabricated metals 15.4%; wood and wood products 12.5%; transportation equipment 11.6%). *Major export destinations:* Fiji 93.1%; El Salvador 4.6%; New Zealand 2.2%; U.K. 0.1%.

Transport and communications

Transport. Railroads: none. Roads (2002): total length 8 km (paved 100%). Vehicles (2007): passenger cars 15; trucks and buses 2. Air transport: n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2007	0.3	33	PCs	2006	...	...
Telephones				Dailies	2007	0	0
Cellular	2006	1.3[13]	124[13]	Internet users	2006	1.7	162
Landline	2006	0.9	85	Broadband	2006	—[13]	3.0[13]

Education and health

Educational attainment (2004–05)[5]. Percentage of population age 15 and over having: no formal education/unknown 8.8%; primary education 52.4%; secondary 29.8%; higher 9.0%. *Literacy* (2004): total population literate 95%.

Education (2006)

	schools	teachers	students	student/teacher ratio
Primary (age 5–11)	9[14]	103	2,067	20.1
Secondary (age 12–18)	2	52	643	12.4
Vocational	1	...	60[14]	...
Higher[15]	1	...	270[16]	...

Health: physicians (2003) 4 (1 per 2,393 persons); hospital beds (2001) 56 (1 per 170 persons); infant mortality rate per 1,000 live births (2007) 19.5; undernourished population, n.a.

Military

Total active duty personnel (November 2007): none; Tuvalu has nonformal security arrangements with Australia and New Zealand.

[1]Transactions over $A 1 are conducted in $A only. [2]Local government councils have been established on all islands except Niulakita. [3]Another survey puts the area at 9.4 sq mi (24.4 sq km). [4]Detail does not add to total given because of rounding. [5]Based on the 2004–05 Household Income and Expenditure Survey, comprising 459 households. [6]Includes remittances from phosphate miners in Nauru and seafarers on German ships, rentals of fishing resources to Japan, Taiwan, and the U.S., and the leasing of the country's Internet domain "tv." [7]Total number of wage earners, unpaid workers, and subsistence workers all over age 15. [8]Excludes non-handicraft manufacturing. [9]Indirect taxes less subsidies and less imputed bank service charges. [10]Includes 60 not adequately defined and 226 unemployed. [11]Because of poor soil quality, only limited subsistence agriculture is possible on the islands. [12]Exports f.o.b.; imports c.i.f. [13]Subscribers. [14]2000. [15]University of the South Pacific Tuvalu campus. [16]2004.

Internet resource for further information:
- **Central Statistics Division**
  http://www.spc.int/prism/country/tv/stats

Uganda

Official name: Republic of Uganda.
Form of government: multiparty republic with one legislative house (Parliament [333[1]]).
Head of state and government: President assisted by the Prime Minister.
Capital: Kampala.
Official languages: English; Swahili[2].
Official religion: none.
Monetary unit: Ugandan shilling (UGX); valuation (Sept. 8, 2008) 1 U.S.$ = UGX 1,635; 1 £ = UGX 2,889.

Area and population

Geographic regions[3]	Principal cities	area sq mi	area sq km	population 2005 estimate
Central	Kampala	23,708	61,403	7,205,500
Eastern	Jinja	15,243	39,479	6,950,600
Northern	Gulu	32,970	85,392	6,091,800
Western	Mbarara	21,343	55,277	6,960,000
TOTAL		93,263[4,5]	241,551[5]	27,207,900

Demography

Population (2008): 29,166,000.
Density (2008)[6]: persons per sq mi 382.4, persons per sq km 147.6.
Urban-rural (2007): urban 12.6%; rural 87.4%.
Sex distribution (2006): male 50.08%; female 49.92%.
Age breakdown (2006): under 15, 50.3%; 15–29, 27.7%; 30–44, 12.9%; 45–59, 5.7%; 60–74, 2.7%; 75–84, 0.6%; 85 and over, 0.1%.
Population projection: (2010) 31,095,000; (2020) 42,705,000.
Ethnolinguistic composition (2002): Ganda 17.3%; Nkole 9.8%; Soga 8.6%; Kiga 7.0%; Teso 6.6%; Lango 6.2%; Acholi 4.8%; Gisu 4.7%.
Religious affiliation (2002): Christian 85.3%, of which Roman Catholic 41.9%, Anglican 35.9%, Pentecostal 4.6%, Seventh-day Adventist 1.5%; Muslim 12.1%; traditional beliefs 1.0%; nonreligious 0.9%; other 0.7%.
Major cities (2002): Kampala 1,208,544[7]; Gulu 119,430; Lira 80,879; Jinja 71,213; Mbale 71,130; Mbarara 69,363.

Vital statistics

Birth rate per 1,000 population (2006): 48.1 (world avg. 20.3).
Death rate per 1,000 population (2006): 13.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 35.1 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 6.88.
Life expectancy at birth (2006): male 50.2 years; female 51.9 years.
Adult population (ages 15–49) *living with HIV* (2007): 5.4%[8] (world avg. 0.8%).

National economy

Budget (2006–07). Revenue: UGX 3,574,000,000,000 (tax revenue 63.3%, of which VAT and sales tax 21.7%, petroleum taxes 10.1%, income tax 6.9%; grants 25.4%; nontax revenue 11.3%). Expenditures: UGX 4,031,900,000,000 (current expenditures 60.6%, of which public administration 14.7%, defense 9.3%, public order 4.6%, education 3.9%, health 2.3%; capital expenditures 39.4%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): plantains 9,231,000, cassava 4,456,000, sweet potatoes 2,602,000, sugarcane 2,000,000, corn (maize) 1,262,000, millet 732,000, potatoes 650,000, sorghum 456,000, soybeans 176,000, sesame 168,000, coffee 168,000, peanuts (groundnuts) 165,000, pigeon peas 89,000, cowpeas 75,000, tea 35,000, tobacco 33,000; livestock (number of live animals) 8,275,020 goats, 7,182,293 cattle, 2,000,000 pigs, 1,697,440 sheep, 23,750,000 chickens; roundwood (2006) 40,518,297 cu m, of which fuelwood 92%; fisheries production (2006) 399,491 (from aquaculture 8%). Mining and quarrying (2006): cobalt 689; columbite-tantalite (ore and concentrate) 275 kg. Manufacturing (2005): cement 692,709; sugar 182,906; soap 127,589; corrugated iron sheets 61,564; wheat flour 20,286; footwear 46,313,000 pairs; soft drinks 1,635,440 hectolitres. Energy production (consumption): electricity (kW-hr; 2005) 1,835,000,000 (1,670,000,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (647,000).
Land use as % of total land area (2003): in temporary crops 26.4%, in permanent crops 10.9%, in pasture 25.9%; overall forest area (2005) 18.4%.
Gross national income (GNI; 2007): U.S.$10,469,000,000 (U.S.$340 per capita); purchasing power parity GNI (U.S.$920 per capita).

Structure of gross domestic product and labour force

	2006–07 in value UGX '000,000	2006–07 % of total value	2002 labour force[9]	2002 % of labour force[9]
Agriculture, forestry, fishing	5,168,882	26.5	5,314,527	76.5
Mining	163,107	0.8	19,740	0.3
Manufacturing	1,578,543	8.1	154,247	2.2
Construction	1,904,635	9.8	108,708	1.6
Public utilities	192,581	1.0	14,369	0.2
Transp. and commun.	1,887,384	9.7	125,235	1.8
Trade, hotels	2,576,708	13.2	422,176	6.1
Pub. admin., defense	679,364	3.5	173,597	2.5
Finance, real estate	1,149,069	5.9	22,101	0.3
Services	2,417,862	12.4	399,221	5.7
Other	1,779,794[10]	9.1[10]	196,386	2.8
TOTAL	19,497,930[4]	100.0	6,950,307	100.0

Population economically active (2002–03): total 9,773,000; activity rate of total population 37.7% (participation rates [2001]: ages 15–64, 78.9%; female 35.2%; officially unemployed 3.5%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.0	101.7	109.6	113.3	122.5	130.8	138.8

Public debt (external, outstanding; 2006): U.S.$1,107,000,000.
Household income and expenditure. Average household size (2004) 4.7; income per household (1999–2000)[11] UGX 141,000 (U.S.$91)[12]; sources of income (1999–2000)[11]: wages and self-employment 78.0%, transfers 13.0%, rent 9.0%; expenditure (2002–03): food and nonalcoholic beverages 41.3%, rent, energy, and services 19.9%, education 8.0%, transportation 6.2%, health 3.9%, household durable goods 3.9%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 355; remittances (2007) 849; foreign direct investment (FDI; 2004–06 avg.) 262; official development assistance (2006) 1,551. Disbursements for (U.S.$'000,000): tourism (2006) 137; remittances (2007) 364.

Foreign trade[13]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−555.1	−606.4	−843.5	−1,066.7	−1,241.3	−1,595.1
% of total	38.1%	39.3%	44.2%	44.9%	43.3%	45.3%

Imports (2006): U.S.$2,557,300,000 (refined petroleum 20.2%; machinery and apparatus 17.2%; chemicals and chemical products 13.2%; food 9.1%, of which cereals 6.1%; road vehicles 8.5%; iron and steel 5.5%). *Major import sources:* Kenya 15.7%; U.A.E. 12.7%; India 8.2%; Japan 6.8%; South Africa 6.1%; China 5.4%.
Exports (2006): U.S.$962,200,000 (food and beverages 49.2%, of which coffee 19.5%, fresh fish 14.4%, black tea 5.2%; gold[14] 12.7%; telecommunications equipment 5.7%). *Major export destinations:* U.A.E. 19.4%; Sudan 9.5%; Kenya 9.1%; The Netherlands 6.4%; Switzerland 4.7%.

Transport and communications

Transport. Railroads (2005): route length 1,244 km; passenger-km[15]; metric ton-km cargo 185,559,000. Roads (2003): total length 70,746 km (paved 23%). Vehicles (2005): passenger cars 65,472; trucks and buses 100,323. Air transport: passenger-km (2003) 237,000,000; metric ton-km cargo (2004) 27,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	450	17	PCs	2005	300	10
Telephones				Dailies	2004	89[16]	3.4[16]
Cellular	2007	4,195[17]	136[17]	Internet users	2006	750	25
Landline	2007	162	5.3	Broadband	2007	1.9[17]	0.1[17]

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling 34.4%; incomplete primary education 36.0%; complete primary 11.1%; incomplete secondary 12.0%; complete secondary (some higher) 1.8%; complete higher (including vocational) 4.7%. *Literacy* (2007): population age 15 and over literate 73.2%; males literate 81.7%; females literate 64.8%.

Education (2005)

	schools[18]	teachers	students	student/teacher ratio
Primary (age 5–11)	13,371	143,247	7,152,099	54.3
Secondary (age 12–15)	3,645	31,890	619,519	17.7
Voc., teacher tr.	15	2,126	31,944	18.4
Higher	35	4,168[18]	88,360[18]	12.6[18]

Health (2004): physicians 2,209 (1 per 11,947 persons); hospital beds 26,772 (1 per 986 persons); infant mortality rate per 1,000 live births (2006) 68.5; undernourished population (2002–04) 4,800,000 (19% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2007): 45,000 (army 100%). *Military expenditure as percentage of GDP* (2005): 2.3%; per capita expenditure U.S.$7.

[1]Statutory number; includes 13 ex officio members. [2]Swahili became official in September 2005. [3]Actual local administration in 2007 was based on 79 districts and one city (Kampala). [4]Detail does not add to total given because of rounding. [5]Includes water area of 16,984 sq mi (43,989 sq km); Uganda's portion of Lake Victoria comprises 11,954 sq mi (30,960 sq km). [6]Based on land area only. [7]Urban agglomeration. [8]Statistically derived midpoint of range. [9]Employed only; excludes informal sector of *c.* 2,600,000 workers. [10]Indirect taxes. [11]Based on nationally representative household survey. [12]The household income for urban areas is UGX 302,900 (U.S.$195). [13]Imports c.i.f.; exports f.o.b. [14]Most gold exports are reexports from the Democratic Republic of the Congo. [15]All Uganda passenger rail service was suspended in 1997; limited service resumed in mid-2007. [16]Circulation of daily newspapers. [17]Subscribers. [18]2004.

Internet resources for further information:
- **Bank of Uganda http://www.bou.or.ug**
- **Uganda Bureau of Statistics http://www.ubos.org**

Ukraine

Official name: Ukrayina (Ukraine).
Form of government: unitary multiparty republic with a single legislative body (Parliament [450]).
Head of state: President.
Head of government: Prime Minister.
Capital: Kiev (Kyyiv).
Official language: Ukrainian.
Official religion: none.
Monetary unit: hryvnya (UAH); (Sept. 8, 2008) 1 U.S.$ = UAH 4.72; 1 £ = UAH 8.33.

Area and population

Provinces	area sq km	population 2008 estimate	Provinces	area sq km	population 2008 estimate
Cherkasy	20,900	1,309,825	Sumy	23,834	1,190,002
Chernihiv	31,865	1,128,277	Ternopil	13,823	1,095,612
Chernivtsi	8,097	903,431	Vinnytsya	26,513	1,665,179
Dnipropetrovsk	31,974	3,383,816	Volyn	20,144	1,035,935
Donetsk	26,517	4,516,627	Zakarpattya (Transcarpathia)	12,777	1,241,939
Ivano-Frankivsk	13,928	1,381,265	Zaporizhzhya	27,180	1,825,744
Kharkiv	31,415	2,784,042	Zhytomyr	29,832	1,299,401
Kherson	28,461	1,102,991	**Autonomous republic**		
Khmelnytsky	20,645	1,345,454	Krym (Crimea)	26,081	1,967,845
Kirovohrad	24,588	1,033,289	**Cities**		
Kyyiv (Kiev)	28,131	1,732,082	Kiev (Kyyiv)	839	2,745,006
Luhansk	26,684	2,342,720	Sevastopol	864	379,379
Lviv	21,833	2,553,567	TOTAL	603,628	46,221,981
Mykolayiv	24,598	1,198,776			
Odesa (Odessa)	33,310	2,391,190			
Poltava	28,748	1,517,797			
Rivne	20,047	1,150,790			

Demography

Population (2008): 46,222,000.
Density (2008): persons per sq mi 198.3, persons per sq km 76.6.
Urban-rural (2008): urban 68.3%; rural 31.7%.
Sex distribution (2006[1]): male 45.97%; female 54.03%.
Age breakdown (2006): under 15, 14.3%; 15–29, 23.0%; 30–44, 21.1%; 45–59, 21.2%; 60–74, 14.1%; 75–84, 5.5%; 85 and over, 0.8%.
Population projection: (2010) 45,661,000; (2020) 42,957,000.
Ethnic composition (2001): Ukrainian 77.8%; Russian 17.3%; Belarusian 0.6%; Moldovan 0.5%; Crimean Tatar 0.5%; other 3.3%.
Religious affiliation (2004): Ukrainian Orthodox, of which "Kiev patriarchy" 19%, "no particular patriarchy" 16%, "Moscow patriarchy" 9%; Ukrainian Autocephalous Orthodox 2%; Ukrainian Catholic 6%; Protestant 2%; Latin Catholic 2%; Muslim 1%; Jewish 0.5%; nonreligious/atheist/other 42.5%.
Major cities (2006[1]): Kiev 2,718,000; Kharkiv 1,461,000; Dnipropetrovsk 1,039,000; Odesa (Odessa) 1,001,000; Donetsk (2005) 999,975.

Vital statistics

Birth rate per 1,000 population (2007): 10.2 (world avg. 20.3); within marriage 78.6%; outside of marriage 21.4%.
Death rate per 1,000 population (2007): 16.4 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 1.30.
Marriage/divorce rates per 1,000 population (2007): 9.0/3.8.
Life expectancy at birth (2006): male 62.4 years; female 74.1 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 998.4, of which ischemic heart disease 655.6, cerebrovascular disease 218.6; malignant neoplasms (cancers) 192.4; accidents 96.7.
Adult population (ages 15–49) *living with HIV* (2007): 1.6%[2] (world avg. 0.8%).

National economy

Budget (2007). Revenue: UAH 165,942,000,000 (tax revenue 70.3%, of which VAT 35.8%, tax on profits of enterprises 20.5%, excise tax 6.3%; nontax revenue 25.4%; other 4.3%). Expenditures: UAH 174,236,000,000 (social security 16.8%; education and health 13.4%; transportation and communications 6.7%; energy and construction 4.7%; agriculture 4.6%; other 53.8%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 19,102,300, sugar beets 16,978,000, wheat 13,800,000, cow's milk 12,300,000, corn (maize) 6,700,000, barley 6,000,000, sunflower seeds 4,173,700, tomatoes 1,520,000, cabbages 1,300,000[3], apples 707,000, cattle meat 563,000, pumpkins/squash 480,000, sour cherries 126,000; livestock (number of live animals) 8,055,000 pigs, 6,175,400 cattle, 145,600,000 chickens; roundwood (2006) 15,246,000 cu m, of which fuelwood 56%; fisheries production (2006) 242,764 (from aquaculture 2%). Mining and quarrying (2005): iron ore 77,952,000[4]; manganese 770,000[5]; ilmenite concentrate 370,000. Manufacturing (value of sales in UAH '000,000,000; 2007): base and fabricated metals 157.5; food, beverages, and tobacco products 110.0; coke and refined petroleum 52.5; transport equipment 47.0; chemicals and chemical products 31.0. Energy production (consumption): electricity (kW-hr; 2007) 195,230,000,000 ([2005] 177,702,000,000); coal (metric tons; 2007) 58,742,000[6] ([2005] 64,013,000[6]); crude petroleum (barrels; 2007) 31,700,000 ([2005] 132,600,000); petroleum products (metric tons; 2005) 17,558,000 (11,957,000); natural gas (cu m; 2007) 20,200,000,000 ([2005] 80,428,000,000).
Household income and expenditure (2007). Average household size 2.6; average annual disposable income per household UAH 25,819 (U.S.$5,113); sources of income: wages and salaries 44.0%, transfers 37.4%[7]; expenditures: food and nonalcoholic beverages 57.1%; housing and energy 12.1%; clothing and footwear 6.6%.

Population economically active (2005): total 22,280,800; activity rate of total population *c.* 47% (participation rates [2003]: ages 15–64, 65.8%; female 48.9%; unemployed [2007] 6.9%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	112.0	112.8	118.7	129.4	146.9	160.3	174.9
Monthly earnings index	135.2	163.6	200.9	256.2	350.4	452.6	587.2

Gross national income (GNI; 2007): U.S.$118,445,000,000 (U.S.$2,550 per capita); purchasing power parity GNI (U.S.$6,810 per capita).

Structure of gross domestic product and labour force

	2006 in value UAH '000,000	2006 % of total value	2005 labour force	2005 % of labour force
Agriculture	41,006	7.5	4,005,500	18.0
Mining	22,064	4.1		
Manufacturing	109,416	20.1	4,072,400	18.3
Public utilities	18,610	3.4		
Construction	21,168	3.9	941,500	4.2
Transp. and commun.	56,053	10.3	1,400,500	6.3
Trade, restaurants	68,573	12.6	4,175,200	18.7
Finance, real estate			1,214,500	5.5
Pub. admin., defense	150,242	27.6	1,028,900	4.6
Services			3,841,500	17.2
Other	57,021[8]	10.5[8]	1,600,800[9]	7.2[9]
TOTAL	544,153	100.0	22,280,800	100.0

Public debt (external; April 2008): U.S.$15,100,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 3,485; remittances (2007) 1,170; foreign direct investment (FDI; 2004–06 avg.) 4,909; official development assistance (2006) 484. Disbursements for (U.S.$'000,000): tourism (2006) 2,834; remittances (2007) 42.
Land use as % of total land area (2003): in temporary crops 56.1%, in permanent crops 1.6%, in pasture 13.8%; overall forest area (2005) 16.5%.

Foreign trade[10]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S $'000,000	+980	+47	+3,669	−1,908	−6,654	−11,421
% of total	2.8%	0.1%	6.0%	2.7%	8.0%	10.4%

Imports (2006): U.S.$45,022,000,000 (machinery and apparatus 17.7%; petroleum 15.2%; chemical products 12.1%; natural gas [in gaseous state] 10.6%; road vehicles/parts 10.5%). *Major import sources:* Russia 30.6%; Germany 9.5%; Turkmenistan 7.8%; China 5.1%; Poland 4.7%.
Exports (2006): U.S.$38,368,000,000 (iron and steel 38.5%, of which ingots 11.4%; machinery and apparatus 8.8%; petroleum 5.0%; cereals 3.9%; metal ore/metal scrap 3.9%). *Major export destinations:* Russia 22.5%; Italy 6.5%; Turkey 6.2%; Poland 3.5%; Germany 3.3%.

Transport and communications

Transport. Railroads (2007): length 21,852 km; passenger-km 52,400,000,000; metric ton-km cargo 223,400,000,000. Roads (2007): total length 169,422 km (paved 98%). Vehicles: passenger cars (2005) 5,538,972; trucks and buses 490,495. Air transport (2006): passenger-km 4,393,000,000; metric ton-km cargo 40,692,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Telephones				Dailies	2004	2,466[11]	52[11]
Cellular	2007	55,240[12]	1,188[12]	Internet users	2007	10,000	215
Landline	2007	12,859	277	Broadband	2007	800[12]	17[12]

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 0.7%; incomplete primary education 2.8%; complete primary/incomplete secondary 22.7%; complete secondary 35.9%; incomplete higher 21.7%; complete higher 16.2%. *Literacy* (2004): 99.4%.
Health (2006): physicians 225,000 (1 per 208 persons); hospital beds 444,000 (1 per 105 persons); infant mortality rate per 1,000 live births (2007) 11.0; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 129,925[13] (army 54.5%, air force/air defense 34.8%, navy 10.7%); Russian naval forces at Sevastopol (November 2007) 13,000. *Military expenditure as percentage of GDP* (2005): 2.4%; per capita expenditure U.S.$42.

[1]January 1. [2]Statistically derived midpoint within range. [3]Includes other brassicas. [4]2007; gross weight. [5]Metal content. [6]Includes negligible (less than 1%) production/consumption of lignite. [7]Includes pensions, scholarships, subsidies, and remittances. [8]Net indirect taxes and taxes on production less subsidies and less imputed bank service charges. [9]Unemployed. [10]Imports c.i.f.; exports f.o.b. [11]Circulation of eight daily newspapers published in Kiev only. [12]Subscribers. [13]Excludes internal security troops and border/coastal guards.

Internet resources for further information:
- **National Bank of Ukraine http://www.bank.gov.ua/ENGL/Publication/index.htm**
- **State Statistics Committee of Ukraine http://www.ukrstat.gov.ua**

United Arab Emirates

Official name: Al-Imārāt al-ʿArabīyah al-Muttaḥidah (United Arab Emirates).
Form of government: federation of seven emirates with one advisory body (Federal National Council [40†]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Abu Dhabi.
Official language: Arabic.
Official religion: Islam.
Monetary unit: dirham (AED); valuation (Sept. 8, 2008) 1 U.S.$ = AED 3.67; 1 £ = AED 6.49.

Area and population

Emirates	Capitals	area[2] sq mi	area[2] sq km	population 2005 census
Abū Ẓaby (Abu Dhabi)	Abu Dhabi	28,210	73,060	1,399,484
ʿAjmān (Ajman)	ʿAjmān	100	260	206,997
Dubayy (Dubai)	Dubai	1,510	3,900	1,321,453
Al-Fujayrah (Fujairah)	Al-Fujayrah	500	1,300	125,698
Ra's al-Khaymah	Ra's al-Khaymah	660	1,700	210,063
Ash-Shāriqah (Sharjah)	Sharjah	1,000	2,600	793,573
Umm al-Qaywayn	Umm al-Qaywayn	300	780	49,159
TOTAL		32,280	83,600	4,106,427[3]

Demography

Population (2008): 4,660,000.
Density (2008): persons per sq mi 144.4, persons per sq km 55.7.
Urban-rural (2006): urban 82.5%; rural 17.5%.
Sex distribution (2007): male 68.65%; female 31.35%.
Age breakdown (2007): under 15, 20.6%; 15–29, 29.2%; 30–44, 37.0%; 45–59, 11.4%; 60–74, 1.6%; 75 and over, 0.2%.
Population projection: (2010) 5,025,000; (2020) 6,560,000.
Doubling time: 51 years.
Ethnic composition (2000): Arab 48.1%, of which U.A.E. Arab 12.2%, U.A.E. Bedouin 9.4%, Egyptian Arab 6.2%, Omani Arab 4.1%, Saudi Arab 4.0%; South Asian 35.7%, of which Pashtun 7.1%, Balochi 7.1%, Malayali 7.1%; Persian 5.0%; Filipino 3.4%; white 2.4%; other 5.4%.
Religious affiliation (2005): Muslim *c.* 62% (mostly Sunnī); Hindu *c.* 21%; Christian *c.* 9%; Buddhist *c.* 4%; other *c.* 4%.
Major cities (2007): Dubai 1,225,137; Abu Dhabi 633,136; Sharjah 584,286; Al-ʿAyn 444,331; ʿAjmān 250,808.

Vital statistics

Birth rate per 1,000 population (2007): 16.1 (world avg. 20.3).
Death rate per 1,000 population (2007): 2.2 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 13.9 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 2.43.
Marriage/divorce rates per 1,000 population (2006): 3.1/0.7.
Life expectancy at birth (2007): male 73.2 years; female 78.3 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 119.6, of which ischemic heart disease 55.9; accidents 61.9; malignant neoplasms (cancers) 34.1; infectious and parasitic diseases 17.6.

National economy

Budget (2007). Revenue: AED 228,750,000,000 (royalties on hydrocarbons 77.1%; tax revenue 6.0%; other 16.9%). Expenditures: AED 159,726,000,000 (current expenditures 76.0%; loans, net equity, and foreign grants 13.2%; development expenditure 10.8%).
Gross national income (2007): U.S.$204,556,000,000 (U.S.$46,030 per capita).

Structure of gross domestic product and labour force

	2007 in value AED '000,000	% of total value	labour force	% of labour force
Agriculture	12,797	1.8	225,499	7.3
Crude petroleum[4]	281,340	38.6	38,783	1.3
Quarrying	1,293	0.2	6,418	0.2
Manufacturing	90,530	12.4	393,173	12.7
Construction	58,301	8.0	624,242	20.2
Public utilities	10,893	1.5	39,958	1.3
Transp. and commun.	42,926	5.9	190,133	6.1
Trade, hotels	84,200	11.5	723,117	23.3
Finance, real estate	96,413	13.2	127,176	4.1
Pub. admin., defense	49,266	6.7	334,207	10.8
Services	12,417	1.7	393,942	12.7
Other	−10,645[5]	−1.5[5]	—	—
TOTAL	729,732[6]	100.0	3,096,646[6]	100.0

Public debt (2005): *c.* U.S.$20,000,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): dates 755,000, tomatoes 215,000, alfalfa for forage and silage (2005) 210,000, eggplants 22,000, pumpkins and squash 20,000, cabbages 17,500, cucumbers and gherkins 17,200, onions 16,500, lemons and limes 12,300; livestock (number of live animals) 1,570,000 goats, 615,000 sheep, 260,000 camels, 125,000 cattle; roundwood, n.a.; fisheries production (2006) 87,570 (from aquaculture 1%). Mining and quarrying (2006): gypsum 130,000; lime 60,000. Manufacturing (value added in AED '000,000; 2002): chemical products (including refined petroleum) 18,467; textiles and wearing apparel 4,281; fabricated metal products and machinery 3,695; food, beverages, and tobacco 2,673; cement, bricks, and tiles 2,508. Energy production (consumption): electricity (kW-hr; 2007) 76,532,000,000 (74,717,000,000); coal, none (none); crude petroleum (barrels; 2007–08) 852,511,000 ([2005] 153,000,000); petroleum products (metric tons; 2005) 20,931,000 (10,051,000); natural gas (cu m; 2007) 49,200,000,000 (38,900,000,000).
Population economically active (2005): total 2,559,668; activity rate of total population 54.6% (participation rates: ages 15–64, 78.1%; female 13.5%; unemployed 3.1%).

Price and earnings indexes (2000 = 100)

	2000	2001	2002	2003	2004	2005	2006
Consumer price index	100.0	102.8	105.8	109.1	114.6	121.7	133.0
Wages and services index	100.0	117.0	125.2	130.9			

Household income and expenditure. Average household size (2005) 4.8; income per household: n.a.; sources of income: n.a.; expenditure (2000)[7]: rent, fuel, and light 36.1%, transportation and communications 14.9%, food 14.4%, education, recreation, and entertainment 10.3%, durable household goods 7.4%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 4,972; remittances (2007) n.a.; foreign direct investment (FDI; 2006 est.) 9,763. Disbursements for (U.S.$'000,000): tourism (2006) 8,827; remittances (2007) n.a.; FDI (2006 est.) 2,758.
Land use as % of total land area (2003): in temporary crops 0.8%, in permanent crops 2.3%, in pasture 3.6%; overall forest area (2005) 3.7%.

Foreign trade[8]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
AED '000,000,000	+51.7	+53.7	+78.3	+101.2	+157.2	+207.1
% of total	17.4%	16.3%	18.9%	17.8%	22.3%	24.7%

Imports (2006): AED 316,280,000,000 (emirate imports 78.7%[9], free zone imports 21.3%). *Major import sources:* U.S. 11.4%; China 11.0%; India 9.8%; Germany 6.2%; Japan 5.8%; U.K. 5.5%; France 4.1%.
Exports (2006): AED 523,350,000,000 (crude petroleum 40.8%; reexports 32.3%; free zone exports 14.4%; natural gas 5.0%; nonpetroleum emirate-produced exports 4.1%; refined petroleum products 3.4%). *Major export destinations:* Japan 25.9%; South Korea 10.3%; Thailand 5.9%; India 4.5%; Iran 3.6%; unspecified 15.4%.

Transport and communications

Transport. Railroads: none. Roads (2008): total length, n.a. (paved roads only, 4,080 km). Vehicles (2007): passenger cars 1,279,098; trucks and buses 48,205. Air transport (2007): passenger-km 90,530,000,000; metric ton-km cargo 5,497,149,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	843	216	PCs	2005	850	208
Telephones				Dailies	2007	489[10]	110[10]
Cellular	2007	7,732[11]	1,765[11]	Internet users	2007	2,260	516
Landline	2007	1,386	316	Broadband	2007	380[11]	87[11]

Education and health

Educational attainment (2005). Percentage of population age 10 and over having: no formal schooling (illiterate/unknown) 9.4%, (literate) 13.9%; primary education 14.6%; incomplete/complete secondary 43.7%; postsecondary 4.0%; undergraduate 12.8%; graduate 1.6%. *Literacy* (2007): total population age 10 and over literate 90.4%; males literate 90.9%; females literate 89.2%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)		16,523	284,034	17.2
Secondary (age 12–18)		23,934	309,476	12.9
Vocational		211[12]	1,409	7.0[12]
Higher		4,710	77,428	16.4

Health (2005): physicians 7,289 (1 per 643 persons); hospital beds 7,891 (1 per 594 persons); infant mortality rate per 1,000 live births (2007) 13.5; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 51,000 (army 86.3%, navy 4.9%, air force 8.8%). *Military expenditure as percentage of GDP* (2005): 2.0%; per capita expenditure U.S.$546.

[1]Twenty seats are appointed by the rulers of the 7 emirates and 20 seats (as of December 2007) are indirectly elected by the nearly 7,000 sheikhs in the U.A.E. [2]Approximate figures; border/territorial disputes exist with Saudi Arabia/Iran, respectively. [3]The national population equals 825,495, non-national population 3,280,932. [4]Includes natural gas. [5]Less imputed bank service charges. [6]Detail does not add to total given because of rounding. [7]Weights of consumer price index components. [8]Imports are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. [9]Principal 2005 imports c.i.f. (AED 242,422,000,000) for Abū Ẓaby, Dubayy, and Ash-Shāriqah only were machinery and apparatus 23.7%, gold/diamonds/jewelry 20.9%, and transport equipment 12.5%. [10]Circulation of nine leading daily newspapers only. [11]Subscribers. [12]2005–06.

Internet resources for further information:
- **United Arab Emirates National Media Council**
  http://uaeinteract.com
- **Central Bank of the United Arab Emirates**
  http://www.centralbank.ae
- **United Arab Emirates Ministry of Economy**
  http://www.economy.ae

United Kingdom

Official name: United Kingdom of Great Britain and Northern Ireland.
Form of government: constitutional monarchy with two legislative houses (House of Lords [732[1]]; House of Commons [646]).
Chief of state: Sovereign.
Head of government: Prime Minister.
Capital: London.
Official language: English; both English and Welsh in Wales.
Official religion: [2].
Monetary unit: pound sterling (£); valuation (Sept. 8, 2008) 1 £ = U.S.$1.77; 1 U.S.$ = £0.57.

Population (2005 estimate)

Countries	population
England	50,431,700[3]
Counties	
Bedfordshire	397,700
Buckinghamshire	481,500
Cambridgeshire	588,900
Cheshire	679,900
Cornwall (incl. Isles of Scilly)	519,400
Cumbria	498,900
Derbyshire	747,500
Devon	731,000
Dorset	401,100
Durham	499,800
East Sussex	497,900
Essex	1,340,000
Gloucestershire	575,200
Hampshire	1,259,500
Hertfordshire	1,048,200
Isle of Wight[5]	140,000
Kent	1,369,900
Lancashire	1,156,100
Leicestershire	627,800
Lincolnshire	678,700
Norfolk	824,200
North Yorkshire	582,000
Northamptonshire	651,800
Northumberland	311,300
Nottinghamshire	762,700
Oxfordshire	626,900
Shropshire	289,000
Somerset	515,600
Staffordshire	816,700
Suffolk	692,100
Surrey	1,075,500
Warwickshire	533,900
West Sussex	764,400
Wiltshire	446,600
Worcestershire	555,800
Unitary Districts	
Bath and NE Somerset	173,700
Blackburn with Darwen	140,200
Blackpool	142,900
Bournemouth	163,600
Bracknell Forest	111,200
Brighton and Hove	255,000
Bristol	398,300
Darlington	99,200
Derby	233,700
East Riding of Yorkshire	327,400
Halton	118,800
Hartlepool	90,000
Herefordshire	178,800
Kingston upon Hull	249,100
Leicester	288,000
Luton	184,900
Medway	251,100
Middlesborough	137,600
Milton Keynes	218,500
NE Lincolnshire	157,500
North Lincolnshire	157,100
North Somerset	195,100
Nottingham	278,700
Peterborough	159,700
Plymouth	246,100
Poole	137,100
Portsmouth	189,600
Reading	145,100
Redcar and Cleveland	138,600
Rutland	37,300
Slough	117,500
South Gloucestershire	248,100
Southampton	222,000
Southend-on-Sea	159,300
Stockton-on-Tees	186,700
Stoke-on-Trent	238,300
Swindon	184,000
Telford and Wrekin	161,600
Thurrock	146,600
Torbay	132,800
Warrington	194,700
West Berkshire	146,300
Windsor and Maidenhead	138,500
Wokingham	153,600
York	186,800
Metropolitan Counties/Greater London	
Greater London	7,517,700
Greater Manchester	2,547,600
Merseyside	1,367,100
South Yorkshire	1,285,600
Tyne and Wear	1,095,200
West Midlands	2,591,300
West Yorkshire	2,118,600
Wales	2,958,600
Unitary Districts	
Blaenau Gwent	68,400
Bridgend	130,800
Caerphilly	170,200
Cardiff	319,700
Carmarthenshire	178,100
Ceredigion	78,300
Conwy	111,500
Denbighshire	96,000
Flintshire	150,200
Gwynedd	118,000
Isle of Anglesey	68,900
Merthyr Tydfil	54,900
Monmouthshire	87,700
Neath and Port Talbot	135,600
Newport	139,600
Pembrokeshire	117,500
Powys	131,500
Rhondda, Cynon, Taff	231,600
Swansea	226,400
Torfaen	90,300
The Vale of Glamorgan	122,900
Wrexham	130,500
Scotland	5,094,800
Unitary Districts	
Aberdeen City	205,910
Aberdeenshire	233,430
Angus	108,790
Argyll and Bute	90,870
Clackmannanshire	48,630
Dumfries and Galloway	148,340
Dundee City	142,360
East Ayrshire	119,400
East Dumbartonshire	105,960
East Lothian	91,800
East Renfrewshire	89,600
Edinburgh, City of	457,830
Eilean Siar[4]	26,370
Falkirk	149,150
Fife	356,740
Glasgow City	578,790
Highland	213,590
Inverclyde	82,130
Midlothian	79,190
Moray	86,590
North Ayrshire	135,830
North Lanarkshire	323,420
Orkney Islands	19,590
Perth and Kinross	138,590
Renfrewshire	170,000
Scottish Borders	109,730
Shetland Islands	22,000
South Ayrshire	111,780
South Lanarkshire	306,280
Stirling	86,930
West Dumbartonshire	91,400
West Lothian	163,780
Northern Ireland	1,724,400[3]
Districts	
Antrim	50,500
Ards	75,300
Armagh	55,800
Ballymena	60,700
Ballymoney	28,700
Banbridge	44,800
Belfast	268,000
Carrickfergus	39,200
Castlereagh	65,700
Coleraine	56,600
Cookstown	34,100
Craigavon	84,700
Derry	107,300
Down	67,400
Dungannon	50,700
Fermanagh	59,700
Larne	31,100
Limvady	34,100
Lisburn	111,500
Magherafelt	41,800
Moyle	16,500
Newry and Mourne	91,600
Newtownabbey	80,800
North Down	78,300
Omagh	50,700
Strabane	38,700
TOTAL	60,209,500

Demography

Population (2008): 61,446,000.
Area[6]: 93,851 sq mi, 243,073 sq km, of which England 50,302 sq mi, 130,281 sq km; Wales 8,005 sq mi, 20,732 sq km; Scotland 30,087 sq mi, 77,925 sq km; Northern Ireland 5,457 sq mi, 14,135 sq km.
Density (2008): persons per sq mi 654.7, persons per sq km 252.8.
Urban-rural (2005): urban 89.7%; rural 10.3%.
Age breakdown (2006): under 15, 17.7%; 15–29, 19.3%; 30–44, 22.3%; 45–59, 19.4%; 60–74, 13.6%; 75–84, 5.6%; 85 and over, 2.1%.
Ethnic composition (2005): white 87.8%, of which British 83.4%, other 4.4%; Asian 4.9%, of which Indian 1.8%, Pakistani 1.4%, Bangladeshi 0.6%, Chinese 0.4%; black 2.2%, of which from Africa 1.1%, from the Caribbean 1.0%; mixed race 1.0%; other 1.2%; unknown 2.9%.
Religious affiliation (2001): Christian 71.8%, of which Anglican-identified 29%, other Protestant-identified (significantly Presbyterian) 14%, Roman Catholic-identified 10%; Muslim 2.8%; Hindu 1.0%; Sikh 0.6%; Jewish 0.5%; nonreligious 15.0%; other 0.5%; unknown 7.8%.
Population projection: (2010) 62,162,000; (2020) 65,854,000.
Sex distribution (2006): male 49.01%; female 50.99%.
Major cities/urban agglomerations (2006/2007): London 7,512,000/8,567,000; Birmingham 1,007,000/2,285,000; Manchester 452,000/2,230,000; Leeds 750,000/1,529,000[7]; Glasgow 581,000/1,160,000; Newcastle 271,000/882,000; Liverpool 436,000/811,000; Sheffield 526,000; Bradford 493,000; Edinburgh 464,000; Bristol 411,000; Wakefield 321,000; Cardiff 318,000; Coventry 307,000; Sunderland 291,000; Doncaster 290,000; Leicester 290,000; Nottingham 286,000; Belfast 267,000.
Mobility (2001). Population living in the same residence as 2000, 88.6%; different residence, same country/region (of the U.K.) 8.6%; different residence, different country/region (of the U.K.) 2.1%; from outside the U.K. 0.7%.
Households (2006). Average household size 2.4; 1 person 29%, 2 persons 36%, 3 persons 16%, 4 persons 13%, 5 or more persons 6%.
Immigration (2004): permanent residents 518,000, from Bangladesh, India, and Sri Lanka 10.6%, South Africa 5.6%, Australia 5.0%, Pakistan 4.1%, United States 2.7%, New Zealand 1.5%, Canada 1.0%, other 69.5%, of which EU 20.8%.

Vital statistics

Birth rate per 1,000 population (2007): 12.6 (world avg. 20.3); (2006) within marriage 56.3%; outside of marriage 43.7%.
Death rate per 1,000 population (2007): 9.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 3.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2006): 1.85.
Marriage/divorce rates per 1,000 population (2005): 4.7/2.6.
Life expectancy at birth (2007): male 77.6 years; female 81.7 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 331.0, of which ischemic heart disease 168.2, cerebrovascular diseases 96.1; malignant neoplasms (cancers) 255.9; diseases of the respiratory system 135.4, of which pneumonia 57.8; diseases of the digestive system 48.2; accidents 21.3; diseases of the genitourinary system 19.3; diabetes mellitus 11.0; suicide and intentional self-harm 8.5; homicide and assault 0.7.

Social indicators

Educational attainment (2003). Percentage of population age 25–64 having: up to lower secondary education only 16%; upper secondary 56%; higher 28%, of which at least some university 19%.

Distribution of disposable income (2006–07)

percentage of household income by quintile				
1	2	3	4	5 (highest)
7.4	11.7	16.6	23.3	41.0

Quality of working life. Average full-time workweek (hours; 2006): male 38.9, female 34.0. Annual rate per 100,000 workers for (2006–07): injury or accident 1,113; death 1.0. Proportion of labour force (employed persons) insured for damages or income loss resulting from (2004): injury 100%; permanent disability 100%; death 100%. Average days lost to labour stoppages per 1,000 employee workdays (2007): 38.
Social participation. Eligible voters participating in last national election (May 2005): 61.3%. Population age 16 and over participating in voluntary work (2001)[8]: 39%. Trade union membership in total workforce (2004) *c.* 25%. Percentage of population attending weekly church services (2001) 8%.
Social deviance (2005–06)[9]. Offense rate per 100,000 population for: theft and handling stolen goods 3,342; criminal damage 1,961; violence against a person 1,754; burglary 1,068; fraud and forgery 386; drug offenses 295; robbery 163; sex offenses 103.
Leisure (2004). Favourite leisure activities: watching television, videos, and DVDs, listening to the radio, watching sporting events, and attending the cinema; the common free-time activity outside of the home is a visit to the pub; favourite sporting activities: for men—walking, golf, snooker, and billiards, for women—walking, swimming, fitness classes, and yoga.
Material well-being (2005–06). Households possessing: automobile 74%, of which two cars 23%, three cars 5%; refrigerator/freezer 97%; washing machine 95%; central heating 94%; digital, cable, or satellite television receiver 65%; Internet connection 55%; dishwasher 35%.

National economy

Budget (2005–06). Revenue: £485,400,000,000 (income tax 26.9%; production and import taxes 24.9%; social security contributions 17.6%). Expenditures: £500,700,000,000 (social protection 34.2%; health 17.7%; education 13.9%; defense 6.1%; public order 6.0%).
Public debt (December 2007): U.S.$1,068,000,000,000.
Gross national income (GNI; 2007): U.S.$2,608,513,000,000 (U.S.$42,740 per capita); purchasing power parity GNI (U.S.$33,800 per capita).

Structure of gross domestic product and labour force

	2006		2005	
	in value £'000,000	% of total value	labour force[10]	% of labour force[10]
Agriculture, fishing	10,577	0.8	383,700	1.3
Mining	28,093	2.2	102,800	0.3
Manufacturing	152,255	11.7	3,723,000	12.6
Construction	65,921	5.1	2,201,700	7.5
Public utilities	31,532	2.4	176,300	0.6
Transp. and commun.	82,950	6.4	1,932,200	6.5
Trade, hotels, restaurants	175,383	13.5	5,507,700	18.7
Finance, real estate	395,147	30.4	4,396,000	14.9
Pub. admin., defense	58,776	4.5	1,988,400	6.7
Services	211,894	16.3	7,684,600	26.0
Other	87,097[11]	6.7[11]	1,420,800	4.8
TOTAL	1,299,622[3]	100.0	29,517,200	100.0[3]

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 14,450,000, wheat 13,362,000, sugar beets 6,500,000, potatoes 5,635,000, barley 5,149,000, rapeseed 2,108,000, chicken meat 1,300,000, carrots 859,300, cattle meat 850,000, pulses 740,000, sheep meat 330,000, mushrooms and truffles 72,000; livestock (number of live animals) 33,582,000 sheep, 9,987,570 cattle, 157,265,000 chickens; roundwood (2006) 8,405,000 cu m, of which fuelwood 4%; fisheries production (2006) 795,671 (from aquaculture 22%). Mining and quarrying (2006)[13]: sand and gravel 95,000,000; rock salt 2,000,000; china clay (kaolin) 1,900,000; slate 900,000[12]; potash 700,000. Manufacturing (value added in U.S.$'000,000; 2006): chemicals and chemical products 42,400; food and beverages 39,100; nonelectrical machinery and equipment 26,000; printing and publishing 24,800; fabricated metal products 23,900; motor vehicles/parts 19,400; rubber and plastic products 13,300; bricks, cement, and ceramics 11,800; radio, television, and communications equipment 11,800.

Financial aggregates

	2002	2003	2004	2005	2006	2007
Exchange rate (end of year)						
U.S. dollar per £	1.61	1.78	1.93	1.72	1 96	2.00
SDRs per £	1.19	1 20	1.24	1.20	1 30	1.27
International reserves (U.S.$)						
Total (excl. gold; '000,000,000)	37.55	35.35	39.94	38.47	40 70	48.96
SDRs ('000,000,000)	0.36	0.38	0.33	0.29	0.40	0.36
Reserve pos. in IMF ('000,000)	6.21	6.32	5.53	2.33	1 41	1.10
Foreign exchange	30.98	28 65	34.08	35.85	38.89	47 50
Gold ('000,000 fine troy oz)	10.09	10.07	10.04	9.99	9 97	9 98
% world reserves	1.1	1.1	1.1	1 1	1 1	1 2
Interest and prices						
Central bank discount (%)	..	..	..	..	..	..
Govt. bond yield (%) long term	4.92	4 58	4.93	4 46	4 37	5.04
Industrial share prices (1995 = 100)	..	..	..	..	..	..
Balance of payments (U.S.$'000,000,000,000)						
Balance of visible trade	−71.77	−79 45	−111.47	−125.07	−142.89	−179 26
Imports, f.o.b.	−351 64	−387.25	−461.13	−509.39	−590 47	−621 41
Exports, f.o.b.	279.87	307.80	349.66	384.32	447.58	442.15
Balance of invisibles	+47.16	+54 98	+76.29	+70.07	+49.27	+60 10
Balance of payments, current account	−24 61	−24.47	−35 18	−55.00	−93.62	−119 16

Manufacturing enterprises (2004)

	no. of employees	annual wages as a % of avg of all wages	annual value added (U.S $'000,000)
Food products	414,711	81 3	31,474
Fabricated metals	329,390	87 4	21,204
Paints, soaps, pharmaceuticals	162,921	133 7	21,011
Publishing	162,710	117 9	16,385
Motor vehicles, trailers, parts	202,398	112.7	16,141
General purpose machinery	173,197	103.6	12,644
Printing	156,611	94.5	12,007
Aircraft and spacecraft	100,477	139 6	11,734
Plastics	181,799	89.0	11,645
Medical, measuring, testing appliances	100,797	110.1	9,323
Bricks, cement, ceramics	92,879	93.6	8,052
Base chemicals	59,165	145.0	7,706
Beverages	51,069	131.8	7,270
Special purpose machinery	96,563	110.4	7,232
Furniture	117,267	78.9	6,311
Paper and paper products	81,171	104.8	5,983

Retail trade and service enterprises (2001)

	no. of enterprises	no. of employees	weekly wage as a % of all wages	annual turnover (£'000,000)
Food, beverages, and tobacco of which	27,074	993,000		85,534
meats	8,485	46,000		2,216
Household goods, of which	23,553	319,000		29,151
electronics, appliances	7,157	101,000		10,821
furniture	10,592	119,000		8,784
Clothing and footwear	17,869	446,000		25,963
Pharmaceuticals and cosmetics	6,915	110,000		9,543
Business services, of which	534,956	4,273,000		265,631
real estate	30,779	79,000		32,779
Transp. and commun.	81,154	1,621,000		181,669
Hotels, restaurants	118,988	1,792,000		49,902
Social services, of which	35,622	1,026		16,233
health	9,683	453,000		7,575

Energy production (consumption): electricity (kW-hr; 2007) 356,954,000,000 ([2005] 408,845,000,000); hard coal (metric tons; 2007) 17,031,000 ([2005] 61,800,000); crude petroleum (barrels; 2007) 580,000,000 ([2005] 607,000,000); petroleum products (metric tons; 2005) 81,644,000 (68,397,000); natural gas (cu m; 2006) 80,000,000,000 ([2005] 111,948,000,000).

Population economically active (2006): total 30,613,000; activity rate of total population 50.6% (participation rates: ages 16 and over, 60.1%; female 45.9%; unemployed [2007] 5.4%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	101.8	103.5	106.5	109.7	112.8	116.4	121.3
Monthly earnings index	104.5	108.2	111.9	116.7	121.5	126.5	131.5

Household income and expenditure. Average household size (2006) 2.4; average annual disposable income per household (2004–05) £25,360 (U.S.$46,447); sources of income (2005–06): wages and salaries 67.3%, social security benefits 12.7%, income from self-employment 8.2%, transfers 7.4%; expenditure (2007): transportation 13.4%, recreation and culture 12.5%, housing and energy 11.3%, food and nonalcoholic beverages 10.5%, restaurants and hotels 8.1%, household furnishings 6.7%, clothing and footwear 4.8%, education 1.5%, health 1.2%.

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 33,888; remittances (2007) 8,124; foreign direct investment (FDI; 2004–06 avg.) 129,733. Disbursements for (U.S.$'000,000): tourism (2006) 63,319; remittances (2007) 4,850; FDI (2004–06 avg.) 84,728.

Land use as % of total land area (2003): in temporary crops 23.4%, in permanent crops 0.2%, in pasture 46.5%; overall forest area (2005) 11.8%.

Foreign trade[14]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−78,777	−85,806	−119,132	−131,417	−161,989	−185,720
% of total	9 9%	12.2%	14 6%	14 6%	15.4%	17 6%

Imports (2006): U.S.$606,428,000,000 (machinery and apparatus 23.6%, of which industrial and power-generating machinery and equipment 7.0%, telecommunications equipment/televisions 6.9%, computers/office machines/parts 4.8%; road vehicles/parts 10.2%; chemicals and chemical products 9.6%; mineral fuels 8.9%, of which petroleum 7.3%; food 6.2%; base and fabricated metals 5.3%; apparel/clothing accessories 3.7%). *Major import sources:* Germany 12.1%; unspecified Europe 8.7%; U.S. 8.0%; France 6.6%; The Netherlands 6.2%; China 6.1%; Norway 4.4%; Belgium 4.3%; Italy 3.8%; Spain 3.2%.

Exports (2006): U.S.$444,439,000,000 (machinery and apparatus 34.7%, of which telecommunications equipment/parts 11.5%, industrial machinery 6.3%, power-generating machinery and equipment 5.7%, electrical machinery/electronic goods/parts 4.8%, office machines/computers/parts 4.7%; chemicals and chemical products 14.4%, of which medicine and pharmaceuticals 5.7%; mineral fuels 9.7%, of which petroleum 8.7%; road vehicles/parts 8.0%; base and fabricated metals 6.0%; food 2.8%; works of art/antiques 1.2%; whiskey 1.0%). *Major export destinations:* U.S. 13.2%; France 11.9%; Germany 11.1%; Ireland 7.1%; The Netherlands 6.8%; Belgium 5.4%; Spain 5.1%; Italy 3.9%; Sweden 2.1%; Switzerland 1.8%.

Transport and communications

Transport. Railroads (2005–06): length (2005) 17,156 km; passenger-km[8] 43,211,000,000; metric ton-km cargo[8] 22,000,000,000. Roads (2005)[8]: total length 241,097 mi, 388,008 km (paved 100%). Vehicles (2004): passenger cars 27,765,100, trucks and buses 3,522,424. Air transport (2006): passenger-km 231,515,000,000; metric ton-km cargo 6,215,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	56,576	950	PCs	2005	45,659	765
Telephones				Dailies	2004	17,485[15]	292[15]
Cellular	2007	71,993[16]	1,179[16]	Internet users	2007	40,200	658
Landline	2007	33,682	552	Broadband	2007	15,529[16]	254[16]

Education and health

Literacy (2006): total population literate, about 99%.

Education (2005–06)[17]

	schools	teachers	students	student/ teacher ratio
Primary (age 5–10)	22,156	226,600	4,831,900	21 3
Secondary (age 11–19)	4,206	248,500	3,987,100	16.0
Voc., teacher tr.	481	157,751[18]	5,301,751[18]	33.6[18]
Higher	642	120,800[18]	2,374,900[18]	19 7[18]

Health (2007): physicians 143,220[19] (1 per 393[19] persons); hospital beds (2005) 226,300 (1 per 266 persons); infant mortality rate per 1,000 live births (2006) 4.5; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 180,527 (army 55.2%, navy 21.6%, air force 23.2%); U.K. troops deployed abroad (November 2007) 42,200; U.S. troops in the U.K. (November 2007) 10,100. *Military expenditure as percentage of GDP* (2005): 2.7%; per capita expenditure U.S.$1,000.

[1]As of December 2008 including 92 hereditary peers, 614 life peers, and 26 archbishops and bishops. [2]Church of England "established" (protected by the state but not "official"); Church of Scotland "national" (exclusive jurisdiction in spiritual matters per Church of Scotland Act 1921); no established church in Northern Ireland or Wales. [3]Detail does not add to total given because of rounding. [4]Formerly Western Isles. [5]Only unitary district with county status. [6]Total area as of 2001 census. [7]West Yorkshire urban agglomeration. [8]Great Britain (England, Scotland, and Wales) only. [9]England and Wales only. [10]March–May. [11]VAT and other taxes less subsidies and less imputed bank service charges. [12]Includes fill. [13]Gold extraction began in Northern Ireland in January 2007. [14]Imports c.i.f.; exports f.o.b. [15]Circulation of daily newspapers. [16]Subscribers. [17]Public sector only. [18]2002–03. [19]England and Scotland only.

Internet resource for further information:

- **Office for National Statistics http://www.statistics.gov.uk**

United States

Official name: United States of America.
Form of government: federal republic with two legislative houses (Senate [100]; House of Representatives [435[1]]).
Head of state and government: President.
Capital: Washington, D.C.
Official language: none.
Official religion: none.
Monetary unit: dollar (U.S.$); valuation (Sept. 8, 2008) 1 U.S.$ = €0.70; 1 U.S.$ = £0.57.

Area and population

States	Capitals	area sq mi	area sq km	population 2007 estimate
Alabama	Montgomery	51,700	133,902	4,627,851
Alaska	Juneau	589,194	1,526,005	683,478
Arizona	Phoenix	113,999	295,256	6,338,755
Arkansas	Little Rock	53,178	137,730	2,834,797
California	Sacramento	158,633	410,858	36,553,215
Colorado	Denver	104,094	269,602	4,861,515
Connecticut	Hartford	5,006	12,965	3,502,309
Delaware	Dover	2,026	5,247	864,764
Florida	Tallahassee	58,599	151,771	18,251,243
Georgia	Atlanta	58,922	152,607	9,544,750
Hawaii	Honolulu	6,461	16,734	1,283,388
Idaho	Boise	83,570	218,445	1,499,402
Illinois	Springfield	57,915	149,999	12,852,548
Indiana	Indianapolis	36,418	94,322	6,345,289
Iowa	Des Moines	56,271	145,741	2,988,046
Kansas	Topeka	82,277	213,096	2,775,997
Kentucky	Frankfort	40,409	104,659	4,241,474
Louisiana	Baton Rouge	47,716	123,584	4,293,204
Maine	Augusta	33,126	85,796	1,317,207
Maryland	Annapolis	10,454	27,076	5,618,344
Massachusetts	Boston	8,263	21,401	6,449,755
Michigan	Lansing	96,716	250,493	10,071,822
Minnesota	St. Paul	86,939	225,171	5,197,621
Mississippi	Jackson	47,692	123,522	2,918,785
Missouri	Jefferson City	89,704	180,533	5,878,415
Montana	Helena	147,042	380,837	957,861
Nebraska	Lincoln	77,353	200,343	1,774,571
Nevada	Carson City	110,561	286,352	2,565,382
New Hampshire	Concord	9,282	24,040	1,315,828
New Jersey	Trenton	7,813	20,236	8,685,920
New Mexico	Santa Fe	121,590	314,917	1,969,915
New York	Albany	53,097	137,521	19,297,729
North Carolina	Raleigh	52,671	136,417	9,061,032
North Dakota	Bismarck	70,700	183,112	639,715
Ohio	Columbus	44,825	116,096	11,468,917
Oklahoma	Oklahoma City	69,898	181,035	3,617,316
Oregon	Salem	97,047	251,351	3,747,455
Pennsylvania	Harrisburg	46,056	119,284	12,432,792
Rhode Island	Providence	1,223	3,168	1,057,832
South Carolina	Columbia	31,118	80,595	4,407,709
South Dakota	Pierre	77,117	199,732	796,214
Tennessee	Nashville	42,143	109,150	6,156,719
Texas	Austin	266,853	691,146	23,904,380
Utah	Salt Lake City	84,899	219,887	2,645,330
Vermont	Montpelier	9,615	24,903	621,254
Virginia	Richmond	40,600	105,154	7,712,091
Washington	Olympia	68,097	176,370	6,468,424
West Virginia	Charleston	24,230	62,755	1,812,035
Wisconsin	Madison	65,498	169,639	5,601,640
Wyoming	Cheyenne	97,813	253,335	522,830
District				
District of Columbia	—	68	176	588,292
TOTAL		3,676,488[2, 3]	9,522,055[2, 3]	301,621,157

Components of population change (2000–05)[6]

States	net change in population	percentage change	births	deaths	net domestic/ international migration
Alabama	110,457	2.5	319,544	242,126	36,457
Alaska	36,730	5.9	53,132	16,542	1,181
Arizona	808,660	15.8	462,739	221,007	576,238
Arkansas	105,756	4.0	198,800	146,586	57,811
California	2,260,494	6.7	2,781,539	1,224,427	751,419
Colorado	363,162	8.4	353,091	147,770	159,957
Connecticut	104,695	3.1	222,222	154,795	41,718
Delaware	59,924	7.6	58,699	36,721	39,118
Florida	1,807,040	11.3	1,115,565	869,507	1,585,704
Georgia	885,760	10.8	718,764	342,659	425,510
Hawaii	63,657	5.3	96,028	47,917	16,956
Idaho	135,140	10.4	111,131	52,247	75,795
Illinois	343,724	2.8	959,470	553,045	63,011
Indiana	191,456	3.1	451,681	292,193	38,656
Iowa	39,952	1.4	197,163	143,457	–11,754
Kansas	55,863	2.1	204,663	128,525	–19,541
Kentucky	131,120	3.2	287,222	210,066	59,604
Louisiana	54,670	1.2	350,818	220,929	–69,373
Maine	46,582	3.7	71,276	64,863	41,808
Maryland	303,882	5.7	395,775	230,068	118,724
Massachusetts	49,638	0.8	426,232	294,903	–73,741
Michigan	182,380	1.8	691,897	456,137	–42,183
Minnesota	213,307	4.3	358,012	196,760	54,032
Mississippi	76,432	2.7	228,849	148,116	75
Missouri	203,627	3.6	401,148	285,745	69,669
Montana	33,475	3.7	58,001	44,327	21,074
Nebraska	47,522	2.8	132,394	80,290	–4,007
Nevada	416,550	20.8	170,451	88,790	337,043
New Hampshire	74,154	6.0	75,060	51,188	51,968
New Jersey	303,578	3.6	604,110	383,890	95,293
New Mexico	109,338	6.0	143,617	69,220	37,501
New York	277,809	1.5	1,345,482	817,606	–334,093
North Carolina	636,751	7.9	627,309	379,212	390,672
North Dakota	–5,527	–0.9	40,890	30,607	–14,881
Ohio	110,897	1.0	789,312	571,435	–102,008
Oklahoma	97,232	2.8	264,324	183,571	21,128
Oregon	219,620	6.4	236,557	161,361	150,084
Pennsylvania	148,562	1.2	761,887	674,287	74,458
Rhode Island	27,870	2.7	66,973	51,753	14,001
South Carolina	243,267	6.1	295,425	197,710	151,485
South Dakota	21,093	2.8	56,247	37,048	3,222
Tennessee	273,697	4.8	414,305	297,102	159,680
Texas	2,008,176	9.6	1,948,398	793,216	881,883
Utah	236,387	10.6	254,433	68,022	16,173
Vermont	14,223	2.3	33,606	26,458	7,889
Virginia	488,435	6.9	531,476	300,421	243,498
Washington	393,619	6.7	418,055	237,895	215,216
West Virginia	8,506	0.5	108,292	111,588	14,209
Wisconsin	172,486	3.2	361,534	242,187	60,701
Wyoming	15,512	3.1	33,704	21,539	4,035
District					
District of Columbia	–21,538	–3.8	42,502	30,109	–53,550
TOTAL/RATE	14,985,802	5.3	21,329,804	12,667,943	...

Principal metropolitan statistical areas/cities (2006)

Metropolitan statistical area	population	Largest city proper	population
New York-Northern New Jersey-Long Island	18,819,000	New York	8,214,000
Los Angeles-Long Beach-Santa Ana	12,950,000	Los Angeles	3,849,000
Chicago-Naperville-Joliet	9,506,000	Chicago	2,833,000
Dallas-Fort Worth-Arlington	6,004,000	Dallas	1,233,000
Philadelphia-Camden-Wilmington	5,827,000	Philadelphia	1,448,000
Houston-Sugar Land-Baytown	5,540,000	Houston	2,144,000
Miami-Fort Lauderdale-Miami Beach	5,464,000	Miami	404,000
Washington-Arlington-Alexandria	5,290,000	Washington	582,000
Atlanta-Sandy Springs-Marietta	5,138,000	Atlanta	486,000
Detroit-Warren-Livonia	4,469,000	Detroit	871,000
Boston-Cambridge-Quincy	4,455,000	Boston	591,000
San Francisco-Oakland-Fremont	4,180,000	San Francisco	744,000
Phoenix-Mesa-Scottsdale	4,039,000	Phoenix	1,513,000
Riverside-San Bernardino-Ontario	4,026,000	Riverside	294,000
Seattle-Tacoma-Bellevue	3,263,000	Seattle	582,000
Minneapolis-St. Paul-Bloomington	3,175,000	Minneapolis	373,000
San Diego-Carlsbad-San Marcos	2,941,000	San Diego	1,257,000
St. Louis	2,796,000	St. Louis	347,000
Tampa-St. Petersburg-Clearwater	2,698,000	Tampa	333,000
Baltimore-Towson	2,658,000	Baltimore	631,000
Denver-Aurora	2,409,000	Denver	567,000
Pittsburgh	2,371,000	Pittsburgh	313,000
Portland-Vancouver-Beaverton	2,138,000	Portland	537,000
Cleveland-Elyria-Mentor	2,114,000	Cleveland	444,000
Cincinnati-Middletown	2,104,000	Cincinnati	332,000
Sacramento-Arden-Arcade-Roseville	2,067,000	Sacramento	454,000
Orlando-Kissimmee	1,985,000	Orlando	220,000
Kansas City	1,967,000	Kansas City, Mo.	447,000
San Antonio	1,942,000	San Antonio	1,297,000
San Jose-Sunnyvale-Santa Clara	1,787,000	San Jose	930,000
Las Vegas-Paradise	1,778,000	Las Vegas	553,000
Columbus, Ohio	1,726,000	Columbus	733,000
Indianapolis-Carmel	1,666,000	Indianapolis	786,000
Virginia Beach-Norfolk-Newport News	1,649,000	Virginia Beach	436,000
Providence-New Bedford-Fall River	1,613,000	Providence	175,000
Charlotte-Gastonia-Concord	1,583,000	Charlotte	630,000
Austin-Round Rock	1,514,000	Austin	710,000
Milwaukee-Waukesha-West Allis	1,510,000	Milwaukee	573,000
Nashville-Davidson-Murfreesboro	1,455,000	Nashville	552,000
Jacksonville	1,278,000	Jacksonville	795,000
Memphis	1,275,000	Memphis	671,000
Louisville-Jefferson County	1,222,000	Louisville	554,000
Richmond	1,194,000	Richmond	193,000
Harrford-West Harrford-East Harrford	1,189,000	Harrford	125,000
Oklahoma City	1,172,000	Oklahoma City	538,000
Buffalo-Niagara Falls	1,138,000	Buffalo	276,000
Birmingham-Hoover	1,100,000	Birmingham	229,000
Salt Lake City	1,068,000	Salt Lake City	179,000
Rochester	1,035,000	Rochester	208,000
New Orleans-Metairie-Kenner	1,025,000	New Orleans	223,000

Demography

Population (2008): 305,146,000.
Density (2008)[4]: persons per sq mi 86.3, persons per sq km 33.3.
Urban-rural (2005): urban 80.8%; rural 19.2%.
Sex distribution (2005): male 49.26%; female 50.74%.
Age breakdown (2005): under 15, 20.5%; 15–29, 20.9%; 30–44, 21.6%; 45–59, 20.2%; 60–74, 10.7%; 75–84, 4.4%; 85 and over, 1.7%.
Population projection: (2010) 310,233,000; (2020) 341,387,000.
Doubling time: not applicable; doubling time exceeds 100 years.
Population by race and Hispanic[5] origin (2006): non-Hispanic white 66.4%; Hispanic 14.8%; non-Hispanic black 12.8%; Asian and Pacific Islander 4.6%; American Indian and Eskimo 1.0%; other 0.4%.
Religious affiliation (2005): Christian 83.3%, of which independent Christian 23.2%, Roman Catholic 19.6%, Protestant (including Anglican) 18.9%, unaffiliated Christian 16.5%, Orthodox 1.8%, other Christian (primarily Mormon and Jehovah's Witness) 3.3%; Jewish 1.9%; Muslim 1.6%; Buddhist 0.9%; New Religionists 0.5%; Hindu 0.4%; traditional beliefs 0.4%; Bahā'ī 0.3%; Sikh 0.1%; nonreligious 9.8%; atheist 0.5%; other 0.3%.
Mobility (2005). Reported gross % of population living in the same residence as in 2004: *c.* 86%; different residence, same county *c.* 8%; different county, same state *c.* 3%; different state *c.* 3%; moved from abroad *c.* 1%.
Households (2007). Total households 116,783,000 (married-couple families 58,370,000 [50.0%]). Average household size 2.6; 1 person 27.5%, 2 persons 33.2%, 3 persons 15.9%, 4 persons 13.6%, 5 or more persons 9.8%. Family households: 77,873,000 (66.7%); nonfamily 38,910,000 (33.3%), of which 1-person 82.7%.
Place of birth (2005): native-born 255,999,000 (87.9%); foreign-born 35,157,000 (12.1%), of which (2004) Mexico 10,011,000, the Philippines 1,222,000, China and Hong Kong 1,067,000, India 1,007,000, Cuba 952,000, Vietnam 863,000, El Salvador 765,000, South Korea 701,000.

Immigration (2006–07): permanent immigrants admitted 1,052,415, from Mexico 14.1%, China 7.3%, the Philippines 6.9%, India 6.2%, Vietnam 2.7%, Dominican Republic 2.7%, South Korea 2.1%, El Salvador 2.0%, Jamaica 1.8%, Guatemala 1.7%, Peru 1.7%, Canada 1.5%, United Kingdom 1.4%, other 39.0%. Refugees (2005) 380,000. Asylum seekers (end of 2000) 386,330.

Vital statistics

Birth rate per 1,000 population (2007): 14.3 (world avg. 20.3); within marriage (2006) 64.2%; outside of marriage (2006) 35.8%.
Death rate per 1,000 population (2007): 8.0 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 6.3 (world avg. 11.7).
Marriage rate per 1,000 population (2007): 7.3; median age at first marriage (2005): men 27.1 years, women 25.8 years.
Divorce rate per 1,000 population (2007): 3.6.
Total fertility rate (avg. births per childbearing woman; 2007): 2.09.
Life expectancy at birth (2004): male 75.2 years, of which white male 75.7 years, black male 69.8 years; female 80.4 years, of which white female 80.8 years, black female 76.5 years.

Vital statistics (2006)

States	live births	birth rate per 1,000 population	death rate per 1,000 population	infant mortality rate per 1,000 live births[7]	abortion rate per 1,000 live births[8]	life expectancy[9]
Alabama	63,235	13.7	10.2	9.1	208	74.6
Alaska	10,991	16.4	5.0	5.2	—	76.7
Arizona	102,475	16.6	7.5	6.9	122	77.5
Arkansas	40,973	14.6	9.9	7.5	142	75.1
California	562,431	15.4	6.5	5.1	—	78.3
Colorado	70,750	14.9	6.2	6.5	113	78.4
Connecticut	41,807	11.9	8.4	5.4	321	78.4
Delaware	11,988	14.0	8.4	7.6	405	76.6
Florida	236,882	13.1	9.4	7.2	428	77.5
Georgia	148,619	15.9	7.2	7.8	256	75.3
Hawaii	18,982	14.8	7.4	6.9	224	79.8
Idaho	24,184	16.5	7.2	6.7	40	78.0
Illinois	180,583	14.1	8.0	7.1	260	76.7
Indiana	88,674	14.0	8.8	7.7	129	76.2
Iowa	40,610	13.6	9.2	5.2	166	78.5
Kansas	40,964	14.8	8.9	6.9	299	77.5
Kentucky	58,291	13.9	9.5	6.5	65	75.3
Louisiana	63,399	14.8	9.3	9.7	161	74.4
Maine	14,151	10.7	9.3	6.8	171	77.6
Maryland	77,478	13.8	7.8	7.9	185	76.3
Massachusetts	77,769	12.1	8.3	5.1	313	78.4
Michigan	127,476	12.6	8.5	7.9	225	76.5
Minnesota	73,559	14.2	7.2	5.2	209	79.1
Mississippi	46,069	15.8	9.8	11.0	87	73.7
Missouri	81,388	13.9	9.4	7.4	109	76.2
Montana	12,506	13.2	9.0	6.3	203	77.3
Nebraska	26,733	15.1	8.4	5.7	149	78.3
Nevada	40,085	16.1	7.4	5.8	306	75.9
New Hampshire	14,380	10.9	7.6	5.2	—	78.5
New Jersey	115,006	13.2	8.1	5.1	286	77.5
New Mexico	29,937	15.3	7.8	6.2	183	77.3
New York	250,091	13.0	7.7	6.0	509	77.9
North Carolina	127,841	14.4	8.4	8.6	249	75.8
North Dakota	8,622	13.6	9.2	6.3	157	78.7
Ohio	150,590	13.1	9.3	8.2	241	76.4
Oklahoma	54,018	15.1	9.9	8.1	129	75.3
Oregon	48,717	13.2	8.5	5.8	291	77.9
Pennsylvania	149,082	12.0	10.1	7.2	249	76.8
Rhode Island	12,379	11.6	9.1	5.9	430	78.2
South Carolina	62,271	14.4	9.0	8.9	122	74.9
South Dakota	11,917	15.2	9.1	6.5	77	78.0
Tennessee	84,345	14.0	9.4	9.0	230	75.0
Texas	399,612	17.0	6.7	6.4	215	76.7
Utah	53,499	21.0	5.4	4.4	72	78.7
Vermont	6,509	10.4	8.1	6.1	256	78.2
Virginia	107,817	14.1	7.5	7.2	251	76.9
Washington	86,848	13.6	7.2	5.0	318	78.2
West Virginia	20,928	11.5	11.4	8.2	99	75.0
Wisconsin	72,335	13.0	8.3	6.6	153	78.1
Wyoming	7,670	14.9	8.4	5.8	.	77.1
District						
District of Columbia	8,529	14.7	9.2	10.2	735	72.6
TOTAL/RATE	4,265,996[3]	14.2	8.1	6.4	246	77.0

Major causes of death per 100,000 population (2006): cardiovascular diseases 275.7, of which ischemic heart disease 141.9, cerebrovascular diseases 45.8, atherosclerosis 2.9; malignant neoplasms (cancers) 187.1; diseases of the respiratory system 75.7, of which pneumonia 18.5; accidents and adverse effects 39.3, of which motor-vehicle accidents 14.9; diabetes mellitus 24.2; kidney disease 14.5; suicide 10.7; chronic liver disease and cirrhosis 9.1; AIDS (2004) 4.4.
Adult population (ages 15–49) *living with HIV* (2007): 0.6%[10] (world avg. 0.8%).
Morbidity rates of infectious diseases per 100,000 population (2004): chlamydia 319.6; gonorrhea 113.5; chicken pox 18.4; AIDS 15.2; salmonellosis 14.5; syphilis 11.5; pertussis 8.9; lyme disease 6.8; shigellosis 5.0; hepatitis B (serum) 2.1; hepatitis A (infectious) 1.9.

Leading cause of death by age group (2005)

	number of deaths			total death rate per 100,000 population	percentage of all deaths
	total[3]	male	female		
All ages[11]	2,448,017	1,207,675	1,240,342	825.9	100.0[3]
1 to 4 years	4,756	2,765	1,991	29.4	0.19
Accidents	1,664	1,027	637	10.3	0.07
Congenital anomalies	522	264	258	3.2	0.02
Malignant neoplasms	377	217	160	2.3	0.02
Homicide	375	214	161	2.3	0.02
Diseases of the heart	151	81	70	0.9	0.01

Leading cause of death by age group (2005) (continued)

	number of deaths			total death rate per 100,000 population	percentage of all deaths
	total[3]	male	female		
5 to 14 years	6,602	3,853	2,749	16.3	0.27
Accidents	2,415	1,493	922	6.0	0.10
Malignant neoplasms	1,000	557	443	2.5	0.04
Congenital anomalies	396	195	201	1.0	0.02
Homicide	341	204	137	0.8	0.01
Suicide	272	204	68	0.7	0.01
15 to 24 years	34,234	25,509	8,725	81.4	1.40
Accidents	15,753	11,827	3,926	37.4	0.64
Homicide	5,466	4,765	701	13.0	0.22
Suicide	4,212	3,498	714	10.0	0.17
Malignant neoplasms	1,717	1,035	682	4.1	0.07
Diseases of the heart	1,119	770	349	2.7	0.05
25 to 44 years	126,710	82,592	44,118	150.8	5.18
Accidents	30,916	22,691	8,225	36.8	1.26
Malignant neoplasms	18,167	8,143	10,024	21.6	0.74
Diseases of the heart	15,937	11,137	4,800	19.0	0.65
Suicide	11,540	9,129	2,411	13.7	0.47
Homicide	7,861	6,325	1,536	9.4	0.32
45 to 64 years	458,831	279,901	178,930	629.9	18.74
Malignant neoplasms	149,645	79,442	70,203	205.4	6.11
Diseases of the heart	103,311	72,381	30,930	141.8	4.22
Accidents	29,192	20,509	8,683	40.1	1.19
Diabetes mellitus	16,992	10,037	6,955	23.3	0.69
Lower respiratory diseases	16,724	8,623	8,101	23.0	0.68
65 and over	1,788,189	796,838	991,351	4,860.5	73.05
Diseases of the heart	530,926	238,119	292,807	1,443.1	21.69
Malignant neoplasms	388,322	200,978	187,344	1,055.5	15.86
Cerebrovascular diseases	123,881	45,788	78,093	336.7	5.06
Lower respiratory diseases	112,716	53,043	59,673	306.4	4.60
Alzheimer's disease	70,858	20,236	50,622	192.6	2.89

Social indicators

Educational attainment (2006). Percentage of population age 25 and over having: unknown/primary and incomplete secondary 14.6%; secondary 31.7%; some postsecondary 25.7%; 4-year higher degree 18.3%; advanced degree 9.7%. Number of earned degrees (2005): associate's degree 697,000; bachelor's degree 1,439,000; master's degree 575,000; doctor's degree 53,000; first-professional degrees (in fields such as medicine, theology, and law) 87,000.

Distribution of income (2007)

percentage of disposable family income by quintile				
1	2	3	4	5 (highest)
3.4	8.7	14.8	23.4	49.7

Quality of working life (2005). Average workweek (2007): 41.3 hours. Annual death rate per 100,000 workers: 3.5; leading causes of occupational deaths: transportation incidents 43%, assaults/violent acts 14%, falls 13%, struck by object 11%. Annual occupational injury rate per 100,000 workers: 4.6. Average duration of journey to work (2006): 25.0 minutes (private automobile 86.7%, of which drive alone 76.0%, carpool 10.7%; take public transportation 4.8%; walk 2.5%; work at home 4.0%; other 2.0%). Rate per 1,000 employed workers of discouraged workers (unemployed no longer seeking work): 3.1.
Access to services (2005). Proportion of occupied dwellings having access to: electricity 100.0%; safe public water supply 100.0%; public sewage collection 79.8%; septic tanks 20.2%.
Social participation (2006). Eligible voters participating in last presidential election (2008): 61.6%. Population age 16 and over volunteering for an organization 26.7%; median annual hours 52. Trade-union membership in total workforce 12.0%.
Social deviance (2007). Offense rate per 100,000 population for: murder 5.6; rape 30.0; robbery 147.6; aggravated assault 283.8; motor-vehicle theft 363.3; burglary and housebreaking 722.5; larceny-theft 2,177.8; drug-abuse violation (2005) 560.1; drunkenness (2003) 149.1. Estimated drug and substance users (population age 12 and over; 2005)[12]: cigarettes 24.9%; binge alcohol[13] 22.7%; marijuana and hashish 6.0%. Rate per 100,000 population of suicide (2005): 10.7.

Crime rates per 100,000 population in metropolitan areas (2007)

		violent crime			
	total	murder and nonnegligent manslaughter	forcible rape	robbery	aggravated assault
Chicago		15.6		546	617
Columbus	852	10.7	89.8	523	228
Dallas	1,069	16.1	41.2	583	429
Detroit	2,289	45.8	39.6	764	1,440
Houston	1,132	16.2	32.0	529	555
Indianapolis	1,234	14.3	63.3	507	649
Jacksonville	1,022	15.4	31.2	391	584
Los Angeles	718	10.2	25.9	348	334
New York	614	6.0	10.6	265	332
Philadelphia	1,475	27.3	66.6	715	667
Phoenix	724	13.8	33.0	321	356
San Antonio	556	9.3	48.2	186	313
San Diego	502	4.7	23.5	166	308
San Francisco	874	13.6	17.0	514	330
San Jose	402	3.5	23.2	114.3	261

Crime rates per 100,000 population in metropolitan areas (2007)
(continued)

	property crime			
	total	burglary	larceny-theft	motor-vehicle theft
Chicago	4,472	876	2,937	659
Columbus	6,996	1,952	4,198	846
Dallas	6,776	1,814	3,849	1,113
Detroit	6,772	2,064	2,430	2,278
Houston	5,684	1,339	3,449	897
Indianapolis	6,308	1,679	3,666	963
Jacksonville	5,696	1,394	3,698	604
Los Angeles	2,621	507	1,506	608
New York	1,819	254	1,403	161
Philadelphia	4,305	803	2,728	774
Phoenix	5,826	1,246	3,227	1,353
San Antonio	6,390	1,272	4,607	511
San Diego	3,502	609	1,845	1,049
San Francisco	4,696	692	3,199	804
San Jose	2,575	476	1,412	686

Leisure (2006). Favourite leisure activities (percentage of total population age 18 and over that undertook activity at least once in the previous year): dining out 48.6%, entertaining friends or relatives at home 40.2%, reading books 38.7%, barbecuing 33.9%, going to the beach 22.9%.

Material well-being (2005). Occupied dwellings with householder possessing: automobiles, trucks, or vans 91.5%, 1 car with or without trucks or vans 47.5%, 2 cars 23.9%, only trucks and vans 12.7%, no cars, trucks, or vans 8.5%, 3 or more cars 7.4%; telephone 97.1%; television receiver 98.2%; video 90.2%; washing machine 82.0%; clothes dryer 79.1%; air conditioner 89.5%; cable television 67.5%; personal computers 61.8%[14]; Internet connections 54.6%[14]; broadband Internet 19.9%[14].

Households with computers and Internet access (2003)

States	computers (%)	Internet (%)
Alabama	53.9	45.7
Alaska	72.7	67.6
Arizona	64.3	55.2
Arkansas	50.0	42.4
California	66.3	59.6
Colorado	70.0	63.0
Connecticut	69.2	62.9
Delaware	64.3	56.8
Florida	61.0	55.6
Georgia	60.6	53.5
Hawaii	63.3	55.0
Idaho	69.2	56.4
Illinois	60.0	51.1
Indiana	59.6	51.0
Iowa	64.7	57.1
Kansas	63.8	54.3
Kentucky	58.1	49.6
Louisiana	52.3	44.1
Maine	67.8	57.9
Maryland	66.0	59.2
Massachusetts	64.1	58.1
Michigan	59.9	52.0
Minnesota	67.9	61.6
Mississippi	48.3	38.9
Missouri	60.7	53.0
Montana	59.5	50.4
Nebraska	66.1	55.4
Nevada	61.3	55.2
New Hampshire	71.5	65.2
New Jersey	65.5	60.5
New Mexico	53.9	44.5
New York	60.0	53.3
North Carolina	57.7	51.1
North Dakota	61.2	53.2
Ohio	58.8	52.5
Oklahoma	55.4	48.4
Oregon	67.0	61.0
Pennsylvania	60.2	54.7
Rhode Island	62.3	55.7
South Carolina	54.9	45.6
South Dakota	62.1	53.6
Tennessee	56.7	48.9
Texas	59.0	51.8
Utah	74.1	62.6
Vermont	65.5	58.1
Virginia	66.8	60.3
Washington	71.4	62.3
West Virginia	55.0	47.6
Wisconsin	63.8	57.4
Wyoming	65.4	57.7
District		
District of Columbia	59.5	53.2
U.S. RATE	61.8	54.6

Recreational expenditures (2003): U.S.$660,700,000,000 (television and radio receivers, computers, and video equipment 18.4%; golfing, bowling, and other participatory activities 13.5%; sports supplies 10.3%; nondurable toys and sports equipment 9.1%; books and maps 5.8%; other 42.9%).

National economy

Budget (2007). Revenue: U.S.$2,415,900,000,000 (individual income tax 45.4%, social-insurance taxes and contributions 36.6%, corporation income tax 10.8%, excise taxes 3.1%, other 4.1%). Expenditures: U.S.$2,700,700,000,000 (social security and medicare 36.3%; defense 17.3%; health 10.2%; interest on debt 9.0%).

Total outstanding national debt (November 2008): U.S.$10,681,135,920,000, of which debt held by the public U.S.$6,434,879,220,000, intragovernment holdings U.S.$4,246,256,700,000.

Gross national income (GNI; 2007): U.S.$13,886,472,000,000 (U.S.$46,040 per capita); purchasing power parity GNI (U.S.$45,850 per capita).

Structure of gross domestic product and labour force

	2006			
	in value U.S.$'000,000,000	% of total value	labour force[15]	% of labour force[15]
Agriculture, forestry, fishing	122.4	0.9	2,206,000	1.5
Mining and quarrying	256.0	1.9	687,000	0.5
Manufacturing	1,601.2	12.1	16,377,000	10.8
Construction	647.9	4.9	11,749,000	7.8
Public utilities	262.6	2.0	1,186,000	0.8
Transp. and commun.	942.9	7.1	6,269,000	4.1
Trade, hotels, restaurants	1,651.9	12.5	30,802,000	20.3
Finance, real estate	2,758.2	20.8	25,359,000	16.7
Public administration, defense	1,636.2	12.4	6,524,000	4.3
Services	3,367.3	25.4	43,270,000	28.6
Other	—	—	7,001,000[16]	4.6[16]
TOTAL	13,246.6	100.0	151,428,000[3]	100.0

Gross domestic product
(in U.S.$'000,000,000)

	2002	2003	2004	2005	2006
Gross domestic product	10,469.6	10,971.2	11,734.3	12,487.1	13,247.0
By type of expenditure					
Personal consumption expenditures	7,350.7	7,709.9	8,214.3	8,746.0	9,269.0
Durable goods	923.9	950.1	987.8	1,026.5	1,070.0
Nondurable goods	2,079.6	2,189.0	2,368.3	2,564.4	2,715.0
Services	4,347.2	4,570.8	4,858.2	5,154.9	5,484.0
Gross private domestic investment	1,582.1	1,670.4	1,928.1	2,105.0	2,213.0
Fixed investment	1,570.2	1,654.9	1,872.6	2,086.1	2,163.0
Changes in business inventories	11.9	15.4	55.4	18.9	50.0
Net exports of goods and services	–424.4	–500.9	–624.0	–726.5	–763.0
Exports	1,005.9	1,045.6	1,173.8	1,301.2	1,466.0
Imports	1,430.3	1,546.5	1,797.8	2,027.7	2,229.0
Government purchases of goods and services	1,961.1	2,091.9	2,215.9	2,362.9	2,528.0
Federal	679.7	754.8	827.6	877.7	927.0
State and local	1,281.5	1,337.1	1,388.3	1,485.2	1,601.0
By major type of product					
Goods output	3,442.4	3,536.7	3,783.0	3,967.3	4,143.0
Durable goods	1,575.0	1,599.1	1,705.7	1,800.0	1,834.0
Nondurable goods	1,867.4	1,937.6	2,077.4	2,167.3	2,309.0
Services	6,031.4	6,366.1	6,755.4	7,186.1	7,662.0
Structures	995.8	1,068.4	1,195.8	1,333.7	1,442.0
National income (incl. capital consumption adjustment)	9,229.3	9,660.9	10,275.9	10,903.9	...
By type of income					
Compensation of employees	6,091.2	6,321.1	6,687.6	7,125.3	...
Proprietors' income	768.4	810.2	889.6	938.7	...
Rental income of persons	152.9	131.7	134.2	72.9	...
Corporate profits	874.6	1,021.1	1,231.2	1,372.8	...
Net interest	532.9	543.0	523.9	558.7	...
By industry division (incl. capital consumption adjustment)					
Agriculture, forestry, fishing	97	114	142	119	122
Mining and construction	584	643	722	808	904
Manufacturing	1,347	1,369	1,420	1,497	1,601
Durable	772	786	824	868	916
Nondurable	575	584	596	628	686
Transportation	304	322	333	362	364
Communications	470	492	539	578	579
Public utilities	211	223	235	239	263
Wholesale and retail trade	1,369	1,416	1,485	1,562	2,002
Finance, insurance, real estate	2,148	2,250	2,424	2,575	2,998
Services	2,371	2,492.0	2,666	2,446	2,779
Government and government enterprise	1,333	1,415	1,483	1,552	1,636

Components of gross domestic product (2007)

States	gross domestic product by state (U.S.$'000,000,000)	personal income (U.S.$'000,000,000)	disposable personal income (U.S.$'000,000,000)	per capita disposable personal income (U.S.$)
Alabama	165.8	149.9	134.0	28,960
Alaska	44.5	27.3	24.6	36,031
Arizona	247.0	208.5	184.2	29,063
Arkansas	95.4	85.3	76.7	27,041
California	1,813.0	1,519.9	1,303.7	35,666
Colorado	236.3	199.4	172.8	35,545
Connecticut	216.3	192.6	158.4	45,217
Delaware	60.1	34.6	30.2	34,917
Florida	734.5	699.3	617.5	33,831
Georgia	396.5	319.0	279.5	29,288
Hawaii	61.5	50.1	44.1	34,365
Idaho	51.1	47.5	41.9	27,948
Illinois	609.6	525.9	458.8	35,697
Indiana	246.4	210.4	186.5	29,394
Iowa	129.0	104.0	92.7	31,020
Kansas	117.3	101.3	89.0	32,067
Kentucky	154.2	130.6	116.0	27,357
Louisiana	216.1	153.6	137.7	32,074
Maine	48.1	44.7	39.6	30,097
Maryland	268.7	262.1	223.3	39,750
Massachusetts	351.5	317.0	267.6	41,491
Michigan	382.0	345.9	308.3	30,611
Minnesota	255.0	212.9	184.3	35,454
Mississippi	88.5	83.3	75.9	26,008
Missouri	229.5	199.8	176.6	30,042
Montana	34.3	31.7	28.2	29,433
Nebraska	80.1	64.2	56.9	32,066
Nevada	127.2	101.7	89.2	34,753
New Hampshire	57.3	54.5	48.4	36,775
New Jersey	465.5	427.7	365.5	42,081
New Mexico	76.2	60.3	54.0	27,389
New York	1,103.0	900.5	748.7	38,800

Components of gross domestic product (2007) (continued)

States	gross domestic product by state (U.S.$'000,-000,000)	personal income (U.S.$'000,-000,000)	disposable personal income (U.S.$'000,-000,000)	per capita disposable personal income (U.S.$)
North Carolina	399.4	305.0	266.6	29,423
North Dakota	27.7	23.0	20.8	32,487
Ohio	466.3	395.7	347.0	30,260
Oklahoma	139.3	126.3	112.6	31,118
Oregon	158.2	131.3	113.9	30,385
Pennsylvania	531.1	481.6	421.1	33,870
Rhode Island	46.9	42.0	36.9	34,894
South Carolina	152.8	136.9	121.6	27,580
South Dakota	33.9	28.4	25.8	32,451
Tennessee	243.9	205.5	186.2	30,248
Texas	1,142.0	884.6	793.2	33,181
Utah	105.7	79.6	69.3	26,203
Vermont	24.5	23.3	20.6	33,156
Virginia	383.0	320.5	275.5	35,721
Washington	311.3	265.6	236.5	36,557
West Virginia	57.7	53.1	47.9	26,408
Wisconsin	232.3	203.0	177.7	31,719
Wyoming	31.5	24.6	21.4	40,921
District				
District of Columbia	93.8	36.1	30.9	52,526
TOTAL/AVERAGE	13,743.0[3]	11,631.6	10,140.2[3]	33,619

Production. Agriculture, forestry, fishing (value of production in U.S.$'000,000 except as noted; 2007): corn (maize) 52,090, soybeans 26,752, wheat 13,669, alfalfa hay 8,972, cotton 5,197, grapes 3,381, potatoes 3,198, lettuce 2,751, apples 2,398, almonds 2,325, rice 2,274, tomatoes 2,179, oranges 2,111, sorghum 1,951, strawberries 1,746, sugar beets 1,526[17], tobacco 1,310, cottonseed 1,061, mushrooms 956, sugarcane 897[17], barley 852, onions 840, broccoli 764, peanuts (groundnuts) 763, cherries 651, carrots 614, sunflowers 607, blueberries 589, peppers 588, walnuts 564[17], pistachios 549, peaches 499, watermelons 476, cabbage 413, lemons 403, pecans 376, sweet potatoes 374, pears 346, cantaloupe 313; livestock (number of live animals) 97,003,000 cattle, 61,860,000 pigs, 9,500,000 horses, 6,165,000 sheep, 2,050,000,000 chickens; roundwood (2006) 472,618,160 cu m, of which fuelwood 9% (coniferous 312,700,000 cu m[7], non-coniferous 159,162,000 cu m[7]); fisheries production (2006) 5,324,933 metric tons (from aquaculture 9%); aquatic plants production (2006) 6,238 (from aquaculture, none). Metals mining (metal content in metric tons unless otherwise noted; 2007): molybdenum 59,400 (world rank: 1); beryllium 100 (world rank: 1); copper 1,190,000 (world rank: 3); lead 430,000 (world rank: 3); zinc 740,000 (world rank: 4); gold 240,000 kg (world rank: 4); palladium 13,500 kg (world rank: 4); platinum 3,400 kg (world rank: 5); iron 52,000,000 (world rank: 7); silver 1,220,000 kg (world rank: 7). Nonmetals mining (metric tons; 2007): diatomite 830,000 (world rank: 1); bromine 235,000 (world rank: 1); boron 1,150,000[17] (world rank: 2); perlite 444,000 (world rank: 2); kyanite 90,000 (world rank: 2); vermiculite 100,000 (world rank: 3); barite 540,000 (world rank: 4); feldspar 760,000 (world rank: 6); silicon 156,000 (world rank: 6). Quarrying (metric tons; 2007): gypsum 22,000,000 (world rank: 1); salt 43,800,000 (world rank: 2); phosphate rock 29,700,000 (world rank: 2); lime 20,200,000 (world rank: 2). Manufacturing (value added in U.S.$'000,000; 2005): chemicals and chemical products 328,440, of which pharmaceuticals and medicine 124,586; transportation equipment 254,665, of which motor vehicle parts 81,600, motor vehicles 78,772, aerospace products and parts 71,221; food and food products 235,673; electronic products 226,319, of which navigational, measuring, medical, and scientific equipment 68,730, computers and related components 36,407, communications equipment 32,413; fabricated metal products 154,928; nonelectrical machinery 142,488; petroleum and coal 117,541; plastic and rubber products 96,348; beverages and tobacco products 80,716; base metals 77,179; paper and paper products 75,889; cement, bricks, and ceramics 64,545; printing and publishing 58,930; general electrical equipment 54,318; furniture 46,801; wood and wood products 44,763; textiles 32,395. Construction (completed; 2006): private U.S.$937,047,000,000, of which residential U.S.$641,-332,000,000, nonresidential U.S.$295,715,000,000; public U.S.$255,191,-000,000.

Energy production (consumption): electricity (kW-hr; 2005) 4,286,357,000,000 (4,311,081,000,000); hard coal (metric tons; 2005) 531,822,000 (514,818,000); lignite (metric tons; 2005) 506,769,000 (514,903,000); crude petroleum (barrels; 2005) 1,882,000,000 (5,786,000,000); petroleum products (metric tons; 2005) 816,677,000 (847,867,000); natural gas (cu m; 2005) 519,875,000,000 (623,534,000,000). Domestic production of energy by source (2005): coal 33.3%, natural gas 27.2%, crude petroleum 15.7%, nuclear power 11.8%, renewable energy 8.8%, other 3.2%.

Energy consumption by source (2006): petroleum and petroleum products 40.3%, natural gas 22.4%, coal 22.5%, nuclear electric power 8.2%, hydroelectric and thermal 2.9%, other renewable energy 3.7%; by end use: industrial 32.3%, residential and commercial 39.2%, transportation 28.5%.

Energy consumption by sector and state (2006)
('000,000,000,000 Btu)

States	total	residential	commercial	industrial	transportation	per capita (in '000,000 Btu)
Alabama	2,141	401	276	966	498	466
Alaska	754	62	68	358	266	1,112
Arizona	1,531[3]	398	347	235	552	248
Arkansas	1,145	225	160	470	290	407
California	8,420	1,552	1,583	1,942	3,343	232
Colorado	1,428	319	287	388	434	300
Connecticut	849	269	202	119	258	849
Delaware	301	64	57	105	75	353
Florida	4,610	1,334	1,067	579	1,630	255
Georgia	3,146[3]	723	550	920	954	337
Hawaii	332[3]	37	43	72	182	260
Idaho	515	118	81	184	132	352
Illinois	3,946	937	759	1,194	1,056	309
Indiana	2,862[3]	505	347	1,352	659	454

Energy consumption by sector and state (2006) (continued)
('000,000,000,000 Btu)

States	total	residential	commercial	industrial	transportation	per capita (in '000,000 Btu)
Iowa	1,207[3]	220	187	493	308	406
Kansas	1,051	213	192	372	274	381
Kentucky	1,971	345	248	904	474	469
Louisiana	3,803[3]	346	264	2,420	772	896
Maine	458	108	72	147	131	348
Maryland	1,452	400	402	185	465	260
Massachusetts	1,479[3]	429	368	202	481	230
Michigan	2,998[3]	755	603	839	802	297
Minnesota	1,822[3]	392	347	560	524	354
Mississippi	1,216	229	163	446	378	419
Missouri	1,913	491	391	434	597	328
Montana	429[3]	76	69	162	121	453
Nebraska	659[3]	146	130	207	177	374
Nevada	767[3]	176	131	205	254	308
New Hampshire	313[3]	92	70	47	105	239
New Jersey	2,605	570	601	453	981	301
New Mexico	683[3]	107	121	228	228	301
New York	3,940	1,133	1,250	462	1,095	204
North Carolina	2,659	680	557	679	743	300
North Dakota	411	60	57	203	91	644
Ohio	3,893	887	671	1,310	1,025	340
Oklahoma	1,603[3]	303	240	608	453	448
Oregon	1,112[3]	270	209	293	339	301
Pennsylvania	3,933[3]	913	689	1,301	1,032	317
Rhode Island	216	70	55	26	65	204
South Carolina	1,708	349	257	654	448	394
South Dakota	272[3]	62	56	65	88	345
Tennessee	2,313[3]	523	375	765	651	381
Texas	11,744	1,580	1,375	5,926	2,863	502
Utah	786[3]	158	146	221	262	305
Vermont	164	48	31	30	55	264
Virginia	2,545	591	574	572	808	333
Washington	2,054	488	374	561	631	322
West Virginia	829	158	109	382	180	459
Wisconsin	1,819[3]	400	345	632	441	326
Wyoming	481	42	59	257	123	938
District						
District of Columbia	176	33	118	4	21	300
TOTAL[3]	99,521	20,785	17,727	32,196	28,814	333

Energy consumption by source and by state (2006)
('000,000,000,000 Btu)

States	petroleum	natural gas[18]	coal	hydroelectric power	nuclear electric power
Alabama	634	402	887	72	333
Alaska	343	380	15	12	0.0
Arizona	602	365	432	67	251
Arkansas	385	241	257	15	159
California	3,916	2,331	67	477	334
Colorado	513	459	394	18	0.0
Connecticut	408	178	46	5	173
Delaware	138	45	57	0.0	0.0
Florida	2,053	917	696	2	328
Georgia	1,130	433	893	26	334
Hawaii	297	0.2	18	1.2	0.0
Idaho	167	79	8	111	0.0
Illinois	1,427	894	1,044	1.7	982
Indiana	897	500	1,596	5	0.0
Iowa	454	208	435	9	53
Kansas	367	264	364	0.1	98
Kentucky	757	217	1,023	26	0.0
Louisiana	1,347	1,347	265	7	175
Maine	236	53	7	42	0.0
Maryland	558	189	325	21	144
Massachusetts	677	376	112	15	61
Michigan	986	824	771	15	303
Minnesota	701	359	371	6	138
Mississippi	477	314	190	0.0	109
Missouri	759	256	829	2.0	106
Montana	197	75	194	101	0.0
Nebraska	233	123	227	9	94
Nevada	296	259	84	20	0.0
New Hampshire	171	65	45	15	98
New Jersey	1,299	568	116	0.4	340
New Mexico	273	230	316	2.0	0.0
New York	1,617	1,123	255	271	441
North Carolina	963	231	778	38	417
North Dakota	138	50	415	15	0.0
Ohio	1,352	771	1,446	6	176
Oklahoma	594	661	384	6	0.0
Oregon	388	230	26	375	0.0
Pennsylvania	1,475	686	1,501	28	786
Rhode Island	94	80	[19]	0.1	0.0
South Carolina	594	181	432	18	530
South Dakota	119	41	40	34	0.0
Tennessee	835	229	677	77	258
Texas	5,871	3,551	1,610	7	431
Utah	314	198	383	7	0.0
Vermont	89	8	[19]	15	53
Virginia	1,009	284	434	13	288
Washington	810	272	69	813	97
West Virginia	292	128	959	16	0.0
Wisconsin	619	377	463	17	128
Wyoming	173	112	489	8	0.0
District					
District of Columbia	23	30	[19]	0.0	0.0
TOTAL	40,420[3]	22,191[3]	22,446[3]	2,869[3]	8,214[3]

Household income and expenditure (2007). Average household size 2.6; median annual income per household U.S.$50,233, of which median Asian (including Hispanic) household U.S.$65,876, median white (including Hispanic) household U.S.$52,034, median non-Hispanic household[17] U.S.$52,423, median Hispanic[5] household U.S.$38,679, median black (including Hispanic) household U.S.$34,091; sources of personal income: wages and salaries 79.8%, transfer payments 10.1%, self-employment 5.5%, other 4.6%; consumption expenditure: housing 20.2%, transportation 17.6%, insurance and

pension 10.7%, fuel and utilities 7.0%, food at home 7.0%, health 5.7%, recreation 5.7%, food away from home 5.4%, wearing apparel 3.8%, alcoholic beverages and tobacco products 1.6%, other 15.3%.

Household income[20] level by selected characteristics (2007)

Characteristics	number of households ('000)	number ('000) under $15,000	$15,000–$34,999	$35,000–$74,999	$75,000 and over	median income ($)
Total/Average	116,783	15,506	26,060	37,789	37,427	50,233
Age of householder						
15 to 24 years	6,554	1,441	2,089	2,256	767	31,790
25 to 34 years	19,225	1,941	4,263	7,306	5,715	51,016
35 to 44 years	22,448	1,838	3,744	7,713	9,150	62,124
45 to 54 years	24,536	2,201	3,768	7,921	10,647	65,476
55 to 64 years	19,909	2,432	3,598	6,414	7,465	57,386
65 years and over	24,113	5,653	8,599	6,179	3,684	28,305
Size of household						
One person	32,167	9,500	10,723	8,774	3,169	25,703
Two persons	38,737	3,131	8,345	13,873	13,385	54,841
Three persons	18,522	1,341	3,091	6,357	7,733	64,403
Four persons	15,865	823	2,121	4,949	7,972	75,263
Five persons	7,332	438	1,101	2,371	3,419	70,977
Six persons	2,694	171	425	954	1,143	64,827
Seven or more persons	1,467	100	256	506	604	63,823
Educational attainment of householder[17]						
Total[21]	109,349	14,000	24,925	35,889	34,535	50,004
Less than 9th grade	5,701	1,998	2,015	1,333	355	20,901
Some high school	9,127	2,597	3,174	2,592	784	25,912
High school graduate	32,851	4,965	9,696	11,667	6,523	39,426
Some college, no degree	19,321	2,128	4,475	7,045	5,673	49,691
Associate degree	9,723	852	1,954	3,586	3,331	56,017
Bachelor's degree	21,082	1,068	2,668	6,659	10,687	75,861
Master's degree	8,128	275	693	2,348	4,812	88,422
Professional degree	1,860	72	143	334	1,311	100,000
Doctorate degree	1,556	45	107	345	1,059	100,000

Financial aggregates[3]

	2002	2003	2004	2005	2006	2007	2008[22]
Exchange rate, U.S.$ per:							
£[23]	1.50	1.63	1.83	1.82	1.84	2.00	1.99
SDR[23]	1.29	1.40	1.48	1.48	1.47	1.53	1.63
International reserves (U.S.$)[24]							
Total (excl. gold, '000,000,000)	67.96	74.89	75.89	54.08	54.85	59.52	64.70
SDRs ('000,000,000)	12.17	12.64	13.63	8.21	8.87	9.48	9.85
Reserve pos. in IMF ('000,000,000)	21.98	22.53	19.54	8.04	5.04	4.24	5.24
Foreign exchange ('000,000,000)	33.82	39.72	42.72	37.84	40.94	45.80	49.61
Gold ('000,000 fine troy oz)	262.00	261.55	261.59	261.55	261.50	261.50	261.50
% world reserves	28.16	28.60	29.14	29.76	30.14	30.67	30.80
Interest and prices							
Central bank discount (%)[24]	0.75	2.00	3.15	5.16	6.25	4.83	2.25
Govt. bond yield (%)[23]	4.61	4.02	4.27	4.29	4.79	4.63	4.01
Industrial share prices[23] (2000 = 100)	65.3	62.9	73.7	78.9	84.6	97.4	89.5
Balance of payments (U.S.$'000,000,000)							
Balance of visible trade	−481.46	−547.64	−666.12	−783.35	−834.56	−815.30	. .
Imports, f.o.b.	−1,167.40	−1,264.34	−1,477.13	−1,681.81	−1,861.41	−1,967.87	. .
Exports, f.o.b.	685.93	716.70	811.01	898.46	1,026.85	1,152.57	. .
Balance of invisibles	+20.18	+24.24	+41.13	+54.36	+46.45	+84.09	. .
Balance of payments, current account	−461.28	−523.40	−624.99	−728.99	−788.11	−731.21	. .

Average employee earnings

	average hourly earnings in U.S.$ 2005	2006	average weekly earnings in U.S.$ 2005	2006
Manufacturing				
Durable goods	17.33	17.67	712.95	731.81
Lumber and wood products	13.16	13.40	526.65	533.44
Furniture and fixtures	13.45	13.79	527.35	535.35
Nonmetallic mineral products	16.61	16.59	700.78	713.34
Primary metal industries	18.94	19.35	815.78	842.94
Fabricated metal products	15.80	16.17	647.34	668.84
Machinery, except electrical	17.03	17.20	716.55	728.99
Electrical equipment and appliances	15.24	15.53	618.97	635.87
Transportation equipment	22.10	22.41	938.03	957.43
Computer and electronic products	18.39	18.96	735.59	767.86
Miscellaneous manufacturing	14.08	14.36	545.21	556.16
Nondurable goods	15.27	15.32	608.95	621.78
Food and kindred products	13.04	13.13	508.55	526.02
Beverage and tobacco manufactures	18.76	18.19	751.54	741.31
Textile mill products	12.38	12.55	498.47	509.41
Apparel and other textile products	10.24	10.61	366.17	387.27
Paper and allied products	17.99	18.01	764.04	772.26
Printing and publishing	15.74	15.80	604.73	618.81
Chemicals and allied products	19.67	19.60	831.76	833.59
Petroleum and coal products	24.47	24.08	1,114.51	1,084.03
Rubber and miscellaneous plastics products	14.80	14.96	591.58	607.82
Leather and leather products	11.50	11.44	441.96	445.50
Nonmanufacturing				
Mining	18.72	19.90	853.71	908.01
Utilities	26.68	27.42	1,095.90	1,136.08
Construction	19.46	20.02	750.22	781.04
Transportation and warehousing	16.70	17.28	618.58	637.14
Wholesale trade	18.16	18.91	685.00	718.30

Average employee earnings (continued)

	average hourly earnings in U.S.$ 2005	2006	average weekly earnings in U.S.$ 2005	2006
Retail trade	12.36	12.58	377.58	383.16
Finance, insurance, and real estate	17.94	18.80	645.10	672.40
Leisure and hospitality services	9.38	9.75	241.36	250.11
Education and health services	16.71	17.38	544.59	564.95
Professional and business services	18.08	19.12	618.87	662.23
Information services	22.06	23.23	805.00	850.81
Other services	14.34	14.77	443.37	456.60

Median household income[25]

(in current 2007 U.S.$)

States	2002	2003	2004	2005	2006	2007
Alabama	37,603	37,225	38,111	36,879	38,783	40,554
Alaska	52,774	51,837	54,627	56,234	59,393	64,333
Arizona	39,734	41,166	42,590	44,282	47,265	49,889
Arkansas	32,387	32,002	33,948	34,999	36,599	38,134
California	47,437	49,300	49,894	53,629	56,645	59,948
Colorado	48,294	49,940	51,022	50,652	52,015	55,212
Connecticut	53,387	54,965	55,970	60,941	63,422	65,967
Delaware	49,650	49,019	50,152	52,499	52,833	54,610
Florida	38,024	38,972	40,171	42,433	45,495	47,804
Georgia	42,939	42,438	43,217	45,604	46,832	49,136
Hawaii	47,303	51,834	53,123	58,112	61,160	63,746
Idaho	37,715	42,372	42,519	41,443	42,865	46,253
Illinois	42,710	45,153	45,787	50,260	52,006	54,124
Indiana	41,047	42,425	43,003	43,995	45,394	47,448
Iowa	41,049	41,384	43,042	43,609	44,491	47,292
Kansas	42,619	44,232	43,725	42,920	45,478	47,451
Kentucky	36,762	36,936	37,396	37,369	39,372	40,267
Louisiana	34,008	33,507	35,523	36,729	39,337	40,926
Maine	36,853	37,113	39,395	42,801	43,439	45,888
Maryland	56,407	52,314	56,763	61,592	66,144	68,080
Massachusetts	49,855	50,955	52,354	57,184	59,963	62,365
Michigan	42,715	45,022	44,476	46,039	47,182	47,950
Minnesota	54,622	52,823	55,914	52,024	54,023	55,802
Mississippi	30,882	32,728	33,659	32,938	34,473	36,338
Missouri	42,776	43,762	43,988	41,974	42,841	45,114
Montana	34,835	34,108	35,201	39,301	40,627	43,531
Nebraska	42,796	43,974	44,623	43,849	45,474	47,085
Nevada	44,958	45,184	46,984	49,169	52,998	55,062
New Hampshire	55,321	55,567	57,352	56,768	59,683	62,369
New Jersey	54,568	56,045	56,772	61,672	64,470	67,035
New Mexico	35,457	35,105	37,587	37,492	40,629	41,452
New York	41,966	42,788	44,228	49,480	51,384	53,514
North Carolina	36,515	37,279	39,000	40,729	42,625	44,670
North Dakota	36,200	40,410	39,594	41,030	41,919	43,753
Ohio	42,684	43,520	44,160	43,493	44,532	46,597
Oklahoma	36,458	35,902	38,281	37,063	38,770	41,567
Oregon	41,802	41,638	42,617	42,944	46,230	48,730
Pennsylvania	42,498	42,933	44,286	44,537	46,259	48,576
Rhode Island	42,417	44,711	46,199	51,458	51,814	53,568
South Carolina	37,812	38,479	39,326	39,316	41,100	43,329
South Dakota	37,873	39,522	40,518	40,310	42,791	43,424
Tennessee	37,030	37,523	38,550	38,874	40,315	42,367
Texas	40,149	39,271	41,275	42,139	44,922	47,548
Utah	47,861	49,275	50,614	47,934	51,309	55,109
Vermont	42,999	43,261	45,692	45,686	47,665	49,907
Virginia	49,631	54,783	53,275	54,240	56,277	59,562
Washington	45,183	47,508	48,688	49,262	52,583	55,591
West Virginia	29,359	32,763	32,589	33,452	35,059	37,060
Wisconsin	45,903	46,269	47,220	47,105	48,772	50,578
Wyoming	39,763	42,555	43,641	46,039	47,423	51,731
District						
District of Columbia	39,070	45,044	46,133	47,221	51,847	54,317
U.S. AVERAGE	42,409	43,318	44,473	46,202	48,451	50,740

Average annual expenditure of "consumer units" (households, plus individuals sharing households or budgets; 2006): total U.S.$48,398, of which housing U.S.$16,366, transportation U.S.$8,508, food U.S.$6,111, pensions and social security U.S.$5,270, health care U.S.$2,766, clothing U.S.$1,874, other U.S.$7,503.

Home ownership rates

States	percent 2000	2006	States	percent 2000	2006
Alabama	73.2	74.2	Nevada	64.0	65.7
Alaska	66.4	67.2	New Hampshire	69.2	74.2
Arizona	68.0	71.6	New Jersey	66.2	69.0
Arkansas	68.9	70.8	New Mexico	73.7	72.0
California	57.1	60.2	New York	53.4	55.7
Colorado	68.3	70.1	North Carolina	71.1	70.2
Connecticut	70.0	71.1	North Dakota	70.7	68.3
Delaware	72.0	76.8	Ohio	71.3	72.1
Florida	68.4	72.4	Oklahoma	72.7	71.6
Georgia	69.8	68.5	Oregon	65.3	68.1
Hawaii	55.2	59.9	Pennsylvania	74.7	73.2
Idaho	70.5	75.1	Rhode Island	61.5	64.6
Illinois	67.9	70.4	South Carolina	76.5	74.2
Indiana	74.9	74.2	South Dakota	71.2	70.6
Iowa	75.2	74.0	Tennessee	70.9	71.3
Kansas	69.3	70.0	Texas	63.8	66.0
Kentucky	73.4	71.7	Utah	72.7	73.5
Louisiana	68.1	71.3	Vermont	68.7	74.0
Maine	76.5	75.3	Virginia	73.9	71.1
Maryland	69.9	72.6	Washington	63.6	66.7
Massachusetts	59.9	65.2	West Virginia	75.9	78.4
Michigan	77.2	77.4	Wisconsin	71.8	70.2
Minnesota	76.1	75.6	Wyoming	71.0	73.7
Mississippi	75.2	76.2	**District**		
Missouri	74.2	71.9	District of Columbia	41.9	45.9
Montana	70.2	69.5	U.S. RATE	67.4	68.8
Nebraska	70.2	67.6			

Selected household characteristics (2007). Total number of households 116,783,000, of which (family households by race) white including Hispanic 82.5%, black including Hispanic 12.8%, other 4.7%—Hispanic of any race 11.4%; (by tenure) owned 79,330,000 (67.9%), rented 35,845,000 (30.7%), other 1,608,000 (1.4%); family households 77,873,000, of which married couple 75.0%, female householder 18.5%, male householder 6.5%; nonfamily households 38,910,000, of which female living alone 47.0%, male living alone 35.6%, other 17.4%.

Population economically active (November 2008): total 154,616,000 (civilian population only); activity rate of total population 50.7% (participation rates [2004]: age 16–64, 74.0%; female [2007] 46.5%; unemployed 6.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	102.8	104.5	106.8	109.7	113.4	117.1	120.4
Hourly earnings index	103.1	106.8	109.9	112.7	115.6	117.4	120.5

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 106,736; remittances (2007) 2,962; foreign direct investment (FDI: 2004–06 avg.) 137,415. Disbursements for (U.S.$'000,000): tourism (2006) 76,807; remittances (2007) 43,680; FDI (2004–06 avg.) 148,948. Number of foreign visitors (2007) 56,716,277 (17,735,000 from Canada, 15,089,000 from Mexico, 11,406,000 from Europe); number of nationals traveling abroad (2007) 64,052,000 (19,453,000 to Mexico, 13,371,000 to Canada, 12,304,000 to Europe).

Land use as % of total land area (2003): in temporary crops 19.3%, in permanent crops 0.3%, in pasture 25.9%; overall forest area (2005) 33.1%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000,000	–468.3	–532.4	–650.9	–766.4	–818.1	–791.0
% of total	25.3%	26.9%	28.4%	29.8%	28.3%	25.4%

Imports (2007): U.S.$1,953,698,800,000 (crude and refined petroleum 16.5%; motor vehicles and parts 10.8%; chemicals and chemical products 8.0%; telecommunications equipment 6.6%; electrical machinery 5.8%; computers and office equipment 5.2%; wearing apparel 4.2%; industrial machinery 3.3%; food and beverages 3.1%). *Major import sources:* China 16.5%; Canada 16.0%; Mexico 10.8%; Japan 7.4%; Germany 4.8%; United Kingdom 2.9%; South Korea 2.4%; France 2.1%; Venezuela 2.0%; Taiwan 2.0%; Saudi Arabia 1.8%; Italy 1.8%; Malaysia 1.7%; Nigeria 1.7%; Ireland 1.6%.

Exports (2007): U.S.$1,162,708,300,000 (chemicals and chemical products 13.6%; electrical machinery 9.0%; motor vehicles and parts 8.8%; other transportation equipment 7.0%; agricultural commodities 5.9%; power-generating machinery 4.6%; general industrial machinery 4.5%; specialized industrial machinery 4.4%; scientific and precision equipment 4.1%; computers and office equipment 4.0%; mineral fuels 3.6%; telecommunications equipment 3.3%). *Major export destinations:* Canada 21.4%; Mexico 11.7%; China 5.6%; Japan 5.4%; United Kingdom 4.3%; Germany 4.3%; South Korea 3.0%; The Netherlands 2.8%; France 2.4%; Taiwan 2.3%; Singapore 2.3%; Belgium 2.2%; Brazil 2.1%; Hong Kong 1.7%; Australia 1.7%.

Direction of trade (2006)

	imports		exports	
	U.S.$'000,000	%	U.S.$'000,000	%
Africa	44,500	2.4	8,700	0.8
Nigeria	27,000	1.5	2,100	0.2
South Africa	7,420	0.4	4,200	0.4
Americas	656,800	35.4	480,300	46.3
Brazil	26,400	1.4	19,200	1.9
Canada	303,400	16.4	230,600	22.2
Caribbean countries	9,800	0.5	15,600	1.5
Central America	20,409	1.1	13,500	1.3
Mexico	198,300	10.7	134,200	12.9
Venezuela	37,200	2.0	9,000	0.7
Asia	745,100	40.2	291,500	28.1
China	287,800	15.5	55,200	5.3
Taiwan	38,200	2.1	23,000	2.2
Japan	148,100	8.0	59,600	5.8
Saudi Arabia	31,700	1.7	6,812	0.7
Singapore	17,800	1.0	24,700	2.4
South Korea	45,800	3.5	32,500	3.1
Europe	398,900	21.5	243,300	23.4
France	37,100	2.0	24,200	2.3
Germany	89,100	4.8	41,300	4.0
Italy	32,700	1.8	12,600	1.2
The Netherlands	17,300	0.9	31,100	0.3
United Kingdom	53,400	2.9	45,400	4.4
Oceania	10,100	0.5	13,500	1.3
Australia	7,342	0.4	...	.
TOTAL	1,855,400	100.0	1,037,300	100.0[3]

Transport and communications

Transport. Railroads (2004): route length 97,662 mi, 156,300 km, of which Amtrak operates 22,256 mi, 35,610 km; (2004) passenger-mi 25,833,000,000, passenger-km 41,574,000,000; (2006) short ton-mi cargo 1,772,000,000,000, metric ton-km cargo 2,835,000,000,000. Roads (2006): total length 4,031,429 mi, 6,487,956 km (paved 65%). Vehicles (2006): passenger cars 135,399,945; trucks and buses 108,765,741. Merchant marine (2006)[26]: vessels (1,000 gross tons and over) 625; total deadweight tonnage 10,172,000. Navigable channels (2004) 26,000 mi, 41,843 km; oil pipeline length (2005) 131,000 mi, 210,824 km; gas pipeline[27] (2004) 1,462,300 mi, 2,353,300 km. Air transport (2007): passenger-mi 829,033,000,000, passenger-km 1,334,199,200,000; short ton-mi cargo 29,524,000,000, metric ton-km cargo 43,104,300,000. Certified route passenger/cargo air carriers (2005) 80; operating revenue (U.S.$'000,000; 2007) 173,104; operating expenses (U.S.$'000,000; 2007) 163,894.

Intercity passenger and freight traffic by mode of transportation (2001)

	cargo traffic ('000,000,000 ton-mi)	% of nat'l total	passenger traffic ('000,000,000 passenger-mi)	% of nat'l total
Rail	1,558	41.7	15	0.6
Road	1,051	28.2	1,980	79.2
Inland water	494	13.2	—	—
Air	15	0.4	504	20.2
Petroleum pipeline	616	16.5	—	—
TOTAL	3,734	100.0	2,499	100.0

Communications

Medium	date	units number in '000s	per 1,000 persons	Medium	date	units number in '000s	per 1,000 persons
Televisions	2003	260,000	893	PCs	2005	223,810	755
Telephones				Dailies	2006	52,300[28]	175[28]
Cellular	2007	255,396[29]	835[29]	Internet users	2007	220,000	719
Landline	2007	163,170	534	Broadband	2007	73,207[29]	239[29]

Other communications media (2002)

	titles		titles
Print			
Books (new), of which	120,106	Engineering	265
Agriculture	888	Fine and applied arts	145
Art	4,483	General interest	181
Biography	5,052	History	151
Business	4,571	Home economics	90
Education	3,658	Industrial arts	106
Fiction	15,133	Journalism and commun	90
General works	1,470	Labour and industrial relations	70
History	6,827	Law	273
Home economics	2,161	Library and information sciences	118
Juvenile	9,545	Literature and language	158
Language	2,420	Mathematics and science	238
Law	2,206	Medicine	182
Literature	3,946	Philosophy and religion	130
Medicine	5,949	Physical education and recreation	151
Music	1,615	Political science	136
Philosophy, psychology	6,012	Psychology	138
Poetry, drama	2,812	Sociology and anthropology	149
Religion	6,664	Zoology	94
Science	7,043		
Sociology, economics	13,829		
Sports, recreation	3,569	**Cinema**	
Technology	7,926	Feature films	478
Travel	2,327		
Periodicals, of which	3,731		(pieces of mail)
Agriculture	153		
Business and economics	262	**Post**[17]	
Chemistry and physics	170	Mail	213,138,000,000
Children's periodicals	78	Domestic	212,345,000,000
Education	203	International	793,000,000

Education and health

Literacy (2003): percentage of population age 16 and over: "illiterate" (able to perform no more than the most simple literacy skills—14% of population [or 30,000,000 people]); "basically literate" (able to perform simple and everyday literacy activities—29% of population [or 63,000,000 people]); "intermediately and proficiently literate" (able to perform moderately challenging to complex literacy activities—57% of population [or 123,000,000 people]). An additional 6,500,000 people were not interviewed for this 2003 survey because they did not speak English or had cognitive or mental disabilities.

Education (2007–08)

	schools	teachers	students	student/ teacher ratio
Primary (age 5–13)[30]	124,118[31]	3,679,000	39,376,000	15.5[31]
Secondary and vocational (age 14–17)			16,386,000	
Higher, including teacher-training colleges	6,383[31]	1,290,000[31]	17,959,000	13.5[31]

High school and college graduates (2006)

	Percent age 25 and over	
States	high school	college
Alabama	82.1	20.8
Alaska[7]	91.7	28.6
Arizona	83.1	24.5
Arkansas[7]	81.4	17.5
California	80.8	29.8
Colorado	90.0	36.4
Connecticut[7]	90.0	36.8
Delaware[7]	86.9	25.6
Florida	86.7	27.2
Georgia	84.2	28.1
Hawaii[7]	87.2	30.4
Idaho[7]	89.1	25.9
Illinois	87.6	31.2
Indiana	88.2	21.9
Iowa[7]	89.8	24.5
Kansas[7]	91.4	30.4
Kentucky	79.9	20.2
Louisiana[7]	80.2	19.6
Maine[7]	87.2	24.3
Maryland	87.2	35.7
Massachusetts	89.9	40.4
Michigan	89.7	26.1
Minnesota	93.0	33.5
Mississippi[7]	79.8	21.8
Missouri	87.1	24.3

High school and college graduates (2006) (continued)

States	Percent age 25 and over: high school	college
Montana[7]	92.1	25.4
Nebraska[7]	89.8	25.4
Nevada[7]	86.6	23.4
New Hampshire[7]	91.9	32.8
New Jersey	86.7	35.6
New Mexico[7]	81.2	27.4
New York	85.1	32.2
North Carolina	84.2	25.6
North Dakota[7]	90.0	27.2
Ohio	88.1	23.3
Oklahoma[7]	85.2	24.0
Oregon[7]	88.6	29.0
Pennsylvania	87.5	26.6
Rhode Island[7]	83.9	29.2
South Carolina	83.1	22.6
South Dakota[7]	88.4	25.0
Tennessee	80.7	22.0
Texas	78.7	25.5
Utah[7]	92.5	29.8
Vermont[7]	90.0	34.4
Virginia	86.5	32.1
Washington	91.1	31.4
West Virginia[7]	82.5	15.1
Wisconsin	91.1	24.6
Wyoming[7]	90.9	21.9
District		
District of Columbia[7]	84.1	46.9
U.S. RATE	85.5	28.0

Food (2005): daily per capita caloric intake 3,754 (vegetable products 72.2%, animal products 27.8%); 143% of FAO recommended minimum requirement. Per capita consumption of major food groups (kilograms annually; 2005): milk 256.4; fresh vegetables 125.5; cereal products 177.2; fresh fruits 122.7; red meat 62.7; potatoes 54.7; poultry products 55.8; fats and oil 31.6; sugar 30.2; fish and shellfish 23.4; undernourished population (2002–04) less than 2.5% of total population.

Health (2005): doctors of medicine 902,100[32] (1 per 329 persons), of which office-based practice 563,200—male 72.8%; female 27.2% (including specialties in internal medicine 17.1%, general and family practice 10.3%, pediatrics 8.2%, obstetrics and gynecology 4.7%, psychiatry 4.6%, anesthesiology 4.5%, general surgery 4.2%, emergency medicine 3.2%, diagnostic radiology 2.7%, orthopedic surgery 2.7%, cardiovascular diseases 2.5%, pathology 2.2%, ophthalmology 2.1%); doctors of osteopathy 56,500; nurses (2004) 2,421,000 (1 per 824 persons); dentists (2004) 167,000 (1 per 1,760 persons); hospital beds 947,000 (1 per 314 persons), of which nonfederal 95.1% (community hospitals 84.7%, psychiatric 8.7%, long-term general and special 1.6%), federal 4.9%; infant mortality rate per 1,000 live births (2007) 6.4.

Active physicians and nurses (2005)

States	physicians: number	physicians: per 100,000 population	nurses: number[33]	nurses: per 100,000 population[33]
Alabama	9,786	215	36,500	807
Alaska	1,515	228	6,800	1,034
Arizona	12,503	210	39,100	681
Arkansas	5,619	202	20,100	731
California	94,341	261	211,600	590
Colorado	12,101	259	34,700	754
Connecticut	12,780	365	32,700	935
Delaware	2,090	248	8,600	1,036
Florida	43,314	244	132,800	764
Georgia	19,997	219	66,500	746
Hawaii	3,964	311	9,300	737
Idaho	2,429	170	8,800	631
Illinois	34,826	273	113,800	895
Indiana	13,448	215	54,600	877
Iowa	5,503	186	32,700	1,107
Kansas	6,070	221	24,900	911
Kentucky	9,608	230	37,600	908
Louisiana	11,481	255	35,400	785
Maine	3,520	267	15,100	1,148
Maryland	23,128	411	47,100	847
Massachusetts	29,343	456	75,400	1,177
Michigan	24,387	241	85,000	841
Minnesota	14,595	285	51,900	1,018
Mississippi	5,168	178	24,000	827
Missouri	13,965	241	57,400	997
Montana	2,084	223	7,900	852
Nebraska	4,209	239	18,500	1,059
Nevada	4,519	187	14,100	604
New Hampshire	3,440	263	13,600	1,047
New Jersey	26,918	309	73,000	841
New Mexico	4,622	240	13,600	715
New York	74,945	388	174,200	903
North Carolina	21,972	253	76,800	899
North Dakota	1,523	240	7,500	1,179
Ohio	30,096	262	112,800	985
Oklahoma	6,041	170	24,400	692
Oregon	9,684	266	30,900	860
Pennsylvania	36,429	294	127,000	1,025
Rhode Island	3,866	360	11,400	1,056
South Carolina	9,769	230	30,700	731
South Dakota	1,698	219	9,300	1,207
Tennessee	15,683	263	54,300	921
Texas	48,776	213	145,300	647
Utah	5,221	210	15,800	653
Vermont	2,269	365	6,400	1,030
Virginia	20,461	270	56,700	758
Washington	16,707	266	48,400	780
West Virginia	4,190	231	16,000	883
Wisconsin	14,093	255	51,700	939
Wyoming	949	187	4,100	810
District				
District of Columbia	4,483	770	11,600	2,093
U.S. TOTAL	790,128[34]	266	2,421,000[35]	624

Infant mortality rates by race (2004)

States	all races	white	black
Alabama	8.7	6.8	13.3
Alaska	6.7	5.5	...
Arizona	6.7	6.5	12.0
Arkansas	8.3	7.1	13.4
California	5.2	4.9	12.4
Colorado	6.3	6.0	14.7
Connecticut	5.5	4.5	12.9
Delaware	8.6	6.5	15.5
Florida	7.1	5.6	11.8
Georgia	8.5	6.1	13.9
Hawaii	5.7	5.2	...
Idaho	6.2	6.1	...
Illinois	7.5	6.0	15.7
Indiana	8.0	7.0	16.9
Iowa	5.1	4.8	...
Kansas	7.2	6.5	16.5
Kentucky	6.8	6.3	12.6
Louisiana	10.5	7.7	14.8
Maine	5.7	5.5	...
Maryland	8.4	5.7	14.0
Massachusetts	4.8	4.4	9.2
Michigan	7.6	5.5	17.5
Minnesota	4.7	4.2	9.2
Mississippi	9.8	6.2	14.6
Missouri	7.5	6.4	14.7
Montana	4.5	4.2	...
Nebraska	6.6	5.9	16.5
Nevada	6.4	5.3	18.6
New Hampshire	5.6	5.3	...
New Jersey	5.7	4.8	10.7
New Mexico	6.3	5.8	...
New York	6.1	5.0	10.9
North Carolina	8.8	6.3	16.8
North Dakota	5.6	5.1	...
Ohio	7.7	6.1	16.3
Oklahoma	8.0	7.1	17.2
Oregon	5.5	5.3	...
Pennsylvania	7.3	6.2	13.5
Rhode Island	5.3	5.0	...
South Carolina	9.3	6.8	14.1
South Dakota	8.2	7.0	...
Tennessee	8.6	6.7	16.0
Texas	6.3	5.6	12.7
Utah	5.2	5.2	...
Vermont	4.6	4.7	...
Virginia	7.5	5.8	14.2
Washington	5.5	5.4	10.6
West Virginia	7.6	7.4	...
Wisconsin	6.0	4.6	19.4
Wyoming	8.8	8.3	...
District			
District of Columbia	12.0	...	14.7
U.S. RATE	6.8	5.7	13.8

Military

Total active duty personnel (November 2007): 1,498,157 (army 39.6%, navy 22.8%, air force 22.4%, marines 12.5%, coast guard 2.7%). *Total reserve duty personnel* (November 2007): national guard 458,030 (army 76.7%, air force 23.3%); ready reserves 1,082,718 (army 62.4%, navy 11.9%, air force 16.5%, marines 8.5%, coast guard 0.7%). *Total special operations forces* (November 2007): active 31,496; reserve 11,247. *Military expenditure as percentage of GDP* (2007): 4.5%; per capita expenditure U.S.$2,060. *Foreign military sales to the world* (2007): U.S.$19,119,454,000, of which to Australia 16.0%, to Turkey 10.6%, to Saudi Arabia 9.0%, to U.A.E. 8.6%, to Iraq 7.4%, to Canada 6.8%.

[1]Excludes 5 nonvoting delegates from the District of Columbia, the U.S. Virgin Islands, American Samoa, the Northern Mariana Islands, and Guam and a nonvoting resident commissioner from Puerto Rico. [2]Total area (excluding 42,225 sq mi [109,362 sq km] of coastal water and 75,372 sq mi [195,213 sq km] of territorial water) equals 3,676,486 sq mi (9,522,055 sq km), of which land area equals 3,537,438 sq mi (9,161,923 sq km), inland water area equals 78,797 sq mi (204,083 sq km), and Great Lakes water area equals 60,251 sq mi (156,049 sq km). [3]Detail does not add to total given because of rounding. [4]Based on land area only. [5]Persons of Hispanic origin may be of any race. [6]The estimate components of population change will not sum to the total due to statistical discrepancy. [7]2005. [8]2002. [9]2000. [10]Statistically derived midpoint of range. [11]Includes deaths with age not known. [12]Current users. [13]Drinking 5 or more drinks on the same occasion on at least one day in the past 30 days per survey. [14]2003. [15]Excludes military personnel overseas. [16]Unemployed. [17]2006. [18]Includes supplemental gaseous fuels. [19]Less than 0.7 trillion Btu. [20]Gross income from all sources, including transfer payments to individuals. Detail may not add to total given because of incomplete survey results. [21]Householder 25 years old or older. [22]July 1. [23]Period average. [24]End of year, except 2008. [25]In 2007 current dollars in conjunction with annually revised U.S. Bureau of Labor Statistics experimental Consumer Price Index (or CPI-U-RS deflator). [26]Excluding foreign-flagged U.S.-domiciled vessels. [27]Excludes service pipelines. [28]Circulation of daily newspapers. [29]Subscribers. [30]Primary includes kindergarten. [31]2005–06. [32]Includes Puerto Rico and other U.S. dependencies. [33]2004. [34]Excludes doctors of osteopathy, physicians with unknown addresses, and inactive physicians. [35]Represents reported total; summed total equals 2,418,400.

Internet resources for further information:

- **U.S. Census Bureau**
  http://www.census.gov
- **Statistical Abstract of the United States**
  http://www.census.gov/compendia/statab/2008edition.html

Uruguay

Official name: República Oriental del Uruguay (Oriental Republic of Uruguay).
Form of government: republic with two legislative houses (Senate [31][1]; Chamber of Representatives [99]).
Head of state and government: President.
Capital: Montevideo.
Official language: Spanish.
Official religion: none.
Monetary unit: peso uruguayo (UYU); valuation (Sept. 8, 2008) 1 U.S.$ = UYU 19.30; 1 £ = UYU 34.10.

Area and population

Departments	area sq km	population 2007 estimate	Departments	area sq km	population 2007 estimate
Artigas	11,928	79,317	Rio Negro	9,282	55,657
Canelones	4,536	509,095	Rivera	9,370	109,267
Cerro Largo	13,648	89,383	Rocha	10,551	70,614
Colonia	6,106	120,855	Salto	14,163	126,745
Durazno	11,643	60,926	San José	4,992	107,644
Flores	5,144	25,609	Soriano	9,008	87,073
Florida	10,417	69,968	Tacuarembó	15,438	94,613
Lavalleja	10,016	61,883	Treinta y Tres	9,529	49,769
Maldonado	4,793	147,391	TOTAL LAND AREA	175,016	
Montevideo	530	1,342,474	OTHER AREAS[2]	2,863	
Paysandú	13,922	115,623	TOTAL	177,879	3,323,906

Demography

Population (2008): 3,350,000.
Density (2008): persons per sq mi 48.8, persons per sq km 18.8.
Urban-rural (2007): urban 93.7%; rural 6.3%.
Sex distribution (2007): male 48.30%; female 51.70%.
Age breakdown (2007): under 15, 23.4%; 15–29, 22.8%; 30–44, 19.6%; 45–59, 16.5%; 60–74, 11.5%; 75–84, 4.7%; 85 and over, 1.5%.
Population projection: (2010) 3,374,000; (2020) 3,495,000.
Ethnic composition (2006): white (mostly Spanish, Italian, or mixed Spanish-Italian) 87.4%; black/part-black 8.4%; Amerindian/part-Amerindian 3.0%; other/unknown 1.2%.
Religious affiliation (2004): Roman Catholic *c.* 54%; Protestant *c.* 11%; Mormon *c.* 3%; Jewish 0.8%; nonreligious/atheist *c.* 26%; other 5.2%.
Major cities (2004): Montevideo 1,269,552; Salto 99,072; Paysandú 73,272; Las Piedras 69,222; Rivera 64,426.

Vital statistics

Birth rate per 1,000 population (2007): 14.7 (world avg. 20.3); (2002) within marriage 42.9%; outside of marriage 57.1%.
Death rate per 1,000 population (2007): 9.4 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 2.02.
Marriage/divorce rates per 1,000 population: (2006) 3.7/(2004) 4.3.
Life expectancy at birth (2007): male 72.3 years; female 79.6 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 327.1, of which ischemic heart disease 117.4, cerebrovascular disease 111.3; malignant neoplasms (cancers) 236.3; respiratory diseases 50.6.

National economy

Budget (2006). Revenue: UYU 111,321,000,000 (taxes on goods and services 59.1%; corporate taxes 12.3%; property taxes 7.1%; nontax revenue 6.7%; individual income taxes 5.6%). Expenditures: UYU 117,225,000,000 (social security and welfare 27.6%; government transfers including debt servicing 20.7%; public administration 13.9%; education 12.3%; health 7.4%; defense 4.4%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 1,650,000, rice 1,200,000, soybeans 800,000, wheat 620,000, beef 570,000, barley 435,000, citrus fruits 281,500, grapes 130,000, sunflower seeds 60,000, wool 50,000, sheep meat 32,000, honey 13,200; livestock (number of live animals) 12,000,000 cattle, 11,000,000 sheep; roundwood (2006) 5,996,000 cu m, of which fuelwood 35%; fisheries production (2006) 134,140 (from aquaculture, negligible). Mining and quarrying (2005): limestone 1,185,000; clays 64,450; gold 3,151 kg. Manufacturing (value added in UYU '000,000; 2005): food and beverages 17,390; refined petroleum 5,945; textiles/hides/leather goods 4,633; chemicals and chemical products 4,458; printing and publishing 1,918; rubber and plastic products 1,647. Energy production (consumption): electricity (kW-hr; 2005) 7,684,000,000 (8,428,000,000); coal (metric tons; 2005) none (1,000); crude petroleum (barrels; 2005) none (15,700,000); petroleum products (metric tons; 2005) 2,020,000 (1,532,000); natural gas (cu m; 2005) none (105,000,000).
Household income and expenditure. Avg. household size (2007) 2.9; avg. annual income per household (2007) UYU 235,746 (U.S.$10,044); expenditure (2005–06)[3]: housing 26.0%, food and nonalcoholic beverages 19.5%, health 12.1%, transportation 10.9%, recreation and culture 6.5%.
Population economically active (2006): total 1,580,400; activity rate 47.7% (participation rates: ages 14–64, 72.7%; female 43.5%; unemployed [2007] 9.2%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	104.4	118.9	142.0	155.0	162.3	172.7	186.7
Annual earnings index	103.6	105.1	111.9	124.0	136.0	151.0	171.1

Gross national income (GNI; 2007): U.S.$21,186,000,000 (U.S.$6,380 per capita); purchasing power parity GNI (U.S.$11,040 per capita).

Structure of gross domestic product and labour force

	2007 in value UYU '000,000	2007 % of total value	2006 labour force[4]	2006 % of labour force[4]
Agriculture	54,947	10.1	157,200	10.0
Mining	1,491	0.3		
Manufacturing	123,411	22.8	209,600	13.3
Public utilities	26,084	4.8		
Construction	22,362	4.1	90,600	5.7
Transp. and commun.	49,616	9.2	75,800	4.8
Trade, hotels	73,094	13.5	308,200	19.5
Finance, real estate	101,051	18.7	101,700	6.4
Pub. admin., defense	45,579	8.4	104,500	6.6
Services	47,815	8.8	364,100	23.0
Other	−3,582[5]	−0.7[5]	168,700[6]	10.7[6]
TOTAL	541,868	100.0	1,580,400	100.0

Public debt (external, outstanding; 2006): U.S.$7,211,000,000.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 597; remittances (2007) 97; foreign direct investment (FDI; 2004–06 avg.) 851; official development assistance (2006) 21. Disbursements for (U.S.$'000,000): tourism (2006) 213; remittances (2007) 4; FDI (2004–06 avg.) 17.
Land use as % of total land area (2003): in temporary crops 7.8%, in permanent crops 0.2%, in pasture 77.4%; overall forest area (2005) 8.6%.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	−103	+16	−183	−474	−823	−1,241
% of total	2.7%	0.4%	3.0%	6.5%	9.4%	12.2%

Imports (2006): U.S.$4,775,000,000 (crude and refined petroleum 27.5%; machinery and appliances 16.0%; chemicals and chemical products 12.7%; food, beverages, and tobacco products 8.7%; transport equipment 7.4%). *Major import sources:* Argentina 22.6%; Brazil 22.6%; Venezuela 12.6%; China 7.3%; United States 6.8%.
Exports (2006): U.S.$3,952,000,000 (beef 23.7%; hides and leather goods 8.6%; dairy products, eggs, and honey 6.9%; textiles and wearing apparel 6.8%; rice 5.5%; plastics and rubber products 5.1%). *Major export destinations:* Brazil 14.7%; United States 13.2%; Argentina 7.6%; Russia 5.7%; Germany 4.2%; Chile 4.2%.

Transport and communications

Transport. Railroads (2006): route length 2,073 km[8]; passenger-km (2004) 11,000,000; metric ton-km cargo (2005) 331,000,000. Roads (2007): length 16,398 km (paved 22%). Vehicles (2005): passenger cars 523,866; trucks and buses 84,354. Air transport (2006)[9]: passenger-km 1,096,000,000; metric ton-km cargo, none.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	838	252	PCs	2005	450	135
Telephones				Dailies	2004	264[10]	79[10]
Cellular	2007	3,004[11]	899[11]	Internet users	2007	968	290
Landline	2007	965	289	Broadband	2007	165[11]	49[11]

Education and health

Educational attainment (2006). Percentage of population age 25 and over having: no formal schooling 1.9%; incomplete primary education 15.1%; complete primary 25.8%; incomplete secondary 20.8%; complete secondary 17.6%; incomplete higher 7.2%; complete higher 11.6%. *Literacy* (2003): population age 15 and over literate 98.0%; males 97.6%; females 98.4%.

Education (2006)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	2,400	17,111	353,528	20.7
Secondary (age 12–17)	436		218,816	
Vocational, teacher tr.	124		66,429	
Higher[12]	2	5,589	64,436	11.5

Health: physicians (2006) 13,603 (1 per 245 persons); hospital beds (2003) 6,661 (1 per 499 persons); infant mortality rate per 1,000 live births (2006) 10.5; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2007): 25,400 (army 66.1%, navy/coast guard 22.1%, air force 11.8%). *Military expenditure as percentage of GDP* (2005): 1.3%; per capita expenditure U.S.$67.

[1]Includes the vice president, who serves as ex officio presiding officer. [2]Includes the Uruguayan part of the Uruguay River, with islands (633 sq km), Río Negro reservoirs (1,199 sq km), and the Uruguayan part of Laguna Merín (1,031 sq km); excludes the Uruguayan part of the Río de la Plata (15,240 sq km) and a contested area with Brazil (237 sq km). [3]Average for 3-member households only. [4]Excludes military conscripts. [5]Import revenue less imputed bank service charges. [6]Includes 167,000 unemployed. [7]Imports c.i.f.; exports f.o.b. [8]Of which 1,641 km were operational in 2006. [9]PLUNA only. [10]Circulation of daily newspapers. [11]Subscribers. [12]Universidad de la República and Universidad Católica del Uruguay only; 2005.

Internet resources for further information:
- **Instituto Nacional de Estadística—Uruguay http://www.ine.gub.uy**
- **Banco Central del Uruguay http://www.bcu.gub.uy**

Uzbekistan

Official name: Ŭzbekiston Respublikasi (Republic of Uzbekistan).
Form of government: republic with two legislative bodies (Senate [100[1]]; Legislative Chamber [120]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Tashkent (Toshkent).
Official language: Uzbek.
Official religion: none.
Monetary unit: sum (UZS); valuation (Sept. 8, 2008) 1 U.S.$ = UZS 1,323; 1 £ = UZS 2,337.

Area and population

Provinces	Administrative centres	area sq mi	area sq km	population 2007 estimate[2]
Andijon	Andijon	1,600	4,200	2,333,657
Buxoro	Bukhara (Buxoro)	15,200	39,400	1,576,299
Fargona	Fargona	2,600	6,800	2,788,476
Jizzax	Jizzax	7,900	20,500	1,063,608
Namangan	Namangan	3,100	7,900	2,127,749
Navoiy	Navoiy	42,800	110,800	905,208
Qashqadaryo	Qarshi	11,000	28,400	2,420,346
Samarqand	Samarkand (Samarqand)	6,300	16,400	2,779,986
Sirdaryo	Guliston	2,000	5,100	657,617
Surxondaryo	Termiz	8,000	20,800	1,954,294
Toshkent	Tashkent	5,800	15,000	4,868,758[3]
Xorazm	Urganch	2,400	6,300	1,453,063
City				
Tashkent	—	100	300	[3]
Autonomous republic				
Qoraqalpoghiston	Nukus	63,900	165,600	1,678,191
TOTAL		172,700	447,400[4]	26,607,252

Demography

Population (2008): 27,345,000.
Density (2008): persons per sq mi 158.3, persons per sq km 61.1.
Urban-rural (2006): urban 35.9%; rural 64.1%.
Sex distribution (2006): male 49.56%; female 50.44%.
Age breakdown (2006): under 15, 32.9%; 15–29, 30.3%; 30–44, 19.6%; 45–59, 11.2%; 60–74, 4.3%; 75 and over, 1.7%.
Population projection: (2010) 27,866,000; (2020) 30,565,000.
Ethnic composition (2000): Uzbek 78.3%; Tajik 4.7%; Kazakh 4.1%; Tatar 3.3%; Russian 2.5%; Karakalpak 2.1%; other 5.0%.
Religious affiliation (2000): Muslim (mostly Sunnī) 76.2%; Russian Orthodox 0.8%; Jewish 0.2%; nonreligious 18.1%; other 4.7%.
Major cities (2007): Tashkent 1,959,190; Namangan 446,237; Andijon 321,622; Samarkand 312,863; Bukhara 249,037; Nukus 240,734.

Vital statistics

Birth rate per 1,000 population (2007): 22.4 (world avg. 20.3).
Death rate per 1,000 population (2007): 5.2 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2006): 2.91.
Marriage/divorce rates per 1,000 population (2007): 9.2/0.7.
Life expectancy at birth (2006): male 61.2 years; female 68.1 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 297.5; diseases of the respiratory system 41.5; accidents, poisoning, and violence 37.0; cancers 35.6; diseases of the digestive system 31.7.

National economy

Budget (2006)[5]. Revenue: UZS 6,406,000,000,000 (taxes on income and profits 20.2%; VAT 17.3%; taxes on property and resources 12.2%; excise taxes 10.2%). Expenditures: UZS 6,331,000,000,000 (health and education 34.4%; social security 27.0%; national economy 9.0%; centralized investments 8.1%).
Household income and expenditure. Average household size (2004) 5.6; income per household (1995) UZS 35,165 (U.S.$1,040); sources of income (2006): self-employment and rent 55.1%, wages and salaries 29.8%, transfers 15.1%; expenditure (1995): food and beverages 71%, clothing and footwear 14%, recreation 6%, household durables 4%, housing 3%.
Public debt (external, outstanding; 2006): U.S.$3,343,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 5,900,000, seed cotton 3,300,000, tomatoes 1,327,000, potatoes 890,000, grapes 590,400, onions 536,000, apples 447,100, cabbages 276,000, cucumbers 195,300, rice 169,000, corn (maize) 165,000, apricots 155,300, raw silk 487; livestock (number of live animals) 10,450,000 sheep, 7,042,500 cattle, 1,974,300 goats, 16,500 camels, 24,220,000 chickens; roundwood (2006) 26,700 cu m, of which fuelwood 69%; fisheries production (2006) 7,200 (from aquaculture 53%). Mining and quarrying (2005): copper (metal content) 100,000; uranium (metal content) 2,300; gold 90,000 kg. Manufacturing (value of production in UZS '000,000,000; 2006): nonferrous metals 2,705; mineral fuels 2,487; machinery and metalworking products 1,986; food and food products 1,699; chemicals and chemical products 715; iron and steel 328. Energy production (consumption): electricity (kW-hr; 2007) 48,950,000,000 ([2006] 47,000,000,000); lignite (metric tons; 2005) 3,003,000 (2,930,000); crude petroleum (barrels; 2006) 39,465,000 ([2005] 25,729,000); petroleum products (metric tons; 2005) 5,062,000 (4,821,000); natural gas (cu m; 2006) 62,500,000,000 (48,400,000,000).
Population economically active (2004): total 9,945,500; activity rate of total population 38.7% (participation rates [2001]: ages 16–59 [male], 16–54 [female] 70.4%; female 44.0%; unemployed [official rate; 2007] 0.8%).

Price index (2000 = 100)

	2000	2001	2002	2003	2004	2005
Consumer price index	100.0	127.4	162.6	179.3	182.2	193.8

Gross national income (GNI; 2007): U.S.$19,721,000,000 (U.S.$730 per capita); purchasing power parity GNI (U.S.$2,450 per capita).

Structure of gross domestic product and labour force

	2006 in value UZS '000,000	2006 % of total value	2000 labour force	2000 % of labour force
Agriculture, fishing	5,003,000	24.1	3,083,000	34.3
Manufacturing, mining, and public utilities	4,587,800	22.1	1,145,000	12.7
Construction	1,058,700	5.1	676,000	7.5
Transp. and commun.	2,366,600	11.4	382,000	4.3
Trade, hotels	1,972,100	9.5	754,000	8.4
Finance, real estate Pub. admin., defense Services	3,861,200	18.6	2,042,000	22.7
Other	1,909,900[6]	9.2[6]	901,000[7]	10.0[7]
TOTAL	20,759,300	100.0	8,983,000	100.0[4]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 43; remittances (2003) 600; foreign direct investment (2004–06 avg.) 146; official development assistance (2006) 149. Disbursements for (U.S.$'000,000): tourism (2006) n.a.; remittances (2006) n.a.
Land use as % of total land area (2003): in temporary crops 11.0%, in permanent crops 0.8%, in pasture 52.2%; overall forest area (2005) 8.0%.

Foreign trade[8]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+276.4	+760.8	+1,037.0	+1,317.5	+1,993.9	+3,755.9
% of total	4.8%	11.4%	12.0%	13.9%	18.5%	26.4%

Imports (2006): U.S.$4,395,900,000 (machinery and metalworking products 40.3%; chemicals and chemical products 15.0%; base metals 10.4%; food products 8.1%). *Major import sources:* Russia 27.8%; South Korea 15.2%; China 10.4%; Kazakhstan 7.3%; Germany 7.1%; Ukraine 4.8%.
Exports (2006): U.S.$6,389,800,000 (cotton fibre 17.2%; energy products [including natural gas and crude petroleum] 13.1%; selected base metals 12.9%; machinery and apparatus 10.1%; gold, n.a.; uranium, n.a.). *Major export destinations:* Russia 23.7%; Poland 11.7%; China 10.4%; Turkey 7.7%; Kazakhstan 5.9%; Ukraine 4.7%.

Transport and communications

Transport. Railroads (2007): length (2006) 3,950 km; passenger-km 2,400,000,000; metric ton-km cargo 21,600,000,000. Roads (2005): total length 84,400 km (paved 85%). Vehicles (1994): passenger cars 865,300; buses 14,500. Air transport (2007): passenger-km 5,400,000,000; metric ton-km cargo 76,600,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	7,232	280	PCs	2006	...	...
Telephones				Dailies	2004	50[9]	1.9[9]
Cellular	2005	720[10]	27[10]	Internet users	2007	1,200	44
Landline	2005	1,794	67	Broadband	2005	8.3[10]	0.3[10]

Education and health

Educational attainment (2002)[11]. Percentage of population age 25 and over having: no formal education/unknown 2.5%; incomplete primary education 9.0%; primary 7.3%; secondary 66.0%; higher 15.2%. *Literacy* (2003): percentage of total population age 15 and over literate 99.3%.

Education (2003–04)

	schools[12]	teachers	students	student/ teacher ratio
Primary (age 6–13) Secondary (age 14–17)	9,835	476,300	2,440,603 3,856,525	... ...
Voc., teacher tr.	892	39,666	378,423	9.5
Higher	64	25,397	407,582	16.0

Health (2005): physicians 70,159 (1 per 371 persons); hospital beds 135,143 (1 per 193 persons); infant mortality rate per 1,000 live births (2006) 70.0; undernourished population (2002–04) 6,500,000 (25% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

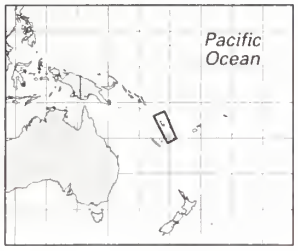
Military

Total active duty personnel (November 2007): 67,000 (army 74.6%, air force 25.4%); German troops 163. *Military expenditure as percentage of GDP* (2005): 0.4%; per capita expenditure U.S.$2.

[1]Includes 16 nonelected seats. [2]World Gazetteer estimates. [3]Toshkent province includes Tashkent city. [4]Detail does not add to total given because of rounding. [5]General government consolidated budget. [6]Indirect taxes less subsidies. [7]Includes 863,000 persons on forced leave and 38,000 unemployed. [8]Imports c.i.f., exports f.o.b. [9]Estimated circulation of daily newspapers. [10]Subscribers. [11]Based on the 2002 Uzbekistan Health Examination Survey, of which 9,624 respondents were age 25 and over. [12]2004–05.

Internet resources for further information:
- **UNDP Uzbekistan in Figures http://www.statistics.uz**
- **State Committee on Statistics http://www.stat.uz/STAT/index.php?lng=1**

Vanuatu



Official name: Ripablik blong Vanuatu (Bislama); République de Vanuatu (French); Republic of Vanuatu (English).
Form of government: republic with a single legislative house (Parliament [52]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Port Vila.
Official languages: Bislama; French; English.
Official religion: none.
Monetary unit: vatu (Vt); valuation (Sept. 8, 2008) 1 U.S.$ = Vt 104.20; 1 £ = Vt 184.09.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2001 estimate
Malampa	Lakatoro	1,073	2,779	33,627
Penama	Longana	463	1,198	27,560
Sanma	Luganville	1,640	4,248	38,282
Shefa	Port Vila	562	1,455	57,307
Tafea	Isangel	628	1,627	30,518
Torba	Sola	341	882	8,150
TOTAL		4,707	12,190[1]	195,444

Demography

Population (2008): 233,000.
Density (2008): persons per sq mi 49.5, persons per sq km 19.1.
Urban-rural (2005): urban 23.5%; rural 76.5%.
Sex distribution (2003): male 51.40%; female 48.60%.
Age breakdown (1999): under 15, 42.2%; 15–29, 26.9%; 30–44, 17.0%; 45–59, 8.8%; 60–74, 3.7%; 75 and over, 1.4%.
Population projection: (2010) 245,000; (2020) 313,000.
Doubling time: 46 years.
Ethnic composition (1999): Ni-Vanuatu (Melanesian) 98.7%; European and other Pacific Islanders 1.3%.
Religious affiliation (2005): Protestant *c.* 70%, of which Presbyterian *c.* 32%, Anglican *c.* 13%, Adventist *c.* 11%; Roman Catholic *c.* 13%; traditional beliefs (John Frum cargo cult) *c.* 5%; other *c.* 12%.
Major towns (2004): Port Vila 36,900; Luganville 12,300.

Vital statistics

Birth rate per 1,000 population (2005): 23.1 (world avg. 20.3).
Death rate per 1,000 population (2005): 7.9 (world avg. 8.6).
Natural increase rate per 1,000 population (2005): 15.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2005): 2.77.
Marriage/divorce rates per 1,000 population: n.a./n.a.
Life expectancy at birth (2005): male 61.0 years; female 64.1 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 194.5; infectious and parasitic diseases 112.6; diseases of the respiratory system 65.3; malignant neoplasms (cancers) 50.3; diseases of the digestive system 26.1.

National economy

Budget (2007). Revenue: Vt 11,764,000,000 (tax revenue 83.5%; nontax revenue 10.2%; foreign grants 6.3%). Expenditures: Vt 11,860,000,000 (wages and salaries 55.0%; goods and services 27.1%; transfers 9.1%; interest payments 3.3%; other [including technical assistance] 5.5%).
Public debt (external, outstanding; 2004): U.S.$71,900,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 322,000, roots and tubers 43,000, copra 21,644, bananas 14,500, peanuts (groundnuts) 2,550, cacao beans 1,400, kava (2004) 825; livestock (number of live animals) 174,137 cattle, 88,694 pigs, 8,792 goats, 368,251 chickens; roundwood (2006) 119,000 cu m, of which fuelwood 76%; fisheries production (2006) 88,189 (from aquaculture, negligible). Mining and quarrying: small quantities of coral-reef limestone, crushed stone, sand, and gravel. Manufacturing (value added in Vt '000,000; 1995): food, beverages, and tobacco 645; wood products 423; fabricated metal products 377; paper products 125; chemical, rubber, plastic, and nonmetallic products 84; textiles, clothing, and leather 54. Energy production (consumption): electricity (kWhr; 2005) 45,000,000 (45,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2005) none (29,000); natural gas, none (none).
Land use as % of total land area (2003): in temporary crops 1.6%, in permanent crops 7.0%, in pasture 3.4%; overall forest area (2005) 36.1%.
Population economically active (1999): total 76,370; activity rate of total population 40.9% (participation rates: ages 15–64, 75.1%; female 44.9%; unemployed [2000] 1.7%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	103.7	105.7	108.9	110.4	111.7	114.0	118.5

Gross national income (GNI; 2007): U.S.$417,000,000 (U.S.$1,840 per capita); purchasing power parity GNI (U.S.$3,440 per capita).

Structure of gross domestic product and labour force

	2006 in value Vt '000,000	2006 % of total value	1999 labour force	1999 % of labour force
Agriculture	6,732	14.7	58,690[2]	76.8[2]
Mining	..	..	3	—
Manufacturing	1,477	3.2	810	1.1
Construction	1,559	3.4	1,494	2.0
Public utilities	917	2.0	107	0.1
Transportation and communications	5,892	12.8	1,570	2.1
Trade, restaurants	17,376	37.9	4,070	5.3
Finance, real estate	7,428	16.2	738	1.0
Pub. admin., defense	6,195	13.5	2,513	3.3
Services	985	2.1	5,117	6.7
Other	–2,660[3]	–5.8[3]	1,258[4]	1.6[4]
TOTAL	45,901	100.0	76,370	100.0

Household income and expenditure (2006). Average household size 4.7; income per household Vt 728,532 (U.S.$6,585); sources of income: wages and salaries 35.1%, own-account production[5] 27.7%, agriculture, fishing, and handicrafts 26.2%; expenditure: own-account production[5] 31.3%, food 22.8%, tobacco and alcohol 10.4%, housing and energy 8.6%, household furnishings 6.1%, transportation 5.5%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 92; remittances (2007) 11; foreign direct investment (FDI; 2004–06 avg.) 31; official development assistance (2006) 49. Disbursements for (U.S.$'000,000): tourism (2006) 9; remittances (2007) 18; FDI (2004–06 avg.) 1.

Foreign trade[6]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006	2007
Vt '000,000	–10,223	–9,843	–9,451	–10,138	–12,189	–12,614	–17,540
% of total	63.8%	65.5%	59.2%	54.9%	59.6%	55.1%	74.3%

Imports (2006): Vt 17,645,000,000 (machinery and transport equipment 25.9%, food and live animals 18.3%, mineral fuels 11.9%, chemicals and chemical products 9.6%). *Major import sources* (2007): Australia 31.3%; New Zealand 16.8%; Singapore 12.5%; Fiji 9.1%; Japan 4.5%.
Exports (2006): Vt 5,130,000,000 (domestic exports 71.2%, of which kava 13.6%, beef 9.1%, copra 6.3%, timber 6.0%, cocoa 5.4%; reexports 28.8%). *Major export destinations* (2007)[7]: EU 23.1%; New Caledonia 13.3%; Japan 7.3%; Australia 4.3%; New Zealand 3.9%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 665 mi, 1,070 km (paved 24%). Vehicles (2001): passenger cars 2,600; trucks and buses 4,400. Air transport (2005)[8]: passenger-mi 137,236,000, passenger-km 220,861,000; short ton-mi cargo 1,045,000, metric ton-km cargo 1,647,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	2.7	13	PCs	2005	3.0	14
Telephones				Dailies	2005	2.0[9]	9.5[9]
Cellular	2007	26[10]	115[10]	Internet users	2007	17	75
Landline	2007	8.8	39	Broadband	2004	0.02[10]	0.1[10]

Education and health

Educational attainment (1999). Percentage of population age 15 and over having: no formal schooling 18.0%; incomplete primary education 20.6%; completed primary 35.5%; some secondary 12.2%; completed secondary 8.5%; higher 5.2%, of which university 1.3%. *Literacy* (2007): total population age 15 and over literate 74%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 6–11)	..	1,947	38,960	20.0
Secondary (age 11–18)	..	692	10,591	15.3
Voc., teacher tr.	.	80[11]	3,246	..
Higher	.	27[11]	2,639	..

Health (2004): physicians 29 (1 per 7,138 persons); hospital beds (2003) 397 (1 per 511 persons); infant mortality rate per 1,000 live births (2005) 55.2; undernourished population (2002–04) 20,000 (11% of total population based on the consumption of a minimum daily requirement of 1,790 calories).

Military

Total active duty personnel (2006): none; in 2005 Vanuatu had a paramilitary force of about 200.

[1]Detail does not add to total given because of rounding. [2]Mostly not stated, which are significantly subsistence workers. [3]Less imputed bank service charges. [4]Unemployed. [5]Production of goods and services that are retained by their producers for their own final consumption. [6]Imports c.i.f.; exports f.o.b. [7]Destination of domestic exports only. [8]Air Vanuatu only. [9]Circulation of daily newspapers. [10]Subscribers. [11]2003.

Internet resources for further information:
- **Vanuatu National Statistics Office**
  http://www.spc.int/prism/country/vu/stats
- **Reserve Bank of Vanuatu**
  http://www.rbv.gov.vu

Venezuela

Official name: República Bolivariana de Venezuela (Bolivarian Republic of Venezuela).
Form of government: federal multiparty republic with a unicameral legislature (National Assembly [167[1]]).
Head of state and government: President.
Capital: Caracas.
Official language: Spanish[2].
Official religion: none.
Monetary unit: bolivar[3] (plural bolívares; VEF); valuation (Sept. 8, 2008) 1 U.S.$ = VEF 2.15; 1 £ = VEF 3.794.

Area and population

States	area sq km	population 2007 estimate[5]
Amazonas	180,145	142,220
Anzoátegui	43,300	1,477,926
Apure	76,500	473,941
Aragua	7,014	1,665,247
Barinas	35,200	756,581
Bolívar	238,000	1,534,825
Carabobo	4,650	2,226,982
Cojedes	14,800	300,288
Delta Amacuro	40,200	152,679
Falcón	24,800	901,518
Guárico	64,986	745,124
Lara	19,800	1,795,069
Mérida	11,300	843,830
Miranda	7,950	2,857,943
Monagas	28,900	855,322
Nueva Esparta	1,150	436,944
Portuguesa	15,200	873,375
Sucre	11,800	916,646
Táchira	11,100	1,177,255
Trujillo	7,400	711,392
Vargas	1,497	332,938
Yaracuy	7,100	597,721
Zulia	63,100	3,620,189
Other federal entities		
Dependencias Federales	120	1,765
Distrito Capital	433	2,085,488
TOTAL	916,445	27,483,208

Demography

Population (2008): 27,884,000.
Density (2008): persons per sq mi 78.8, persons per sq km 30.4.
Urban-rural (2005): urban 93.4%; rural 6.6%.
Sex distribution (2007): male 50.19%; female 49.81%.
Age breakdown (2006): under 15, 32.1%; 15–29, 26.9%; 30–44, 20.5%; 45–59, 13.2%; 60–74, 5.5%; 75–84, 1.5%; 85 and over, 0.3%.
Population projection: (2010) 28,807,000; (2020) 33,038,000.
Ethnic composition (2000): mestizo 63.7%; local white 20.0%; local black 10.0%; other white 3.3%; Amerindian 1.3%; other 1.7%.
Religious affiliation (2005): Roman Catholic 84.5%; Protestant 4.0%; nonreligious/other 11.5%.
Major cities/urban agglomerations (2001/2005): Caracas 1,836,000 (2,913,000); Maracaibo 1,609,000 (2,255,000); Valencia 1,196,000 (2,451,000); Barquisimeto 811,000 (1,029,000); Ciudad Guayana 629,000.

Vital statistics

Birth rate per 1,000 population (2007): 21.5 (world avg. 20.3).
Death rate per 1,000 population (2007): 5.1 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 2.58.
Marriage/divorce rates per 1,000 population (2007): 3.4/1.1.
Life expectancy at birth (2007): male 70.7 years; female 76.6 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 137.4, of which ischemic heart disease 71.2; malignant neoplasms 67.8; violence/suicide 43.3; accidents 40.6; infectious and parasitic diseases 31.7.

National economy

Budget (2006). Revenue: VEB 117,326,000,000,000 (petroleum income 52.9%, of which royalties 37.5%, taxes 13.0%, nonpetroleum income 47.1%, of which VAT 22.4%). Expenditures: VEB 117,255,000,000,000 (current expenditure 75.0%; development expenditure 22.8%; other 2.2%).
Public debt (external, outstanding; 2006): U.S.$27,180,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 9,300,000, corn (maize) 2,104,000, rice 800,000, bananas 523,000, sorghum 498,000, cassava 490,000, oranges 378,000, pineapples 360,000, coffee 75,000; livestock (number of live animals) 16,700,000 cattle, 120,000,000 chickens; roundwood (2006) 5,556,521 cu m, of which fuelwood 70%; fisheries production (2006) 482,210 (from aquaculture 5%). Mining and quarrying (2006): iron ore (metal content) 15,200,000; bauxite 5,928,000; phosphate rock (gross weight) 400,000; gold 12,400 kg; gem diamonds 45,000 carats. Manufacturing (value added in VEB '000,000,000; 2004): food products 8,122; iron and steel 3,022; refined petroleum 2,890; soaps, paints, and pharmaceuticals 1,835; base chemicals 1,582; printing and publishing 1,580; fabricated metals 1,465; nonferrous base metals 1,377. Energy production (consumption): electricity (kW-hr; 2005) 101,544,000,000 (101,544,000,000); coal (metric tons; 2005) 7,195,000 (52,000); crude petroleum (barrels; 2007) 888,000,000 ([2005] 384,000,000); petroleum products (metric tons; 2005) 60,084,000 (25,901,000); natural gas (cu m; 2005) 24,320,000,000 (24,320,000,000).
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 768; remittances (2007) 136; foreign direct investment (FDI; 2004–06 avg.) 1,174; official development assistance (2006) 58. Disbursements for (U.S.$'000,000): tourism (2006) 1,229; remittances (2007) 598; FDI (2004–06 avg.) 1,297.
Household income and expenditure. Average household size (2005) 4.5; average annual household income (2006) VEB 13,848,000 (U.S.$6,450)[6]; expenditure (2002): food and nonalcoholic beverages 27.3%, housing and energy 13.5%, transport 10.5%, expenditures in cafés and hotels 9.0%.
Gross national income (GNI; 2007): U.S.$201,146,000,000 (U.S.$7,320 per capita); purchasing power parity GNI (U.S.$11,920 per capita).

Structure of gross domestic product and labour force

	2006			
	in value VEB '000,000,000[7]	% of total value[7]	labour force	% of labour force
Agriculture			1,016,000	8.2
Petroleum and natural gas	7,408[8]	14.4[8]	77,900	0.6
Mining	329	0.6		
Manufacturing	8,505[9]	16.6[9]	1,350,900	10.9
Construction	3,366	6.6	1,057,600	8.5
Public utilities	1,178	2.3	50,400	0.4
Transp. and commun.	3,757	7.3	913,600	7.4
Trade, hotels	5,295	10.3	2,620,000	21.2
Finance, real estate	7,183	14.0	551,000	4.5
Pub. admin., defense	5,795	11.3	3,452,600	27.9
Services	2,668	5.2		
Other	5,854	11.4	1,289,700[10]	10.4[10]
TOTAL	51,338	100.0	12,379,700	100.0

Population economically active (2006): total 12,379,700; activity rate 45.9% (participation rates: ages 15–64, 68.7%; female 38.6%; unemployed [July 2006–June 2007] 9.4%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	112.5	137.7	180.6	219.9	255.0	289.8	344.0
Annual earnings index[11]	110.0	132.0	171.6	223.1	281.3	355.8	...

Land use as % of total land area (2003): in temporary crops 2.9%, in permanent crops 0.9%, in pasture 20.7%; overall forest area (2005) 54.1%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.$'000,000	+12,314	+16,617	+24,051	+33,639	+30,826	+23,702
% of total	34.5%	49.9%	45.0%	43.5%	33.5%	20.7%

Imports (2006): U.S.$30,559,000,000 (machinery and apparatus 26.6%, road vehicles 12.1%, chemicals and chemical products 11.0%, food 5.9%, unspecified 20.1%). *Major import sources:* U.S. 30.6%; Colombia 10.2%; Brazil 10.1%; Mexico 5.9%; China 4.9%.
Exports (2006): U.S.$61,385,000,000 (crude petroleum 91.6%; iron and steel 2.8%; aluminum 1.7%; organic chemicals 0.6%). *Major export destinations:* U.S. 46.2%; Netherlands Antilles 13.5%; China 3.2%.

Transport and communications

Transport. Railroads: route length (2005) 768 km; metric ton-km cargo (2004) 22,000,000. Roads (2004): total length 96,200 km (paved 34%). Vehicles (2004): passenger cars 2,466,000; trucks and buses 677,000. Air transport (2005): passenger-km 2,578,700,000; metric ton-km cargo 2,100,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	5,000	201	PCs	2005	2,475	98
Telephones				Dailies	2003	1,981[12]	80[12]
Cellular	2007	23,820[13]	861[13]	Internet users	2007	5,720	207
Landline	2007	5,082	184	Broadband	2007	858[13]	31[13]

Education and health

Educational attainment (2003). Percentage of head-of-household population[14] having: no formal schooling 10.2%; primary education or less 38.5%; some secondary 36.9%; completed secondary/higher 14.4%. *Literacy* (2003): 93.0%.

Education (2003–04)

	schools	teachers	students	student/ teacher ratio
Primary (age 6–11)	17,521	172,322	3,449,579	20.0
Lower secondary (age 12–14)	...	109,437	1,383,891	12.6
Further education[15]	...	65,302	569,615	8.7
Higher[16]	48	51,459	626,837	12.2

Health (2003): physicians 35,756 (1 per 722 persons); hospital beds 74,866 (1 per 345 persons); infant mortality rate (2006) 23.0; undernourished population (2002–04) 4,700,000 (18% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2007): 115,000 (army 54.8%, navy 15.2%, air force 10.0%, national guard 20.0%). *Military expenditure as percentage of GDP* (2005): 1.2%; per capita expenditure U.S.$60.

[1]Includes 3 seats reserved for indigenous residents. [2]Indigenous Indian languages are also official. [3]The bolívar was redenominated on Jan. 1, 2008; as of this date 1,000 (old) bolívares (VEB) = 1 (new) bolívar or "bolívar fuerte" (VEF). [4]The black market rate of the "bolívar fuerte" (VEF) in May 2008 was about 1 U.S.$ = VEF 5.20. [5]Official projection based on 2001 census. [6]At official exchange rate; excludes top 2.4% of all households by income. [7]At prices of 1997. [8]Includes refined petroleum. [9]Excludes refined petroleum. [10]Includes 1,154,900 unemployed. [11]Minimum wage. [12]Top ten dailies only. [13]Subscribers. [14]Data based on survey of 5,528,902 heads of households. [15]Excludes adult education and special needs education. [16]Universities only.

Internet resources for further information:
- **Banco Central de Venezuela http://www.bcv.org.ve/EnglishVersion**
- **Instituto Nacional de Estadística http://www.ine.gov.ve**

Vietnam

Official name: Cong Hoa Xa Hoi Chu Nghia Viet Nam (Socialist Republic of Vietnam).
Form of government: socialist republic with one legislative house (National Assembly [493]).
Head of state: President.
Head of government: Prime Minister.
Capital: Hanoi.
Official language: Vietnamese.
Official religion: none.
Monetary unit: dong (VND); valuation (Sept. 8, 2008) 1 U.S.$ = VND 16,590; 1 £ = VND 29,310.

Area and population

Economic regions[1]	Principal cities	area sq mi	area sq km	population 2007 estimate[2]
Central Highlands	Buon Ma Thuot	21,104	54,660	4,935,200
Mekong River Delta	Long Xuyen	15,678	40,605	17,523,900
North Central Coast	Hue	19,904	51,552	10,722,800
North East	Thai Nguyen	24,720	64,025	9,543,900
North West	Hoa Binh	14,492	37,534	2,650,100
Red River Delta	Hanoi	5,738	14,862	18,400,600
South Central Coast	Da Nang	12,806	33,166	7,185,200
South East	Ho Chi Minh City	13,440	34,808	14,193,200
TOTAL		127,882	331,212	85,154,900

Demography

Population (2008): 88,537,000[3].
Density (2008): persons per sq mi 692.3, persons per sq km 267.3.
Urban-rural (2005): urban 27.0%; rural 73.0%.
Sex distribution (2007): male 49.15%; female 50.85%.
Age breakdown (2005): under 15, 27.9%; 15–29, 30.1%; 30–44, 22.2%; 45–59, 12.1%; 60–74, 5.4%; 75–84, 1.9%; 85 and over, 0.4%.
Population projection: (2010) 90,845,000; (2020) 101,656,000.
Ethnic composition (1999): Vietnamese 86.2%; Tho (Tay) 1.9%; Montagnards 1.7%; Thai 1.7%; Muong 1.5%; Khmer 1.4%; Nung 1.1%; Miao (Hmong) 1.0%; Dao 0.8%; other 2.7%.
Religious affiliation (2005): Buddhist *c.* 48%; New-Religionist (mostly Cao Dai and Hoa Hao) *c.* 11%; traditional beliefs *c.* 10%; Roman Catholic *c.* 7%; Protestant *c.* 1%; nonreligious/atheist *c.* 20%; other *c.* 3%.
Major cities (2004): Ho Chi Minh City 3,452,100 (5,065,000[4]); Hanoi 1,420,400 (4,164,000[4]); Haiphong 591,100 (1,873,000[4]); Da Nang 459,400.

Vital statistics

Birth rate per 1,000 population (2005): 17.1 (world avg. 20.3).
Death rate per 1,000 population (2005): 6.2 (world avg. 8.6).
Marriage/divorce rates per 1,000 population (2002): 12.1/0.5.
Total fertility rate (avg. births per childbearing woman; 2005): 1.94.
Life expectancy at birth (2005): male 67.8 years; female 73.6 years.
Adult population (ages 15–49) *living with HIV* (2007): 0.5% (world avg. 0.8%).
Major causes of death per 100,000 population (2002): diseases of the circulatory system 200.7; infectious and parasitic diseases 93.6; malignant neoplasms (cancers) 80.4; diseases of the respiratory system 64.3.

National economy

Budget (2007). Revenue: VND 281,900,000,000,000 (tax revenue 82.1%, of which corporate income taxes 35.1%, VAT 28.0%; nontax revenues 16.8%; grants 1.1%). Expenditures: VND 360,100,000,000,000 (current expenditures 61.5%, of which social services 27.0%; capital expenditures 27.6%; off-budget investment expenditure 10.9%).
Public debt (external, outstanding; 2006): U.S.$17,518,000,000.
Gross national income (GNI; 2007): U.S.$67,236,000,000 (U.S.$790 per capita); purchasing power parity GNI (U.S.$2,550 per capita).

Structure of gross domestic product and labour force

	2006 in value VND '000,000,000	2006 % of total value	2006 labour force[5]	2006 % of labour force[5]
Agriculture, forestry, fishing	198,266	20.4	24,122,800	55.7
Public utilities	33,386	3.4		
Mining	99,919	10.3	6,198,700	14.3
Manufacturing	206,945	21.3		
Construction	64,503	6.6	1,994,000	4.6
Transp. and commun.	43,825	4.5	1,127,000	2.6
Trade, restaurants	168,655	17.3	5,855,000	13.5
Finance, real estate	54,421	5.6		
Pub. admin., defense	26,737	2.7	4,049,700	9.3
Services, other	77,133	7.9		
TOTAL	973,790	100.0	43,347,200	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 35,566,800, sugarcane 16,000,000, cassava 8,900,000, corn (maize) 4,312,500, sweet potatoes 1,450,000, bananas 1,355,000, coffee 1,060,000, coconuts 962,000, cashews 961,000, oranges 601,000, natural rubber 550,000, groundnuts (peanuts) 490,000, pineapples 470,000, tea 153,000, black pepper 82,000, cinnamon 9,500; livestock (number of live animals) 26,500,000 pigs, 6,840,000 cattle, 2,921,100 buffalo, 62,800,000 ducks; roundwood (2006) 30,829,468 cu m, of which fuelwood 85%; fisheries production (2006) 3,617,627 (from aquaculture 46%); aquatic plants production (2006) 30,000 (from aquaculture 100%). Mining and quarrying (2006): phosphate rock (gross weight) 1,220,000; tin (metal content) 3,500. Manufacturing (value added in U.S.$'000,000; 2000): food products 736; cement, bricks, and pottery 418; wearing apparel 376; beverages 359; footwear 308; tobacco products 228; paints, soaps, and pharmaceuticals 206. Energy production (consumption): electricity (kW-hr; 2005) 53,463,000,000 (53,463,000,000); coal (metric tons; 2005) 32,400,000 (14,900,000); crude petroleum (barrels; 2005) 131,725,000 (negligible); petroleum products (metric tons; 2005) 343,000,000 (11,811,000); natural gas (cu m; 2005) 6,342,000,000 (6,342,000,000).
Population economically active (2004): total 43,242,000; activity rate 52.9% (participation rates: ages 15–64, 77.7%; female 49.0%; unemployed [2006] 4.8%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	99.6	103.4	106.6	114.9	124.4	133.7	145.6

Household income and expenditure (2004). Average household size 4.4; average annual income per household (1997–98)[6] VND 15,494,000 (U.S.$1,165); sources of income: wages and salaries 32.7%, self-employment 27.0%, agriculture 22.6%; expenditure: food, beverages, and tobacco 53.5%, transportation and communications 10.8%, household furnishings 9.1%, health 7.0%, education 6.3%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 3,200; remittances (2007) 5,500; foreign direct investment (FDI; 2004–06 avg.) 1,982; official development assistance (2006) 1,846. Disbursements for (U.S.$'000,000): tourism, n.a.; FDI (2005–06 avg.) 68.
Land use as % of total land area (2003): in temporary crops 21.2%, in permanent crops 7.5%, in pasture 2.1%; overall forest area (2005) 39.7%.

Foreign trade[7]

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007[8]
U.S.$'000,000	–3,040	–5,107	–5,484	–4,314	–4,805	–9,045
% of total	8.3%	11.2%	9.4%	6.2%	5.7%	10.4%

Imports (2005): U.S.$36,761,000,000 (machinery equipment [including aircraft] 20.7%; chemicals and chemical products 14.4%; refined petroleum 13.7%; textile yarn, fabrics, made-up articles 9.3%; iron and steel 8.7%). *Major import sources* (2006): China 16.5%; Singapore 14.0%; Taiwan 10.7%; Japan 10.5%; South Korea 8.6%.
Exports (2005): U.S.$32,447,000,000 (crude petroleum 22.7%; garments 14.4%; footwear 9.5%; marine products 8.5%; electrical machinery 4.5%; rice 4.3%; furniture 4.3%). *Major export destinations* (2006): U.S. 19.7%; Japan 13.1%; Australia 9.2%; China 7.6%; Singapore 4.1%; Germany 3.6%.

Transport and communications

Transport. Railroads (2005): route length 2,600 km; passenger-km 4,580,000,000; metric ton-km cargo 2,948,400,000. Roads (2004): total length 137,359 km (paved 44%). Vehicles (2003): passenger cars, trucks, and buses 600,000. Air transport (2005–06): passenger-km 11,787,000,000; metric ton-km cargo 251,100,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	15,938	197	PCs	2005	1,174	14
Telephones				Dailies	2003	1,530[9]	19[9]
Cellular	2007	23,730[10]	272[10]	Internet users	2007	17,872	205
Landline	2007	28,529	327	Broadband	2007	1,294[10]	15[10]

Education and health

Educational attainment (1999). Percentage of population age 18 and over having: no formal education 9.0%; primary education 29.2%; lower secondary 32.5%; upper secondary 24.9%; incomplete/complete higher 4.3%; advanced degree 0.1%. *Literacy* (2003): percentage of population age 15 and over literate 94.0%; males 95.8%; females 92.3%.

Education (2006–07)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	15,607	349,500	7,029,400	20.1
Secondary (age 13–18)	11,986	440,100	9,227,200	21.0
Vocational	269	14,500	468,800	32.3
Higher	299	53,400	1,666,200	31.2

Health (2007): physicians 54,798 (1 per 1,594 persons); hospital beds 210,800 (1 per 415 persons); infant mortality rate (2005) 26.0; undernourished population (2002–04) 13,000,000 (16% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2007): 455,000 (army 90.5%, navy 2.9%, air force 6.6%). *Military expenditure as percentage of GDP* (2005): 6.0%; per capita expenditure U.S.$38.

[1]Eight economic regions are divided into 59 provinces and 5 municipalities. [2]Official figures. [3]Estimate of *UN World Population Prospects (2006 Revision)*. [4]2005 urban agglomeration. [5]Employed only. [6]Based on a survey of about 6,000 urban and rural households. [7]Imports c.i.f.; exports f.o.b. [8]Excludes November and December. [9]Circulation of the top 10 dailies only. [10]Subscribers.

Internet resources for further information:
- **Ministry of Foreign Affairs http://www.mofa.gov.vn/en**
- **General Statistics Office of Vietnam http://www.gso.gov.vn/default_en.aspx?tabid=491**

Virgin Islands (U.S.)

Official name: Virgin Islands of the United States.
Political status: organized unincorporated territory of the United States with one legislative house (Senate [15]).
Chief of state: President of the United States.
Head of government: Governor.
Capital: Charlotte Amalie.
Official language: English.
Official religion: none.
Monetary unit: U.S. dollar (U.S.$); valuation (Sept. 8, 2008) 1 £ = U.S.$1.77.

Area and population

Islands[1]	Principal towns	area sq mi	area sq km	population 2007 estimate
St. Croix	Christiansted	84	218	55,293
St. John	Cruz Bay[2]	20	52	4,359
St. Thomas	Charlotte Amalie	32	83	53,160
TOTAL		136	353	112,812

Demography

Population (2008): 113,000.
Density (2008): persons per sq mi 830.9, persons per sq km 320.1.
Urban-rural (2006): urban 94.4%; rural 5.6%.
Sex distribution (2006): male 47.71%; female 52.29%.
Age breakdown (2006): under 15, 22.4%; 15–29, 18.8%; 30–44, 20.0%; 45–59, 21.3%; 60–74, 13.4%; 75 and over, 4.1%.
Population projection: (2010) 114,000; (2020) 112,000.
Doubling time: more than 100 years.
Ethnic composition (2000): black 76.2%; white 13.1%; mixed race 3.5%; Asian 1.1%; other 6.1%[3].
Religious affiliation (2000): Christian 96.3%, of which Protestant 51.0% (including Anglican 13.0%), Roman Catholic 27.5%, independent Christian 12.2%; nonreligious 2.2%; other 1.5%.
Major towns (2000): Charlotte Amalie 11,004 (urban agglomeration 18,914); Christiansted 2,637; Frederiksted 732.

Vital statistics

Birth rate per 1,000 population (2007): 12.6 (world avg. 20.3); (1998) within marriage 30.2%[4]; outside of marriage 69.8%.
Death rate per 1,000 population (2007): 6.4 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 6.2 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 1.91.
Marriage/divorce rates per 1,000 population (2001): 37.4[5]/n.a.
Life expectancy at birth (2007): male 75.8 years; female 82.0 years.
Major causes of death per 100,000 population (2002): malignant neoplasms (cancers) 114.6; diseases of the heart 110.9; cerebrovascular diseases 46.1; accidents 31.6; communicable diseases 27.5; diabetes mellitus 25.6.

National economy

Budget. Revenue (2006): U.S.$718,700,000 (income tax 54.1%; corporate taxes 25.8%). Expenditures (2004): U.S.$592,000,000 (direct federal expenditures 100.0%).
Public debt (2005–06): U.S.$1,150,000,000.
Production. Agriculture, forestry, fishing (value of sales in U.S.$'000; 2002): ornamental plants and other nursery products 799, livestock and livestock products 775 (notably cattle and calves and hogs and pigs), vegetables 340 (notably tomatoes and cucumbers), fruits and nuts 131 (notably mangoes, bananas, papayas, and avocados); livestock (number of live animals; 2007) 8,100 cattle, 4,100 goats, 3,250 sheep, 2,650 hogs and pigs, 40,000 chickens; roundwood, n.a.; fisheries production (2006) 1,624 metric tons (from aquaculture, 1%). Mining and quarrying: sand and crushed stone for local use. Manufacturing (U.S.$'000[6]; 2002): beverages and tobacco products 44,766; stone, clay, and glass products 32,939; computer and electronic products 22,875; chemicals and chemical products 16,989. Energy production (consumption): electricity (kW-hr; 2005) 996,100,000 ([2007] 765,224,000); coal (metric tons; 2002) none (290,000); crude petroleum (barrels; 2002) none (149,000,000); petroleum products (metric tons; 2002) 18,801,000 (1,588,000); natural gas, none (none).
Household income and expenditure (2004). Average household size 2.5; average annual income per household U.S.$37,201; sources of income (1999): wages and salaries 73.9%, transfers 10.0%, self-employment 8.8%, interest, dividends, and rents 5.7%; expenditures (2001)[7]: housing 38.8%, food and beverages 12.5%, transportation 11.1%, education and communications 7.1%, health 5.8%.
Population economically active (2004)[8]: total 44,299; activity rate of total population 39.7% (participation rates: over age 15, 53.1%; female 52.7%; unemployed [2008] 5.7%).

Price and earnings indexes (2001 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	100.0	102.1	104.4	107.1	109.7	113.0	118.4
Annual earnings index[9]	100.0	104.4	106.0	109.4	114.3	121.1	125.0

Gross domestic product (at current market prices; 2006): U.S.$3,080,000,000 (U.S.$27,300 per capita).

Structure of gross territorial product and labour force

	2003 in value U.S.$'000,000	2003 % of total value	2007 labour force	2007 % of labour force
Agriculture, fishing	...	..	...	...
Mining	...	..	[10]	[10]
Manufacturing	189	7.5	2,318	4.4
Construction	142	5.6	3,470[10]	6.6[10]
Public utilities	..	...	1,625	3.1
Transp. and commun.	.	..		
Trade, hotels, restaurants, leisure	648	25.7	14,482	27.5
Services	555	22.0	10,203	19.4
Finance, insurance, real estate	..	...	2,459	4.7
Pub. admin., defense	584	23.2	12,698	24.1
Other	404	16.0	5,415[11]	10.3[11]
TOTAL	2,522[12]	100.0[12]	52,670	100.0[13]

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2007) 1,433; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.$'000,000): tourism, n.a.; remittances, n.a.
Land use as % of total land area (2003): in temporary crops *c.* 6%, in permanent crops *c.* 3%, in pasture *c.* 9%; overall forest area (2005) *c.* 28%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	−374.5	−336.9	−90.6	+359.8	+233.0	+11.8
% of total	4.2%	4.2%	0.8%	2.3%	1.1%	0.5%

Imports (2006): U.S.$11,614,800,000 (foreign crude petroleum 81.8%, other [significantly manufactured goods] 18.2%). *Major import sources:* United States 11.4%; other countries (mostly Venezuela) 88.6%.
Exports (2006): U.S.$11,626,600,000 (refined petroleum 90.0%, unspecified [significantly rum and watches] 10.0%). *Major export destinations:* United States 95.0%; other countries 5.0%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 781 mi, 1,257 km (paved 95%). Vehicles (2006): registered vehicles 69,330. Cruise ships (2006–07): passenger arrivals 1,900,253. Air transport (2006–07)[14]: passenger arrivals 676,039.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	65	594	PCs	2006	...	...
Telephones				Dailies	2005	15[15]	134[15]
Cellular	2005	80[16]	713[16]	Internet users	2007	30	269
Landline	2006	65	576	Broadband	2005	3.0[16]	27[16]

Education and health

Educational attainment (2004). Percentage of population age 25 and over having: no formal schooling 0.5%; incomplete primary to incomplete secondary 39.1%; complete secondary 29.8%; some higher 11.9%; undergraduate 13.8%; advanced degree 4.9%. *Literacy:* n.a.

Education (2005)

	schools	teachers	students	student/teacher ratio
Primary (age 5–12)[17]	28	750[18]	9,475[18]	12.6[18]
Secondary (age 12–18)[17]	8	772[18]	8,329[18]	10.8[18]
Higher	1	107	2,392	22.4

Health (2005): physicians 165 (1 per 680 persons); hospital beds 320[19] (1 per 350 persons); infant mortality rate per 1,000 live births (2007) 7.9; undernourished population, n.a.

Military

Total active duty personnel (2006): no domestic military force is maintained; the United States is responsible for defense and external security.

[1]May be administered by officials assigned by the governor. [2]Census-designated place. [3]*Birthplace* (2004): U.S. Virgin Islands 45.4%; other Caribbean 34.9%, of which St. Kitts and Nevis 6.9%, Dominica 5.9%, Antigua and Barbuda 4.8%; mainland U.S. 11.3%; Puerto Rico 5.4%; other 3.0%. [4]Percentage of births within marriage may be an underestimation due to the common practice of consensual marriage. [5]Includes numerous marriages by visitors. [6]Figures are for value of sales. [7]Weights of consumer price index components. [8]Age 16 and over. [9]Average gross pay. [10]Construction includes Mining. [11]Includes 3,123 unemployed. [12]Tourism in 2003 accounted for more than 60% of gross domestic product. [13]Detail does not add to total given because of rounding. [14]St. Croix and St. Thomas airports. [15]Circulation data for *Virgin Islands Daily News*. [16]Subscribers. [17]Public schools only. [18]2002. [19]Main hospitals on St. Thomas and St. Croix only.

Internet resources for further information:

- **Pacific Web**
  http://www.pacificweb.org
- **Bureau of Economic Research**
  http://www.usviber.org

Yemen

Official name: Al-Jumhūrīyah al-Yamanīyah (Republic of Yemen).
Form of government: multiparty republic with two legislative houses (Consultative Council [111 nonelected seats]; House of Representatives [301]).
Head of state: President.
Head of government: Prime Minister.
Capital: Sanaa.
Official language: Arabic.
Official religion: Islam.
Monetary unit: Yemeni rial (YR); valuation (Sept. 8, 2008) 1 U.S.$ = YR 199.84; 1 £ = YR 353.05.

Area and population

Governorates	area[1] sq km	population 2007 estimate
Abyān	23,897	468,420
'Adan (Aden)	6,863	654,099
'Amrān	9,261	937,791
Al-Bayḍā'	10,757	623,793
Al-Ḍāli'	3,448	519,945
Dhamār	8,296	1,455,280
Ḥaḍramawt	193,582	1,126,355
Ḥajjah	8,882	1,618,858
Al-Ḥudaydah	15,657	2,370,444
Ibb	6,160	2,306,919
Al-Jawf	28,930	479,964
Lahij	16,655	784,412
Al-Mahrah	93,907	99,724
Al-Maḥwit	2,545	539,219
Ma'rib	15,201	259,356
Raymah	2,241	431,448
Sa'dah	13,343	769,775
San'ā' (Sanaa)	16,394	987,056
Shabwah	39,134	509,748
Ta'izz	12,631	2,589,769
Capital City		
Sanaa[2]	292	2,006,619
TOTAL	528,076	21,538,995[3]

Demography

Population (2008): 23,013,000.
Density (2008): persons per sq mi 112.9, persons per sq km 43.6.
Urban-rural (2006): urban 28.6%; rural 71.4%.
Sex distribution (2007): male 50.84%; female 49.16%.
Age breakdown (2007): under 15, 46.3%; 15–29, 29.0%; 30–44, 13.2%; 45–59, 7.5%; 60–74, 3.1%; 75 and over, 0.9%.
Population projection: (2010) 24,658,000; (2020) 34,234,000.
Doubling time: 20 years.
Ethnic composition (2000): Arab 92.8%; Somali 3.7%; black 1.1%; Indo-Pakistani 1.0%; other 1.4%.
Religious affiliation (2005): Muslim nearly 100%, of which Sunnī *c.* 58%, Shī'ī *c.* 42%.
Major cities (2004): Sanaa (2007) 2,006,619; Aden 588,938; Ta'izz 466,968; Al-Ḥudaydah 409,994; Ibb 212,992; Al-Mukallā 182,478.

Vital statistics

Birth rate per 1,000 population (2007): 42.7 (world avg. 20.3).
Death rate per 1,000 population (2007): 8.1 (world avg. 8.6).
Natural increase rate per 1,000 population (2007): 34.6 (world avg. 11.7).
Total fertility rate (avg. births per childbearing woman; 2007): 6.49.
Life expectancy at birth (2007): male 60.6 years; female 64.5 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases *c.* 184, of which ischemic heart disease *c.* 84; infectious and parasitic diseases *c.* 171, of which diarrheal diseases *c.* 99; lower respiratory infections *c.* 126; perinatal conditions *c.* 90; accidents *c.* 77.

National economy

Budget (2007). Revenue: YR 1,406,400,000,000 (oil revenue 69.1%; tax revenue 21.9%; nontax revenue and grants 9.0%). Expenditures: YR 1,748,300,000,000 (transfers and subsidies 29.7%; wages and salaries 27.9%; interest on debt 5.7%).
Population economically active (2005–06): total 4,944,763; activity rate of total population 24.3% (participation rates: ages 15 and older, 44.4%; female 12.0%; unemployed 16.1%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	111.9	125.6	139.2	156.6	175.1	211.6	232.8

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sorghum 429,972, potatoes 231,432, tomatoes 212,000, onions 174,000, wheat 156,631, khat (qat) 147,444[4], grapes 120,000, bananas 112,500, oranges 101,000, chickpeas 54,000, dates 50,000, coffee 17,292; livestock (number of live animals) 8,420,000 sheep, 8,220,000 goats, 1,480,000 cattle, 500,000 asses, 361,000 camels; roundwood (2006) 380,530 cu m, of which fuelwood 100%; fisheries production (2006) 250,000 (from aquaculture, none). Mining and quarrying (2007): salt 100,000; gypsum 44,000. Manufacturing (value added in YR '000,000; 2006): food and beverages 121,761; cement, bricks, and ceramics 34,294; tobacco 26,556; fabricated metal products 23,333; clothing, textiles, and leather 21,574; petroleum products 17,462; plastic products 10,103. Energy production (consumption): electricity (kW-hr; 2007) 5,243,000,000 (4,094,000,000); coal, none (none); crude petroleum (barrels; 2007) 117,029,000 ([2005] 31,000,000); petroleum products (metric tons; 2005) 3,115,000 (4,975,000); natural gas (cu m; 2007) 25,000,000,000[5] (5).
Land use as % of total land area (2003): in temporary crops 2.9%, in permanent crops 0.2%, in pasture 30.4%; overall forest area (2005) 1.0%.
Gross national income (GNI; 2007): U.S.$19,421,000,000 (U.S.$870 per capita); purchasing power parity GNI (U.S.$2,200 per capita).

Structure of gross domestic product and labour force

	2007 in value YR '000,000	2007 % of total value	2005–06 labour force	2005–06 % of labour force
Agriculture, forestry, fishing[4]	450,427	9.1	1,406,099	28.4
Crude petrol., natural gas	1,363,411	27.7	14,959	0.3
Mining and quarrying	3,788	0.1		
Manufacturing	472,384[6]	9.6[6]	222,138	4.5
Public utilities	34,136	0.7	18,773	0.4
Construction	275,756	5.6	485,864	9.8
Transp. and commun.	578,451	11.7	239,477	4.8
Trade, restaurants, hotels	806,861	16.4	724,868	14.7
Finance, real estate	518,211	10.5	39,907	0.8
Pub. admin., defense	485,372	9.9	453,532	9.2
Services	74,352	1.5	402,816	8.2
Other	−139,462[7]	−2.8[7]	936,328[8]	18.9[8]
TOTAL	4,923,687	100.0	4,944,763[3]	100.0

Public debt (external, outstanding; January 2008): U.S.$5,818,700,000.
Household income and expenditure. Average household size (2004) 7.1; income per household (1998) YR 29,035 (U.S.$217); expenditures (1999)[9]: food and nonalcoholic beverages 43.8%, tobacco and khat (qat) 14.8%, housing and energy 13.3%, transportation 4.3%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 181; remittances (2007) 1,283; foreign direct disinvestment (2004–06 avg.) −181; official development assistance (2006) 284. Disbursements for (U.S.$'000,000): tourism (2006) 162; remittances (2007) 120; foreign direct investment (2004–06 avg.) 28.

Foreign trade[10]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
YR '000,000	+153,108	+72,920	+10,779	+17,063	+142,950	+273,078
% of total	15.5%	6.6%	0.8%	1.1%	7.1%	11.6%

Imports (2006): YR 1,043,119,407,000 (crude and refined petroleum 24.8%; food and live animals 19.2%; machinery and apparatus 13.7%; base and fabricated metals 10.2%; transport equipment 9.7%). *Major import sources:* U.A.E. 22.0%; Saudi Arabia 9.7%; Switzerland 9.1%; China 7.3%; Kuwait 6.7%.
Exports (2006): YR 1,316,197,658,000 (crude and refined petroleum 91.7%; food and live animals 3.9%, of which fish 2.0%; machinery and apparatus 1.3%; transport equipment 1.0%). *Major export destinations:* India 24.0%; China 22.5%; Thailand 14.4%; U.K. 5.9%; U.S. 5.7%; U.A.E. 5.3%.

Transport and communications

Transport. Railroads: none. Roads (2007): total length 71,300 km (paved 9%). Vehicles (2004): passenger cars 522,437; trucks and buses 506,766. Air transport (2005): passenger-km (2003) 1,956,000,000; metric ton-km cargo 67,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	6,780	359	PCs	2005	300	14
Telephones				Dailies	2007	123[11]	5.5[11]
Cellular	2007	4,283[12]	193[12]	Internet users	2007	320	14
Landline	2007	968	44	Broadband	2007		. .

Education and health

Educational attainment (2004). Percentage of population age 10 and over having: no formal schooling 46.0%; reading and writing ability 31.5%; primary education 12.0%; secondary 7.2%; higher 3.3%. *Literacy* (2005): percentage of total population age 15 and over literate 53.0%; males literate 74.7%; females literate 52.4%.

Education (2005–06)

	schools	teachers	students	student/teacher ratio
Primary (age 7–12)	11,485	107,461	3,971,853	37.0
Secondary (age 13–18)[13]	3,490	82,753	525,459	6.3
Voc., teacher tr.	85	2,079	14,785	7.1
Higher	18	6,905	196,081	28.4

Health (2007): physicians 6,024 (1 per 3,690 persons); hospital beds 14,970 (1 per 1,485 persons); infant mortality rate 57.9; undernourished population (2002–04) 7,600,000 (38% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2007): 66,700 (army 90.0%, navy 2.5%, air force 7.5%). *Military expenditure as percentage of GDP* (2005): 7.0%; per capita expenditure U.S.$50.

[1]Approximate figures. [2]Regarded as a governorate for administrative purposes. [3]Detail does not add to total given because of rounding. [4]Khat's (or qat's) agricultural and nonagricultural contribution to GDP is about 10% of total GDP; khat cultivation employs nearly 15% of the labour force. [5]Virtually all natural gas was flared or reinjected for field pressure maintenance. [6]Includes petroleum refining. [7]Customs duties less imputed bank service charges. [8]Includes 795,316 unemployed. [9]Weights of consumer price index components. [10]Imports c.i.f.; exports f.o.b. [11]Circulation of daily newspapers. [12]Subscribers. [13]Includes data from 3,167 combined primary and secondary schools.

Internet resources for further information:
- **Central Bank of Yemen http://www.centralbank.gov.ye**
- **Central Statistical Organization http://www.cso-yemen.org**

Zambia

Official name. Republic of Zambia.
Form of government: multiparty republic with one legislative house (National Assembly [158[1]]).
Head of state and government: President.
Capital: Lusaka.
Official language: English.
Official religion: none[2].
Monetary unit: Zambian kwacha (K); valuation (Sept. 8, 2008) 1 U.S.$ = K 3,530; 1 £ = K 6,236.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2000 census
Central	Kabwe	36,446	94,394	1,012,257
Copperbelt	Ndola	12,096	31,328	1,581,221
Eastern	Chipata	26,682	69,106	1,306,173
Luapula	Mansa	19,524	50,567	775,353
Lusaka	Lusaka	8,454	21,896	1,391,329
North-Western	Solwezi	48,582	125,827	583,350
Northern	Kasama	57,076	147,826	1,258,696
Southern	Livingstone	32,928	85,283	1,212,124
Western	Mongu	48,798	126,386	765,088
TOTAL		290,585[3]	752,612[3]	9,885,591

Demography

Population (2008): 11,670,000.
Density (2008): persons per sq mi 40.2, persons per sq km 15.5.
Urban-rural (2007): urban 35.2%; rural 64.8%.
Sex distribution (2005): male 49.75%; female 50.25%.
Age breakdown (2005): under 15, 46.2%; 15–29, 30.6%; 30–44, 13.4%; 45–59, 6.1%; 60–74, 3.0%; 75–84, 0.6%; 85 and over, 0.1%.
Population projection: (2010) 12,057,000; (2020) 13,948,000.
Doubling time: 37 years.
Ethnic composition (2000): Bemba 21.5%; Tonga 11.3%; Lozi 5.2%; Nsenga 5.1%; Tumbuka 4.3%; Ngoni 3.8%; Chewa 2.9%; other 45.9%.
Religious affiliation (2000): Christian 82.4%, of which Roman Catholic 29.7%, Protestant (including Anglican) 28.2%, independent Christian 15.2%, unaffiliated Christian 5.5%; traditional beliefs 14.3%; Bahā'ī 1.8%; Muslim 1.1%[4]; other 0.4%.
Major cities (2000): Lusaka 1,084,703 (urban agglomeration [2005] 1,260,000); Ndola 374,757; Kitwe 363,734; Kabwe 176,758; Chingola 147,448.

Vital statistics

Birth rate per 1,000 population (2006): 41.0 (world avg. 20.3).
Death rate per 1,000 population (2006): 21.8 (world avg. 8.6).
Natural increase rate per 1,000 population (2006): 19.2 (world avg. 11.7).
Marriage/divorce rates per 1,000 population (2005): n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2006): 5.39.
Life expectancy at birth (2006): male 38.0 years; female 38.2 years.
Major causes of death by overall percentage (2004): fever/malaria 21.7%, diarrhea 11.8%, tuberculosis 10.4%, cough/chest infection 9.6%, abdominal pain 5.2%, lack of blood/anemia 5.1%.
Adult population (ages 15–49) *living with HIV* (2007): 15.2% (world avg. 0.8%).

National economy

Budget (2006). Revenue: K 16,635,000,000,000 (grants 60.2%; tax revenue 38.4%, of which income tax 18.0%, VAT 10.9%, excise taxes 5.6%; nontax revenue 1.4%). Expenditures: K 9,248,000,000,000 (current expenditures 77.1%; capital expenditures 20.3%; other 2.6%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 2,500,000, corn (maize) 1,366,158, cassava 940,000, seed cotton 160,000, wheat 115,843, sweet potatoes 67,500, peanuts (groundnuts) 41,000, sunflower seeds 8,200, tobacco 4,800, fresh-cut flowers (value of sales; 2000) U.S.$21,000,000; livestock (number of live animals) 2,610,000 cattle, 1,275,000 goats, 340,000 pigs, 30,000,000 chickens; roundwood (2006) 9,406,989 cu m, of which fuelwood 91%; fisheries production (2006) 70,125 (from aquaculture 7%). Mining and quarrying (2006): copper (metal content) 514,000; cobalt (metal content) 8,000; amethyst 1,200,000 kg; emeralds 2,600 kg. Manufacturing (2005): cement 435,000; refined copper 399,000; vegetable oils (2001) 11,800; refined cobalt 5,422. Energy production (consumption): electricity (kW-hr; 2005) 8,938,000,000 (8,695,000,000); coal (metric tons; 2005) 244,000 (161,000); crude petroleum (barrels; 2005) none (4,266,000); petroleum products (metric tons; 2005) 525,000 (553,000); natural gas, none (none).
Household income and expenditure. Average household size (2005) 5.1; average annual income per household (2004) K 6,024,360 (U.S.$1,261); expenditure (1993–94)[5]: food, beverages, and tobacco 57.1%, transportation and communications 9.6%, housing and energy 8.5%, household furnishings 8.2%.
Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 110; remittances (2007) 59; foreign direct investment (FDI; 2004–06 avg.) 365; official development assistance (2006) 1,425. Disbursements for (U.S.$'000,000): tourism (2006) 53; remittances (2007) 124.
Population economically active (2000): total 3,165,200[6]; activity rate of total population 32.0% (participation rates: ages 12–64, 55.8%; female 41.3%; unemployed 12.7%).

Price and earnings indexes (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	121.4	148.4	180.1	212.5	251.4	274.1	303.3
Earnings index							

Gross national income (GNI; 2007): U.S.$9,479,000,000 (U.S.$800 per capita); purchasing power parity GNI (U.S.$1,220 per capita).

Structure of gross domestic product and labour force

	2006 in value K '000,000,000	2006 % of total value	2000 labour force	2000 % of labour force
Agriculture, forestry, fishing	7,800	19.9	2,014,000	62.5
Mining	1,613	4.1	36,500	1.1
Manufacturing	4,016[7]	10.2[7]	77,500	2.4
Construction	5,463	13.9	36,800	1.1
Public utilities	1,166	3.0	11,000	0.3
Transp. and commun	1,629	4.2	53,700	1.7
Trade, hotels	7,645	19.5	190,400	5.9
Finance, real estate	5,543	14.1	29,200	0.9
Pub. admin., defense	3,366	8.6	363,400	11.3
Services				
Other	983[8]	2.5[8]	409,800[9]	12.7[9]
TOTAL	39,223[3]	100.0	3,222,200[3]	100.0[3]

Public debt (external, outstanding; 2006): U.S.$1,003,000,000.
Land use as % of total land area (2003): in temporary crops 7.1%, in permanent crops 0.04%, in pasture 40.4%; overall forest area (2005) 57.1%.

Foreign trade[10]

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.$'000,000	–322	–146	–593	–576	–748	+696
% of total	14.1%	7.1%	23.2%	15.5%	17.1%	10.2%

Imports (2006): U.S.$3,074,000,000 (machinery and apparatus 29.7%, of which industrial machinery and equipment 19.5%; chemicals and chemical products 14.6%; petroleum 13.6%; road vehicles 10.0%). *Major import sources:* South Africa 47.0%; U.A.E. 10.4%; Zimbabwe 5.7%; Norway 4.0%; U.K. 3.7%.
Exports (2006): U.S.$3,770,000,000 (refined copper 67.9%; copper ore and concentrate 11.2%; cobalt 3.8%; food 3.8%). *Major export destinations:* Switzerland 39.8%; South Africa 11.0%; Thailand 7.7%; China 6.8%; Egypt 4.2%.

Transport and communications

Transport. Railroads (1998): length (2006)[11] 2,157 km; passenger-km 586,000,000; metric ton-km cargo 702,000,000. Roads (2001): total length 91,440 km (paved 22%). Vehicles (1996): passenger cars 157,000; trucks and buses 81,000. Air transport (2006)[12]: passenger-km 56,609,000; metric ton-km cargo, none.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	551	51	PCs	2005	131	11
Telephones				Dailies	2004	55[13]	5.0[13]
Cellular	2007	2,639[14]	221[14]	Internet users	2007	500	42
Landline	2007	92	7.7	Broadband	2006	2.3[14]	0.2[14]

Education and health

Educational attainment (2001–02)[15]. Percentage of population age 15 and over having: no formal schooling 14.4%; some primary education 33.4%; completed primary 19.7%; some secondary 22.0%; completed secondary 5.9%; higher 4.3%; unknown 0.3%. *Literacy* (2007): population age 15 and over literate 83.5%; males literate 88.5%; females literate 78.6%.

Education (2004)

	schools	teachers	students	student/teacher ratio
Primary (age 7–13)	4,221[16]	46,414	2,251,357	48.5
Secondary (age 14–18)	246[17]	10,090	356,681	35.3
Voc., teacher tr.	14	629	6,932	11.0
Higher	2	640[17]	24,553[18]	...

Health: physicians (2004) 1,264 (1 per 8,672 persons); hospital beds (2004) 21,924 (1 per 500 persons); infant mortality rate per 1,000 live births (2006) 100.5; undernourished population (2002–04) 5,000,000 (46% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

Military

Total active duty personnel (November 2007): 15,100 (army 89.4%; navy, none; air force 10.6%). *Military expenditure as percentage of GDP* (2005): 0.7%; per capita expenditure U.S.$4.

[1]Statutory number (including 8 nonelective seats). [2]In 1996 Zambia was declared a Christian nation per the preamble of a constitutional amendment. [3]Detail does not add to total given because of rounding. [4]3 to 4% in 2005. [5]Weights of consumer price index components. [6]Excludes population ages 11 and under. [7]Manufacturing includes the smelting of copper. [8]Taxes less imputed bank service charges. [9]Unemployed. [10]Imports c.i.f.; exports f.o.b. [11]Includes 891 km of the Tanzania-Zambia Railway Authority. [12]Zambian Airways Limited only. [13]Circulation of daily newspapers. [14]Subscribers. [15]Based on a sample survey of 19,531 persons. [16]1998. [17]1996. [18]2000.

Internet resources for further information:
- **Zambian Department of Census and Statistics http://www.zamstats.gov.zm**
- **Bank of Zambia http://www.boz.zm**

Zimbabwe

Official name: Republic of Zimbabwe.
Form of government: multiparty republic (Senate [93[1]]; House of Assembly [210]).
Chief of state and government: President[2].
Capital: Harare.
Official language: English.
Official religion: none.
Monetary unit: (redenominated) Zimbabwe dollar (Z$); valuation (Sept. 8, 2008) 1 U.S.$ = (redenominated) Z$49.59[3,4]; 1 £ = (redenominated) Z$87.61.

Area and population

Provinces	Capitals	area sq mi	area sq km	population 2002 preliminary census
Bulawayo	—	185	479	676,787
Harare	—	337	872	1,903,510
Manicaland	Mutare	14,077	36,459	1,566,889
Mashonaland Central	Bindura	10,945	28,347	998,265
Mashonaland East	Marondera	12,444	32,230	1,125,355
Mashonaland West	Chinhoyi	22,178	57,441	1,222,583
Masvingo	Masvingo	21,840	56,566	1,318,705
Matabeleland North	Lupane	28,967	75,025	701,359
Matabeleland South	Gwanda	20,916	54,172	654,879
Midlands	Gweru	18,983	49,166	1,466,331
TOTAL		150,872	390,757	11,634,663

Demography

Population (2008): 11,350,000[5].
Density (2008): persons per sq mi 75.2, persons per sq km 29.0.
Urban-rural (2007): urban 36.7%; rural 63.3%.
Sex distribution (2005): male 49.95%; female 50.05%.
Age breakdown (2005): under 15, 37.6%; 15–29, 35.2%; 30–44, 14.5%; 45–59, 7.7%; 60–74, 3.8%; 75 and over, 1.2%.
Population projection: (2010) 11,652,000; (2020) 15,832,000.
Ethnic composition (2003): Shona 71%; Ndebele 16%; other African 11%; white 1%; mixed race/Asian 1%.
Religious affiliation (2005): African independent Christian *c.* 38%; traditional beliefs *c.* 25%; Protestant *c.* 14%; Roman Catholic *c.* 8%; Muslim *c.* 1%; other (mostly unaffiliated Christian) *c.* 14%.
Major cities (2002): Harare 1,444,534; Bulawayo 676,787; Chitungwiza 321,782; Mutare 170,106; Gweru 141,260; Epworth 113,884.

Vital statistics

Birth rate per 1,000 population (2007): 31.8 (world avg. 20.3).
Death rate per 1,000 population (2007): 18.3 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 3.74.
Life expectancy at birth (2007): male 43.9 years; female 41.9 years.
Adult population (ages 15–49) *living with HIV* (2007): 15.3% (world avg. 0.8%).
Major causes of death per 100,000 population (2002): HIV/AIDS-related *c.* 1,406; cardiovascular diseases *c.* 142; lower respiratory infections *c.* 84; tuberculosis *c.* 55; malignant neoplasms (cancers) *c.* 54.

National economy

Budget (2004). Revenue: (old[3]) Z$8,071,700,000,000 (tax revenue 96.2%, of which income tax 50.5%, sales tax 29.4%, customs duties 11.5%, excise tax 3.5%; nontax revenue 3.8%). Expenditures: (old[3]) Z$9,630,900,000,000 (current expenditures 87.3%, of which goods and services 52.1%, transfer payments 21.7%, interest payments 13.5%; development expenditure 12.7%).
Population economically active (2003): total 5,542,000[6]; activity rate of total population 43.1%[6] (participation rates: ages 15–64, 74.0%[6]; female 44.0%[6]; unemployed [2006] *c.* 70%).

Price index (2002 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	100.0	575.0	2,150	8,675	103,750	25,432,300	[7]

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 3,600,000, corn (maize) 952,600, seed cotton 235,000, cassava 192,000, wheat 128,000, peanuts (groundnuts) 125,000, soybeans 112,300, oranges 93,000, bananas 85,000, tobacco 79,000, sorghum 76,200, tea 22,300, coffee 4,600; livestock (number of live animals) 5,400,000 cattle, 3,000,000 goats, 630,000 pigs, 610,000 sheep; roundwood (2006) 9,151,336 cu m, of which fuelwood 92%; fisheries production (2006) 15,450 (from aquaculture 16%). Mining and quarrying (2006): chromite 700,001; asbestos 97,000; nickel (metal content) 8,825; cobalt (metal content) 26; gold 11,354 kg; platinum-group metals (palladium, platinum, rhodium, ruthenium, and iridium) 9,894 kg; diamonds 1,046,000 carats. Manufacturing (value added in U.S.$'000,000; 1998): beverages 171; foodstuffs 148; textiles 99; iron and steel 86; fabricated metal products 64; cement, bricks, and tiles 63; tobacco products 51. Energy production (consumption): electricity (kW-hr; 2005) 10,269,000,000 (13,246,000,000); coal (metric tons; 2005) 3,622,000 (3,699,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (648,000).
Public debt (external, outstanding; 2006): U.S.$3,452,000,000.
Household income and expenditure. Average household size (2004) 4.5; income per household (1992) (old[3]) Z$1,689 (U.S.$332); expenditure (1995)[8]: food 33.6%, housing 17.3%, beverages and tobacco 16.0%, household durable goods 7.5%, clothing and footwear 6.9%, transportation 6.6%.

Gross national income (2007): U.S.$2,112,000,000 (U.S.$158 per capita).

Structure of gross domestic product and labour force

	2003 in value (old[3]) Z$'000,000[9]	2003 % of total value[9]	2002 labour force	2002 % of labour force
Agriculture	803,589	14.6	2,800,000	56.4
Mining	32,865	0.6	50,000	1.0
Manufacturing	593,808	10.8	378,000	7.6
Construction	38,469	0.7	106,000	2.1
Public utilities	73,146	1.3	10,000	0.2
Transp. and commun.	413,158	7.5	102,000	2.1
Trade, restaurants	460,785	8.3	333,000	6.7
Finance, real estate	2,544,796	46.1	121,000	2.4
Services			578,000	11.7
Pub. admin., defense	168,490	3.0		
Other	389,651	7.1	485,000[10]	9.8[10]
TOTAL	5,518,757	100.0	4,963,000	100.0

Selected balance of payments data. Receipts from (U.S.$'000,000): tourism (2006) 338; remittances (2005) *c.* 500–1,300; foreign direct investment (2004–06 avg.) 51; official development assistance (2006) 280. Disbursements for (U.S.$'000,000): tourism (1998) 131; remittances, n.a.
Land use as % of total land area (2003): in temporary crops 8.3%, in permanent crops 0.3%, in pasture 44.5%; overall forest area (2005) 45.3%.

Foreign trade[11]

Balance of trade (current prices)

	2001	2002	2003	2004	2005
U.S.$'000,000	−508	−139	. .	−278	−679
% of total	17.4%	29.1%		6.7%	19.6%

Imports (2005): U.S.$2,072,000,000 (copper [all forms] 28.2%, machinery and apparatus 10.4%, electricity 9.0%, chemicals and chemical products 7.0%, refined petroleum 5.7%). *Major import sources:* Zambia 40.9%; South Africa 15.0%; Mozambique 9.9%; Botswana 5.0%; Kuwait 4.0%.
Exports (2005): U.S.$1,393,000,000 (nickel [all forms] 16.4%, raw tobacco/cigarettes 15.8%, gold 14.9%, iron and steel 13.5%, food 9.8%, cotton 3.6%). *Major export destinations:* South Africa 41.5%; U.S. 6.9%; Switzerland 6.4%; Zambia 5.6%; U.K. 5.3%.

Transport and communications

Transport. Railroads (2004): route length 3,077 km; (1998) passenger-km 408,223,000; metric ton-km cargo 1,377,000. Roads (2002): total length 97,267 km (paved 19%). Vehicles (2002): passenger cars 570,866; trucks and buses 84,456. Air transport (2006)[12]: passenger-km 671,185,000; metric ton-km cargo 8,547,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	610	50	PCs	2005	850	71
Telephones				Dailies	2004	166[13]	14[13]
Cellular	2007	1,226[14]	92[14]	Internet users	2007	1,351	101
Landline	2007	345	26	Broadband	2007	15[14]	1.1[14]

Education and health

Educational attainment (1992). Percentage of population age 25 and over having: no formal schooling 22.3%; primary 54.3%; secondary 13.1%; higher 3.4%. *Literacy* (2007): percentage of total population age 15 and over literate 92.8%; males literate 95.8%; females literate 89.9%.

Education (2003–04)

	schools	teachers	students	student/teacher ratio
Primary (age 7–13)	4,741[15]	61,251	2,361,588	38.6
Secondary (age 14–19)	1,555[15]	33,964	758,229	22.3
Higher[16]		3,581[17]	46,492[17]	13.0[17]

Health: physicians (2004) 2,086 (1 per 5,792 persons); hospital beds (1996) 22,975 (1 per 501 persons); infant mortality rate per 1,000 live births (2007) 35.8; undernourished population (2002–04) 6,000,000 (47% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2007): 29,000 (army 86.2%, air force 13.8%). *Military expenditure as percentage of GDP* (2005): 2.3%; per capita expenditure U.S.$11.

[1]Includes 5 presidential appointees, 16 traditional chiefs, and 12 others not directly elected. [2]Historic pact signed on Sept. 15, 2008, not enforced in mid-December 2008. [3]The (redenominated) Z$ replaced the (third, second, and old) Z$ on Aug. 1, 2008, at a rate of 1 (redenominated) Z$ = (old) Z$12,000,000,000,000,000; previous redenominations of the Z$ occurred on Aug. 1, 2006, and Sept. 6, 2007. [4]The black market exchange rate on Sept. 10, 2008, was about 1 U.S.$ = (redenominated) Z$2,000. [5]Includes 3 million Zimbabweans living outside of the country, many of whom are in South Africa. [6]Estimate of the ILO Employment Trends Unit. [7]Official year-on-year inflation rate in July 2008 was 231,000,000%; private sector estimates placed it at 80,000,000,000% or higher. Lack of commodities in shops and multiple price changes per day make precise calculation of CPI virtually impossible. [8]Weights of consumer price index components. [9]At factor cost. [10]Includes 187,000 not adequately defined and 298,000 unemployed. [11]Imports c.i.f.; exports f.o.b. [12]Air Zimbabwe only. [13]Circulation of daily newspapers. [14]Subscribers. [15]2000. [16]Includes postsecondary vocational and teacher training at the higher level. [17]1998.

Internet resource for further information:
- **Reserve Bank of Zimbabwe http://www.rbz.co.zw**

Comparative National Statistics

World and regional summaries

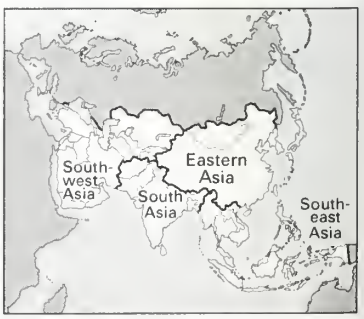
region/bloc	area and population, 2008						gross national income						labour force, 2000–01		
	area		population				total ('000,000 U.S.$), 2006	GNI per capita (U.S.$), 2006	% agriculture, 2000	% industry, 2000	% services, 2000	growth rate, 1990–99	total ('000)	% male	% female
	square miles	square kilometres	total	per sq mi	per sq km	population projection, 2020									
World	52,403,039	135,722,940	6,649,893,640	126.9	49.0	7,528,401,640	47,725,283	7,456	4	28	68	2.5	2,828,551	60.2	39.8
Africa	11,678,801	30,247,722	955,761,100	81.8	31.6	1,210,693,800	975,286	1,112	16	30	53	2.5	321,761	60.2	39.8
Central Africa	2,553,319	6,613,063	118,158,000	46.3	17.9	160,981,000	77,208	719	17	36	21	1.3	38,800	57.6	42.4
East Africa	2,466,263	6,387,474	300,227,500	121.7	47.0	390,816,000	97,137	348	28	17	54	2.9	114,915	52.9	47.1
North Africa	3,289,316	8,519,290	197,123,000	59.9	23.1	236,555,000	393,377	2,064	16	33	51	3.3	56,141	75.5	24.5
Southern Africa	1,032,824	2,675,004	55,752,000	54.0	20.8	56,072,000	255,150	4,719	3	28	68	1.3	21,488	60.6	39.4
West Africa	2,337,079	6,052,891	284,500,600	121.7	47.0	366,269,800	152,414	583	31	30	38	3.0	90,417	60.9	39.1
Americas	16,300,494	42,218,088	905,276,200	55.5	21.4	1,017,875,400	17,215,319	19,377	2	23	75	3.0	395,502	58.3	41.7
Anglo-America[2]	8,368,033	21,673,107	338,486,900	40.5	15.6	377,906,100	14,406,979	42,957	1	22	76	3.0	165,111	54.2	45.8
Canada	3,855,103	9,984,670	33,213,000	8.6	3.3	36,387,000	1,249,635	38,400	3	27	70	2.8	16,224	54.3	45.7
United States	3,676,486	9,522,055	305,146,000	83.0	32.1	341,387,000	13,150,600	43,420	1	22	77	3.0	148,850	54.2	45.8
Latin America	7,932,461	20,544,981	566,789,300	71.5	27.6	639,969,300	2,808,340	5,288	7	29	64	3.4	230,391	61.2	38.8
Caribbean	90,339	233,975	41,533,800	459.8	177.5	45,145,800	206,152	5,363	5	33	56	2.8	15,932	61.2	38.8
Central America	201,645	522,261	40,124,000	199.0	76.8	48,175,000	98,341	2,444	17	21	63	4.4	13,248	67.1	32.9
Mexico	758,450	1,964,375	106,683,000	140.7	54.3	115,762,000	816,892	7,760	4	27	69	2.8	40,300	66.4	33.6
South America	6,882,027	17,824,370	378,448,500	55.0	21.2	430,886,500	1,686,955	4,869	8	30	63	3.6	160,911	59.4	40.6
Andean Group	2,111,952	5,469,933	140,489,000	66.5	25.7	161,515,000	554,816	4,025	9	32	59	3.8	56,750	60.2	39.8
Brazil	3,287,612	8,514,877	187,163,000	56.9	22.0	212,615,000	892,806	5,500	8	31	60	3.0	83,387	58.8	41.2
Other South America	1,482,463	3,839,560	50,796,500	34.3	13.2	56,756,500	239,333	4,840	5	24	70	4.8	20,774	59.7	40.3
Asia	12,239,721	31,700,654	4,018,522,000	328.3	126.8	4,548,139,000	a12,352,631	3,183	8	35	57	3.7	1,751,066	61.6	38.4
Eastern Asia	4,546,218	11,774,694	1,559,598,000	343.1	132.5	1,641,269,000	8,585,278	5,593	4	36	59	3.1	860,729	55.8	44.2
China	3,696,100	9,572,900	1,324,681,000	358.4	138.4	1,407,520,000	2,641,846	2,000	18	49	33	10.8	745,715	55.3	44.7
Japan	145,914	377,915	127,674,000	875.0	337.8	122,837,000	4,520,998	35,300	2	33	66	1.4	67,705	59.4	40.6
South Korea	38,486	99,678	50,187,000	1,304	503.5	51,327,000	856,565	18,150	6	49	45	5.7	22,501	59.7	40.3
Other Eastern Asia	665,718	1,724,201	57,056,000	85.7	33.1	59,585,000	565,869	10,131	1	22	73	5.5	24,808	60.1	39.9
South Asia	1,933,355	5,007,370	1,529,938,000	791.3	305.5	1,827,964,000	1,118,965	735	28	23	48	5.5	530,171	71.0	29.0
India	1,222,559	3,166,414	1,147,996,000	939.0	362.6	1,362,053,000	887,483	770	28	24	48	5.9	398,363	72.0	28.0
Pakistan	307,374	796,096	161,910,000	526.8	203.4	200,370,000	122,295	770	24	18	58	3.5	48,238	75.2	24.8
Other South Asia	403,422	1,044,860	220,032,000	545.4	210.6	265,541,000	109,187	520	35	28	36	4.9	83,570	63.7	36.3
Southeast Asia	1,718,299	4,450,371	578,605,000	336.7	130.0	657,258,000	867,600	1,557	21	30	49	5.3	247,704	58.5	41.5
Southwest Asia	4,041,849	10,468,219	350,381,000	86.7	33.5	421,648,000	1,780,788	5,210	10	36	52	2.8	112,462	68.8	31.2
Central Asia	1,545,772	4,003,400	60,300,000	39.0	15.1	67,948,000	99,866	1,721	16	25	58	–4.3	23,445	54.3	45.7
Gulf Cooperation Council	993,122	2,572,164	38,153,000	38.4	14.8	49,639,000	748,320	20,745	4	51	45	2.2	11,300	85.6	14.4
Iran	636,374	1,648,200	72,269,000	113.6	43.9	84,306,000	238,669	3,400	21	30	50	3.4	22,788	70.5	29.5
Other Southwest Asia	866,581	2,244,455	179,659,000	207.3	80.1	219,755,000	693,933	3,954	11	28	57	4.0	54,929	70.9	29.1
Europe	8,896,305	23,041,330	735,213,700	82.6	31.9	710,978,000	16,306,515	22,003	3	27	70	1.3	345,442	54.9	45.1
European Union (EU)	1,534,635	3,974,686	467,800,000	304.8	117.7	450,855,000	14,372,390	30,852	2	27	71	1.8	212,021	56.5	43.5
France	210,026	543,965	62,028,000	295.3	114.0	65,393,000	2,256,465	35,700	3	22	75	1.5	26,345	54.6	45.4
Germany	137,874	357,093	82,143,000	595.8	230.0	80,148,000	2,901,482	35,100	1	31	68	1.4	40,464	56.3	43.7
Italy	116,346	301,336	59,760,000	513.6	198.3	62,462,000	1,843,325	31,400	3	31	67	1.4	23,838	61.7	38.3
Spain	195,364	505,990	45,661,000	233.7	90.2	50,516,000	1,208,184	27,530	3	24	73	2.3	18,681	60.5	39.5
United Kingdom	93,851	243,073	61,446,000	654.7	252.8	65,854,000	2,425,690	40,090	1	26	73	2.5	29,558	54.5	45.5
Other EU	781,174	2,023,229	156,762,000	200.7	77.5	126,482,000	3,737,244	23,888	3	25	72	2.4	73,155	55.4	44.6
Other Western Europe[3]	205,540	532,343	13,193,700	64.2	24.8	14,277,000	745,415	58,287	2	29	67	1.7	6,761	54.5	45.5
Eastern Europe	7,156,130	18,534,301	254,220,000	35.5	13.7	245,846,000	1,188,710	4,704	7	32	61	–3.2	126,660	52.2	47.8
Russia	6,592,800	17,075,400	141,841,000	21.5	8.3	138,507,000	822,364	5,780	7	35	59	–6.0	71,319	51.5	48.5
Ukraine	233,062	603,628	46,222,000	198.3	76.6	42,957,000	90,616	2,260	11	30	59	–10.8	22,847	51.1	48.9
Other Eastern Europe	330,268	855,273	66,157,000	200.3	77.4	64,382,000	275,730	4,126	7	30	62	1.3	32,494	54.7	45.3
Oceania	3,287,718	8,515,146	35,120,640	10.7	4.1	40,715,440	875,532	26,460	4	21	74	3.9	14,780	55.3	44.7
Australia	2,969,978	7,692,208	21,338,000	7.2	2.8	24,110,000	738,479	36,400	3	22	76	4.1	9,498	55.6	44.4
Pacific Ocean Islands	317,740	822,938	13,782,640	43.4	16.8	16,605,440	137,053	10,635	9	21	64	2.9	5,282	54.8	45.2

[1]Refers only to the outstanding long-term external public and publicly guaranteed debt of the 114 developing countries that report under the World Bank's Debtor Reporting System (DRS). [2]Anglo-America includes Canada, the United States, Greenland, Bermuda, and St. Pierre and Miquelon. [3]Other Western Europe includes Andorra, Faroe Islands, Gibraltar, Guernsey, Iceland, Isle of Man, Jersey,

Africa

Americas

Asia



economic indicators							social indicators								region/bloc
pop. per 1,000 ha of arable land, 2002	electricity consumption (kW-hr per capita), 2004	trade ('000,000 U.S.$), 2001–03			debt ('000,000 U.S.$), 2005[1]		life expectancy (years), 2005		health			food (% FAO recommended minimum), 2004	literacy (%) (latest)		
		imports (c.i.f.)	exports (f.o.b.)	balance	total	% of GNI	male	female	pop per doctor (latest)	infant mortality per 1,000 births, 2005	pop having safe water (%), 2000		male	female	
4,387	2,717	6,930,434	6,744,616	−185,818	1,353,947	14 9	66.0	70.0	730	38 3	82	118	84 0	70 8	World
4,434	607	128,896	140,874	+11,978	228,543	28.2	51 8	53 8	2,560	78 4	64	103	69 6	52.0	Africa
4,365	137	8,854	16,653	+7,799	35,512	57 4	49.8	50.2	12,890	96 1	46	80	79 5	60 0	Central Africa
5,667	179	19,575	9,904	−9,671	45,086	52.1	46 9	48 2	13,620	86 7	50	86	69.5	53 6	East Africa
4,591	1,006	39,602	41,639	+2,037	77,626	27.0	67.2	71 0	890	39 2	87	125	69 2	45 8	North Africa
3,161	4,818	38,442	36,089	−2,353	13,198	5 6	47 8	51 2	1,610	55.1	85	119	84 8	84 4	Southern Africa
3,876	147	22,423	36,590	+14,167	57,121	42 0	47 7	49 7	6,260	94 3	65	109	62.7	44 7	West Africa
2,328	6,753	2,138,514	1,595,412	−543,102	415,488	18.9	71.5	77.6	520	17 1	91	129	91.5	90 2	Americas
1,441	14,647	1,528,316	976,367	−551,949	—	—	75.0	80 4	370	6 2	100	140	95 7	95 3	Anglo-America[2]
686	18,408	222,241	252,418	+30,177	—	—	76 7	83 6	540	4.8	100	136	96 6	96 6	Canada
1,637	14,240	1,305,092	723,609	−581,483	—	—	74 8	80 1	360	6 4	100	141	95 7	95.3	United States
3,692	2,056	610,198	619,045	+8,847	415,488	18.9	69 4	76 0	690	23 6	86	123	89 0	87.1	Latin America
7,532	1,946	134,133	113,899	−20,234	14,074	29 2	67 5	71.6	380	29 4	79	118	82 5	82 1	Caribbean
6,969	853	25,355	11,344	−14,011	27,697	29 1	67.9	73.7	950	21 4	88	106	78.2	72 3	Central America
4,153	2,190	168,651	160,670	−7,981	108,786	14 4	72.7	77.6	810	12 6	88	134	93.1	89 1	Mexico
3,253	2,160	120,755	158,917	+38,162	264,931	20.3	68 9	76.2	710	26 3	86	122	89.7	88 6	South America
9,110	1,790	56,520	68,915	+12,395	98,352	22.0	69 4	75 6	830	23.5	86	108	92 7	90 1	Andean Group
2,986	2,340	49,735	60,632	+10,897	94,497	14.3	67 7	75 9	770	30 7	87	132	85.5	85 4	Brazil
1,358	2,484	14,500	29,640	+15,140	72,082	37 1	72 1	79 4	410	17 5	82	120	96 6	96 4	Other South America
7,318	1,565	1,799,979	2,028,586	+228,607	517,206	11 1	67.2	70.3	970	39 6	81	116	82 5	65.2	Asia
9,736	2,525	1,179,486	1,321,391	+141,905	84,120	3 7	71 2	75 0	610	22 3	78	121	93 3	80 4	Eastern Asia
9,005	1,684	295,170	325,596	+30,426	82,853	3.7	70 4	73 7	620	25 2	75	123	92.3	77 4	China
28,837	8,459	383,452	471,996	+88,544	—	—	78 6	85.6	530	2 7	97	110	100.0	100 0	Japan
28,282	7,716	149,572	160,855	+11,283	—	—	71 7	79 3	740	6 4	92	123	99 2	96 4	South Korea
6,672	4,276	351,292	362,945	+11,653	1,267	70 4	71 7	77 3	500	13 8	94	93	97 5	90.9	Other Eastern Asia
6,864	546	91,054	75,813	−15,241	140,738	14.8	63 3	64 6	2,100	60 5	85	108	65.8	39 4	South Asia
6,490	618	61,118	52,471	−8,647	80,281	10.0	63 6	65 2	1,920	56 3	84	112	68.6	42 1	India
6,805	564	13,013	11,910	−1,103	29,490	27 5	64 7	65 5	1,840	76.2	90	100	57 6	27 8	Pakistan
9,923	157	16,923	11,432	−5,491	30,967	83 5	60 4	60 5	5,080	71.0	85	97	56 7	33 4	Other South Asia
8,406	862	353,337	410,291	+56,954	170,335	22.6	66 8	71.9	3,120	33 9	78	123	92.9	85 8	Southeast Asia
3,508	2,845	176,101	221,090	+44,989	122,013	17 3	67 3	71.9	610	35 5	85	118	88 0	72 9	Southwest Asia
1,876	2,678	12,654	15,806	+3,152	9,190	13.5	61 0	68 9	330	54 0	82	99	98 8	96 4	Central Asia
8,843	8,580	79,974	121,229	+41,255	842	3.7	73 4	77 5	620	12 7	95	117	82.9	69 9	Gulf Cooperation Council
4,455	2,460	20,336	28,356	+8,020	10,493	5.9	68 6	71 4	1,200	41.6	92	131	83.7	70.0	Iran
3,868	1,908	63,138	55,700	−7,438	101,488	23.2	67 6	71 9	690	31 6	82	119	87 0	66 8	Other Southwest Asia
2,534	6,440	2,932,353	3,068,534	+136,181	191,444	13 6	71.0	79 1	300	7 2	98	130	99 4	98.5	Europe
4,422	6,936	2,667,945	2 727,170	+59,225	62,914	13 4	75 5	81 8	290	4 8	100	137	99 4	98 9	European Union (EU)
3,223	8,231	362,398	357,881	−4,517	—	—	76 7	83 8	330	3 6	100	142	98 9	98 7	France
6,997	7,442	601,761	748,531	+146,770	—	—	75 8	82.0	290	4 1	100	131	100.0	100.0	Germany
6,935	6,029	242,744	251,003	+8,259	—	—	77 6	83 2	180	5.9	100	151	98.9	98 1	Italy
3,054	6,412	165,920	125,872	−40,048	—	—	76 7	83 2	240	4 4	99	138	98.6	96 8	Spain
10,296	6,756	399,478	320,057	−79,421	—	—	75.9	81.0	720	5 1	100	137	100.0	100.0	United Kingdom
3,436	6,722	895,644	923,825	+28,181	62,914	13 4	73.6	80.3	320	5.2	100	133	99 4	98 9	Other EU
9,474	15,621	125,857	153,411	+27,554	—	—	78 5	83 5	480	3 8	100	131	100 0	100.0	Other Western Europe[3]
1,427	5,060	138,550	187,954	+49,404	128,530	13.7	62 3	73 8	290	11 7	95	119	99 4	97.6	Eastern Europe
1,177	6,425	52,410	125,960	+73,550	75,359	11 8	59 9	73 3	240	11 5	99	117	99 8	99.2	Russia
1,481	3,727	16,976	17,927	+951	10,458	14 6	62 2	74 0	330	10.0	98	120	99 5	97 4	Ukraine
2,496	3,083	69,164	44,066	−25,098	42,713	18 7	67 3	74 7	370	13 4	84	121	98.5	94 4	Other Eastern Europe
564	8,660	91,999	85,427	−6,572	1,266	45.2	74 5	79 4	480	14 7	87	117	94.7	91 9	Oceania
407	11,849	69,260	66,366	−2,894	—	—	78 5	83.3	400	4 7	100	116	99 5	99 5	Australia
1,498	3,741	22,738	19,061	−3,677	1,266	45.2	68 3	73.3	770	30.1	67	118	87 9	80.6	Pacific Ocean Islands

Liechtenstein, Monaco, Norway, San Marino, and Switzerland.

Europe

Eastern Europe

Oceania

Government and international organizations

This table summarizes principal facts about the governments of the countries of the world, their branches and organs, the topmost layers of local government constituting each country's chief administrative subdivisions, and the participation of their central governments in the principal intergovernmental organizations of the world.

In this table "date of independence" may refer to a variety of circumstances. In the case of the newest countries, those that attained full independence after World War II, the date given is usually just what is implied by the heading—the date when the country, within its present borders, attained full sovereignty over both its internal and external affairs. In the case of longer established countries, the choice of a single date may be somewhat more complicated, and grounds for the use of several different dates often exist. The reader should refer to appropriate Britannica articles on national histories and relevant historical acts.

The date of the current, or last, constitution is in some ways a less complicated question, but governments sometimes do not, upon taking power, either adhere to existing constitutional forms or trouble to terminate the previous document and legitimize themselves by the installation of new constitutional forms. Often, however, the desire to legitimize extraconstitutional political activity by associating it with existing forms of long precedent leads to partial or incomplete modification, suspension, or abrogation of a constitution, so that the actual day-to-day conduct of government may be largely unrelated to the provisions of a constitution still theoretically in force. When a date in this column is given in italics, it refers to a document that has been suspended, abolished by extraconstitutional action, or modified extensively.

The characterizations adopted under "type of government" represent a compromise between the forms provided for by the national constitution and the more pragmatic language that a political scientist might adopt to describe these same systems. For an explanation of the application of these terms in the Britannica World Data, *see* the Glossary at page 501.

The positions denoted by the terms "chief of state" and "head of government" are usually those identified with those functions by the constitution. The duties of the chief of state may range from largely ceremonial responsibilities, with little or no authority over the day-to-day conduct of government, to complete executive authority as the effective head of government. In certain countries, an individual outside the constitutional structure may exercise the powers of both positions.

Membership in the legislative house(s) of each country as given here includes all elected or appointed members, as well as ex officio members (those who by virtue of some other office or title are members of the body), whether voting or nonvoting. The legislature of a country with a unicameral system is shown as the upper house in this table.

The number of administrative subdivisions for each country is listed down to the second level. In some instances, planning or statistical sub-

Government and international organizations

country	date of independence[a]	date of current or last constitution[b]	type of government	executive branch[c]		legislative branch[d]		admin. subdivisions		seaward claims	
				chief of state	head of government	upper house (members)	lower house (members)	first-order (number)	second-order (number)	territorial (nautical miles)	fishing/economic (nautical miles)
Afghanistan	Aug. 19, 1919	Jan. 26, 2004	Islamic republic	president		102	249	34	398	—	—
Albania	Nov. 28, 1912	Nov. 28, 1998	republic	president	prime minister	140	—	12	36	12	[2]
Algeria	July 5, 1962	Dec. 7, 1996[3]	republic	president	prime minister	144	389	48	553	12	[4]
American Samoa	—	July 1, 1967	territory (U.S.)	U.S. president	governor	18	20[5]	—	5[6]	12	200
Andorra	Dec. 6, 1288	May 4, 1993	parl. coprincipality	[7]	head of govt.	28	—	7	...	—	—
Angola	Nov. 11, 1975	Aug. 27, 1992	republic	president[8]		220[9]	—	18	164	12	200
Antigua and Barbuda	Nov. 1, 1981	Nov. 1, 1981	constitutional monarchy	British monarch	prime minister	17	17[10]	17	—	12[11]	200[11]
Argentina	July 9, 1816	Aug. 24, 1994[12]	federal republic	president		72	257	24	820	12	200
Armenia	Sept. 23, 1991	Nov. 27, 2005[13]	republic	president	prime minister	131	—	11	929	—	—
Aruba	—	Jan. 1, 1986	overseas territory (Neth.)	Dutch monarch	[14]	21	—	...	..	12	200
Australia	Jan. 1, 1901	Jan. 1, 1901	federal parl. state[16]	British monarch	prime minister	76	150	8	673	12	200
Austria	Oct. 30, 1918	Oct. 1, 1920[17]	federal state	president	chancellor	62	183	9	99	—	—
Azerbaijan	Aug. 30, 1991	Aug. 24, 2002[18]	republic	president[8]		125[19]	—	71	...	...	...
Bahamas, The	July 10, 1973	July 10, 1973	constitutional monarchy	British monarch	prime minister	16	41	32	80	12	200
Bahrain	Aug. 15, 1971	Feb. 14, 2002	constitutional monarchy	monarch	prime minister	40	40	5	50	12	[20]
Bangladesh	March 26, 1971	Dec. 16, 1972	caretaker regime[21]	president	chief adviser	—	—	7[22]	64	12	200
Barbados	Nov. 30, 1966	Nov. 30, 1966	constitutional monarchy	British monarch	prime minister	21	30	—	—	12	200
Belarus	Aug. 25, 1991	Nov. 27, 1996[23]	republic	president[8]		64[19]	110[19]	7	118	—	—
Belgium	Oct. 4, 1830	Feb. 17, 1994	fed. const. monarchy	monarch	prime minister	71[24]	150	[25]	10	12	[26]
Belize	Sept. 21, 1981	Sept. 21, 1981	constitutional monarchy	British monarch	prime minister	12[27]	31[28]	[29]	...	12[30]	200
Benin	Aug. 1, 1960	Dec. 2, 1990	republic	president		83	—	12	77	200	200
Bermuda	—	June 8, 1968	overseas territory (U.K.)	British monarch	[31]	11	36	11	—	12	200
Bhutan	March 24, 1910	July 18, 2008	constitutional monarchy	monarch	prime minister	25	47	20	47	—	—
Bolivia	Aug. 6, 1825	Feb. 2, 1967	republic	president		27	130	9	112	—	—
Bosnia and Herzegovina	March 3, 1992	Dec. 14, 1995[32]	emerging fed. republic	[33]	chairman CM	15	42	3	72	...	...
Botswana	Sept. 30, 1966	Sept. 30, 1966	republic	president		35[34]	63	16	28	—	—
Brazil	Sept. 7, 1822	Oct. 5, 1988[17]	federal republic	president		81	513	27	5,564	12	200
Brunei	Jan. 1, 1984	Sept. 29, 1959[35]	monarchy (sultanate)	sultan		31[34]	—	4	38	12	200
Bulgaria	Oct. 5, 1908	July 12, 1991	republic	president	prime minister	240	—	28	262	12	200
Burkina Faso	Aug. 5, 1960	June 11, 1991	republic	president	prime minister	111	—	13	45	—	—
Burundi	July 1, 1962	March 18, 2005	republic	president[36]		49	118	17	117	—	—
Cambodia	Nov. 9, 1953	March 4, 1999[37]	constitutional monarchy	king	prime minister	61	123	24	185	12	200
Cameroon	Jan. 1, 1960	Jan. 18, 1996	republic	president	prime minister	180	—	10	58	12	[2, 38]
Canada	July 1, 1867	April 17, 1982	federal parl. state[16]	Canadian GG[39]	prime minister	105[19]	308	13	...	12	200
Cape Verde	July 5, 1975	Sept. 25, 1992	republic	president	prime minister	72	—	22	31	12[11]	200[11]
Cayman Islands	—	Aug. 22, 1972	overseas territory (U.K.)	[40]	[41]	18	—	...	1	...	...
Central African Republic	Aug. 13, 1960	Dec. 27, 2004	republic	president	prime minister	105	—	17	72	—	—
Chad	Aug. 11, 1960	April 14, 1996	republic	president	prime minister	155	—	18	48	—	—
Chile	Sept. 18, 1810	Sept. 17, 2005	republic	president		38	120	15	52	12	200
China	1523 BC	Dec. 4, 1982	people's republic	president	premier SC	3,000[19]	—	31	333	12	200
Colombia	July 20, 1810	July 6, 1991	republic	president		102	166	33	1,099	12	200
Comoros	July 6, 1975	June 5, 2002[42]	republic[43]	president[36]		33	—	3	...	12[11]	200[11]
Congo, Dem. Rep. of the	June 30, 1960	Feb. 18, 2006	republic	president	prime minister	108	500	26[44]	...	12	...
Congo, Rep. of the	Aug. 15, 1960	Aug. 10, 2002	republic	president[8]		72[19]	137[19]	16	93	200	[2]
Costa Rica	Sept. 15, 1821	Nov. 9, 1949	republic	president		57	—	7	81	12	200
Côte d'Ivoire	Aug. 7, 1960	July 23, 2000	transitional regime	president[8]		223	—	19	58	12	200
Croatia	June 25, 1991	Dec. 22, 1990	republic	president	prime minister	153	—	21	[45]	12	[46]
Cuba	May 20, 1902	Feb. 24, 1976	socialist republic	president		614	—	15	169	12	200
Cyprus[48]	Aug. 16, 1960	Aug. 16, 1960	republic	president		56[49]	—	24[50]	...	12	...
Czech Republic	Jan. 1, 1993	Jan. 1, 1993	republic	president	prime minister	81	200	14	76	—	—
Denmark	*c.* 800	June 5, 1953	constitutional monarchy	monarch	prime minister	179	—	5	98	12	[51]
Djibouti	June 27, 1977	Sept. 15, 1992	republic	president		65	—	6	...	12	200
Dominica	Nov. 3, 1978	Nov. 3, 1978	republic	president	prime minister	32	—	...	—	12	200
Dominican Republic	Feb. 27, 1844	Nov. 28, 1966	republic	president		32	178	32	248	12	200
East Timor	May 20, 2002	May 20, 2002	republic	president	prime minister	65	—	13	65	12	200
Ecuador	May 24, 1822	Oct. 20, 2008[52]	republic	president		130	—	24	218	200[53]	...
Egypt	Feb. 28, 1922	Sept. 11, 1971	republic	president	prime minister	264[34]	454	29	166	12	[54]
El Salvador	Jan. 30, 1841	Dec. 20, 1983	republic	president		84	—	14	262	200	200
Equatorial Guinea	Oct. 12, 1968	Nov. 17, 1991	republic	president[8]		100	—	7	30	12	200
Eritrea	May 24, 1993	[55]	transitional regime	president		150	—	6	...	12	[56]

divisions may be substituted when administrative subdivisions do not exist.

Finally, in the second half of the table are listed the memberships each country maintains in the principal international intergovernmental organizations of the world. This part of the table may also be utilized to provide a complete membership list for each of these organizations as of Dec. 15, 2008.

Notes for the column headings

a. The date may also be either that of the organization of the present form of government or the inception of the present administrative structure (federation, confederation, union, etc.).
b. Constitutions whose dates are in italic type had been wholly or substantially suspended or abolished as of late 2008.
c. For abbreviations used in this column see the list on this page.
d. When a legislative body has been adjourned or otherwise suspended, figures in parentheses indicate the number of members in the legislative body as provided for in constitution or law.
e. 15 nations with judicial representation in ICJ in 2008.
f. 18 nations with judicial representation in ICC in 2008 (ICC entered into force in July 2002; 108 countries had ratified or acceded to the ICC statute by July 2008).

International organizations, conventions

AC	Arctic Council
ACP	African, Caribbean, and Pacific (Cotonou Agreement) states
ADB	Asian Development Bank
APEC	Asia-Pacific Economic Co-operation
ASEAN	Association of Southeast Asian Nations
ATs	Antarctic Treaty signatories
AU	African Union
CARICOM	Caribbean Community and Common Market
ECOWAS	Economic Community of West African States
EU	The European Union
FAO	Food and Agriculture Org.
FZ	The Franc Zone
GCC	Gulf Cooperation Council
I-ADB	Inter-American Development Bank
IAEA	International Atomic Energy Agency
IBRD	International Bank for Reconstruction and Development
ICAO	International Civil Aviation Org.
ICC	International Criminal Court
ICJ	International Court of Justice
IDA	International Development Association
IDB	Islamic Development Bank
ILO	International Labour Org.
IMF	International Monetary Fund
IMO	International Maritime Org.
ITU	International Telecommunication Union
LAS	League of Arab States (Arab League)
OAS	Organization of American States
OPEC	Organization of the Petroleum Exporting Countries
PC	Pacific Community
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational Scientific and Cultural Org.
UNIDO	United Nations Industrial Development Org.
WHO	World Health Org.
WIPO	World Intellectual Property Org.
WTO	World Trade Org.

Abbreviations used in the executive-branch column

CM	Council of Ministers
FC	Federal Council
GC	General Council
GG	Governor-General
GPC	General People's Committee
HCS	High Council of State
NDC	National Defense Commission
Pc	Policy Council
SC	State Council
SPDC	State Peace and Development Council

membership in international organizations

United Nations (date of admission)	UN organs* and affiliated intergovernmental organizations																	The Commonwealth	regional multipurpose								economic								country
	UNCTAD*	ICJ**	FAO	IAEA	IBRD	ICAO	ICC[f]	IDA	ILO	IMF	IMO	ITU	UNESCO	UNIDO	WHO	WIPO	WTO		AC	ASEAN	ATs	AU	EU	GCC	LAS	OAS	PC	ACP	ADB	APEC	CARICOM	ECOWAS	FZ	I-ADB	IDB	OPEC	
1946	●		●	●	●	●		●	●	●		●	●	●	●	●	1												●					●		Afghanistan
1955	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●																	●		Albania
1962	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1					●			●									●	●	Algeria
—												●															●									American Samoa
1993	●		●			●						●	●		●	●	1																			Andorra
1976	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●						●							●	Angola
1981	●		●		●	●			●	●		●	●		●	●	●	●								●			●		●					Antigua and Barbuda
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●					●		●					●			Argentina
1992	●		●	●	●	●		●	●	●		●	●	●	●	●	●												●							Armenia
—										●		●	15																							Aruba
1945	●		●	●	●	●		●	●	●	●	●	●		●	●	●	●			●						●		●	●						Australia
1955	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●		●						●				●			Austria
1992	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1												●					●		Azerbaijan
1973	●		●		●	●		●	●	●	●	●	●	●	●	●	·	●								●		●		●			●			Bahamas, The
1971	●		●	●	●	●			●	●	●	●	●	●	●	●	●						●	●									●			Bahrain
1974	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●										●						●		Bangladesh
1966	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●								●		●		●			●			Barbados
1945	●		●	●	●	●			●	●		●	●	●	●	●	·				●															Belarus
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●		●					●					●			Belgium
1981	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●								●		●		●			●			Belize
1960	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●						●			●	●		●		Benin
—												●																			15						Bermuda
1971	●		●		●	●		●			●	●	●	●	●	●	1											●								Bhutan
1945	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									●								●		Bolivia
1992	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1																			Bosnia and Herzegovina
1966	●		●	●	●	●		●	●	●		●	●	●	●	●	●	●				●						●								Botswana
1945	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●					●								●		Brazil
1984	●				●	●			●	●	●	●	●	●	●	●	●	●		●									●	●				●		Brunei
1955	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●				●		●													Bulgaria
1960	●		●	●	●	●		●	●	●		●	●	●	●	●	●					●						●			●	●		●		Burkina Faso
1962	●		●	●	●	●		●	●	●		●	●	●	●	●	●					●						●								Burundi
1955	●		●		●	●		●	●	●	●	●	●	●	●	●	●			●									●							Cambodia
1960	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●				●						●				●		●		Cameroon
1945	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●					●		●	●	●				●		Canada
1975	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●						●			●					Cape Verde
—												●	15																		15						Cayman Islands
1960	●		●	●	●	●		●	●	●		●	●	●	●	●	●					●						●				●				Central African Republic
1960	●		●	●	●	●		●	●	●		●	●	●	●	●	●					●						●				●		●		Chad
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●					●				●				●		Chile
1945	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●		1		●							●		●						China
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●					●								●		Colombia
1975	●		●		●	●		●	●	●	●	●	●	●	●	●	1					●		●			●					●		●		Comoros
1960	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●					●									Congo, Dem. Rep. of the
1960	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●					●					●				Congo, Rep. of the
1945	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									●							●			Costa Rica
1960	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●						●			●	●		●		Côte d'Ivoire
1992	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●																●			Croatia
1945	●		●	●		●				●	●	●	●	●	●	●	●				●							●								Cuba
1960	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●			47		●								Cyprus[48]
1993	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●		●													Czech Republic
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●		●		●		●					●					●			Denmark
1977	●		●		●	●		●	●	●	●	●	●	●	●	●	●					●			●			●					●			Djibouti
1978	●		●			●		●	●	●	●	●	●	●	●	●	●	●								●		●		●						Dominica
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●									●		●					●			Dominican Republic
2002	●		●		●	●		●	●	●			●	●	●											●		●								East Timor
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●					●							●		●	Ecuador
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●			●								●			Egypt
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●									●							●			El Salvador
1968	●		●		●	●		●	●	●	●	●	●	●	●	●	1					●					●					●				Equatorial Guinea
1993	●		●	●	●	●		●	●	●	●	●	●	●	●	●						●					●									Eritrea

Government and international organizations (continued)

country	date of independence[a]	date of current or last constitution[b]	type of government	executive branch[c]		legislative branch[d]		admin. subdivisions		seaward claims	
				chief of state	head of government	upper house (members)	lower house (members)	first-order (number)	second-order (number)	territorial (nautical miles)	fishing/economic (nautical miles)
Estonia	Feb. 24, 1918	July 3, 1992	republic	president	prime minister	101	—	15	227	12[57]	[57]
Ethiopia	*c.* 1000 BC	Aug. 22, 1995	federal republic	president	prime minister	112	547[19]	11	63[58]	—	—
Faroe Islands	—	April 1, 1948	ext. terr. (Den.)	Danish monarch	[59]	33	—	34	—	. .	200
Fiji	Oct. 10, 1970	July 27, 1998[60]	republic[60]	president	prime minister	(32)	(71)	4	15	12[11]	200[11]
Finland	Dec. 6, 1917	March 1, 2000	republic	president	prime minister	200	—	6	20	12[61]	[57]
France	August 843	Oct. 4, 1958[17]	republic	president	prime minister	343	577	22	96[62]	12	200
French Guiana	—	Feb. 28, 1983	overseas dept. (Fr.)	French president	[63]	19	31	2	22	12	200
French Polynesia	—	Feb. 27, 2004	overseas collectivity (Fr.)	French president	[64]	57	—	5	48	12	200
Gabon	Aug. 17, 1960	March 26, 1991	republic	president	prime minister	91	120	9	37	12	200
Gambia, The	Feb. 18, 1965	Jan. 16, 1997	republic	president		53	—	8	39	12	200
Gaza Strip	—	May 4, 1994[65]	interim authority[66]	.	.	.	.	.	.	.	.
Georgia	April 9, 1991	Feb. 6, 2004	republic	president[8]		150	—	11[68]	[69]	12	.
Germany	May 5, 1955	May 23, 1949	federal republic	president	chancellor	69	614	16	22	12[51]	[26]
Ghana	March 6, 1957	Jan. 7, 1993	republic	president		230	—	10	110	12	200
Greece	Feb. 3, 1830	April 6, 2001[70]	republic	president	prime minister	300	—	14	54	6/10	[2]
Greenland	—	May 1, 1979	ext. terr. (Den.)	Danish monarch	[59]	31	—	18			200
Grenada	Feb. 7, 1974	Feb. 7, 1974	constitutional monarchy	British monarch	prime minister	13	15	—	—	12	200
Guadeloupe	—	Feb. 28, 1983	overseas dept. (Fr.)	French president	[63]	42	41	2	32	12	200
Guam	—	Aug. 1, 1950	territory (U.S.)	U.S. president	governor	15	—	—	—	12	200
Guatemala	Sept. 15, 1821	Jan. 14, 1986	republic	president		158	—	22	331	12	200
Guernsey	—	Jan. 1, 1949[17]	crown dependency (U.K.)	British monarch[71]	chief minister Pc	50[72]	—	1	2	3	12
Guinea	Oct. 2, 1958	November 2001[37]	republic	president[8]		114	—	8	33	12	200
Guinea-Bissau	Sept. 10, 1974	[73]	transitional regime	president[8]		102	—	9	37	12	200
Guyana	May 26, 1966	Oct. 6, 1980	republic	president		65	—	10	. .	12	200
Haiti	Jan. 1, 1804	March 29, 1987	republic	president	prime minister	30	99	10	41	12	200
Honduras	Nov. 5, 1838	Jan. 20, 1982	republic	president		128	—	18	298	12	200
Hong Kong	—	July 1, 1997	[74]	Chinese president	chief executive	60	—	18	—	12	[2]
Hungary	Nov. 16, 1918	Aug. 20, 1949[75]	republic	president	prime minister	386	—	20	274[76]	—	—
Iceland	June 17, 1944	June 17, 1944	republic	president	prime minister	63	—	[77]	—	12	200
India	Aug. 15, 1947	Jan. 26, 1950	federal republic	president[8]	prime minister	245	545	35	610	12	200
Indonesia	Aug. 17, 1945	Aug. 17, 1945	republic	president		128[34]	550	33	483	12[11]	200[11]
Iran	Oct. 7, 1906	Dec. 2–3, 1979	Islamic republic	president[78]		290	—	30	336	12	[51]
Iraq	Oct. 3, 1932	Oct. 15, 2005	republic	president	prime minister	275	—	. .	. . .	12	. . .
Ireland	Dec. 6, 1921	Dec. 29, 1937	republic	president	prime minister	60	166	34	. . .	12	200
Isle of Man	—	[79]	crown dependency (U.K.)	British monarch[71]	chief minister CM	11	24	24	—	12[80]	. . .
Israel	May 14, 1948	June 1950[17]	republic	president	prime minister	120	—	6	[81]	12	[2]
Italy	March 17, 1861	Jan. 1, 1948	republic	president	prime minister	322	630	20	107	12	[82]
Jamaica	Aug. 6, 1962	Aug. 6, 1962	constitutional monarchy	British monarch	prime minister	21	60	13	—	12	200
Japan	*c.* 660 BC	May 3, 1947	constitutional monarchy	[83]	prime minister	242	480	47	782[84]	12[85]	200
Jersey	—	Jan. 1, 1949[17]	crown dependency (U.K.)	British monarch[71]	chief minister CM	58	—		—	12	. . .
Jordan	May 25, 1946	Jan. 8, 1952	constitutional monarchy	king[8]		55	110	12	51	3	[2]
Kazakhstan	Dec. 16, 1991	Sept. 6, 1995	republic	president[8]		47	107	16	160	—	—
Kenya	Dec. 12, 1963	Dec. 12, 1963	republic	president[8]		224	—	8	68	12	200
Kiribati	July 12, 1979	July 12, 1979	republic	president		46	—	10	. .	12[11]	200[11]
Korea, North	Sept. 9, 1948	Sept. 5, 1998	socialist republic	chairman NDC		687	—	13	173	12	200
Korea, South	Aug. 15, 1948	Feb. 25, 1988	republic	president[8]		299	—	16	165[86]	12	200
Kosovo	Feb. 17, 2008	[87]	transitional republic	president	prime minister	120	—	30	—	—	—
Kuwait	June 19, 1961	Nov. 16, 1962	const. mon. (emirate)	emir[8]		65	—	6	.	12	[2]
Kyrgyzstan	Aug. 31, 1991	Oct. 23, 2007	republic	president[8]		90	—	9	41	—	—
Laos	Oct. 23, 1953	Aug. 15, 1991	people's republic	president	prime minister	115	—	18	141	—	—
Latvia	Nov. 18, 1918	Nov. 7, 1922	republic	president	prime minister	100	—	33	70[88]	12	[51]
Lebanon	Nov. 26, 1941	Sept. 21, 1990	republic	president	prime minister	128	—	6	25	12	[2]
Lesotho	Oct. 4, 1966	April 2, 1993	constitutional monarchy	king	prime minister	33[34]	120	11	128	—	—
Liberia	July 26, 1847	Jan. 6, 1986	republic	president		30	64	15	86	200	[2]
Libya	Dec. 24, 1951	—	authoritarian state	leader[89]	sec. GPC	468	—	20	. . .	12	[26]
Liechtenstein	July 12, 1806	March 16, 2003	constitutional monarchy	prince	head of govt.	25	—	11	—	—	—
Lithuania	Feb. 16, 1918	Nov. 6, 1992	republic	president	prime minister	141	—	10	60	12	[51]
Luxembourg	May 10, 1867	Oct. 17, 1868	constitutional monarchy	grand duke	prime minister	22[34, 90]	60	3	116	—	—
Macau	—	Dec. 20, 1999	[74]	Chinese president	chief executive	29	. . .	. . .	. . .	. . .	. . .
Macedonia	Nov. 17, 1991	Nov. 20, 2001	republic	president	prime minister	120	—	84	. . .	—	—
Madagascar	June 26, 1960	April 8, 1998	republic	president[8]		33	127	22	116	12	200
Malawi	July 6, 1964	May 18, 1994	republic	president		193	—	[91]	. .	—	—
Malaysia	Aug. 31, 1957	Aug. 31, 1957	fed. const. monarchy	paramount ruler	prime minister	70	222	16	146	12	200
Maldives	July 26, 1965	Aug. 7, 2008	republic	president		50	—	21	. . .	12[11]	200
Mali	Sept. 22, 1960	Feb. 25, 1992	republic	president	prime minister	147	—	9	49	—	—
Malta	Sept. 21, 1964	Dec. 13, 1974	republic	president	prime minister	89	—	68	—	12	25
Marshall Islands	Dec. 22, 1990	May 1, 1979	republic	president		12[34]	33	4	—	12[11]	200
Martinique	—	Feb. 28, 1983	overseas dept. (Fr.)	French president	[63]	45	41	4	34	12	200
Mauritania	Nov. 28, 1960	July 21, 1991[92]	military regime	chairman HCS[8]		. . .	. . .	13	. .	12	200
Mauritius	March 12, 1968	March 12, 1992	republic	president	prime minister	70	—	9		12	200
Mayotte	—	July 11, 2001	dept. collectivity (Fr.)	French president	president GC	19	—	17	—	12	200
Mexico	Sept. 16, 1810	Feb. 5, 1917	federal republic	president		128	500	32	2,454	12	200
Micronesia	Dec. 22, 1990	Jan. 1, 1981	federal republic	president		14	—	4	74	12	200
Moldova	Aug. 27, 1991	Aug. 27, 1994	parliamentary republic	president	prime minister	101	—	35/1	. . .	—	—
Monaco	Feb. 2, 1861	April 12, 2002[37]	constitutional monarchy	prince	min. of state[93]	24	—	—	—	12	[2]
Mongolia	March 13, 1921	Feb. 12, 1992	republic	president	prime minister	76	—	22	315	—	—
Montenegro	June 3, 2006	Oct. 22, 2007	republic	president	prime minister	81	—	21	—	. .	. . .
Morocco	March 2, 1956	Oct. 7, 1996	constitutional monarchy	king[8]		270	325	16[94]	66[94]	12	200
Mozambique	June 25, 1975	Nov. 16, 2004	republic	president		250	—	11	128	12	200
Myanmar (Burma)	Jan. 4, 1948	*Jan. 4, 1974*	military regime	chairman SPDC[8]		(492)	—	14	65	12	200
Namibia	March 21, 1990	March 21, 1990	republic	president		26	78	13	102	12	200
Nauru	Jan. 31, 1968	Jan. 31, 1968	republic	president		18	—	—	—	12	200
Nepal	Nov. 13, 1769	Jan. 15, 2007[96]	republic	president	prime minister	601	—	14	75	—	—
Netherlands, The	March 30, 1814	Feb. 17, 1983	constitutional monarchy	monarch	prime minister	75	150	12	443	12	[26]
Netherlands Antilles	—	Dec. 29, 1954	overseas territory (Neth.)	Dutch monarch	[14]	21	—	5	—	12	200

membership in international organizations

United Nations (date of admission)	UN organs* and affiliated intergovernmental organizations																		The Commonwealth	regional multipurpose						economic									country
	UNCTAD*	ICJ*[6]	FAO	IAEA	IBRD	ICAO	ICC[7]	IDA	ILO	IMF	IMO	ITU	UNESCO	UNIDO	WHO	WIPO	WTO		AC	ASEAN	ATs	AU	EU	GCC	LAS	OAS	PC	ACP	ADB	APEC	CARICOM	ECOWAS	FZ	I-ADB	IDB	OPEC	
1991	●		●	●	●	●		●	●	●	●	●	●		●	●	●				●		●													Estonia
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1					●					●									Ethiopia
—			15									●							●																	Faroe Islands
1970	●		●		●	●		●	●	●	●	●	●	●	●	●	●		47								●	●	●							Fiji
1955	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●		●						●					●			Finland
1945	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			1		●		●				●		●			●	●			France
—																																	●				French Guiana
—												●			15												●										French Polynesia
1960	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●						●				●		●		Gabon
1965	●		●		●	●		●	●	●	●	●	●	●	●	●	●		●			●						●				●		●		Gambia, The
—												●			15,67	1,7									●	7								●			Gaza Strip
1992	●		●	●	●	●			●	●	●	●	●	●	●	●	●											●								Georgia
1973	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			1		●		●				●					●				Germany
1957	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●			●						●				●					Ghana
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●		●													Greece
—												●								●																	Greenland
1974	●		●		●	●		●	●	●	●	●	●	●	●	●	●		●						●		●			●						Grenada
—																																	●				Guadeloupe
—												●			15											●											Guam
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●				●							●				Guatemala
—																																					Guernsey
1958	●		●		●	●		●	●	●	●	●	●	●	●	●	●					●					●				●		●			Guinea
1974	●		●		●	●		●	●	●	●	●	●	●	●	●	●					●					●				●	●	●			Guinea-Bissau
1966	●		●		●	●		●	●	●	●	●	●	●	●	●	●		●						●		●			●			●			Guyana
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●								●		●			●			●			Haiti
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●								●								●			Honduras
—										●		●					●											●	●							Hong Kong
1955	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●		●													Hungary
1946	●		●	●	●	●		●	●	●	●	●	●		●	●	●		●																	Iceland
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●							●								India
1950	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●			●								●	●				●	●		Indonesia
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1																			Iran
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1								●									●		Iraq
1955	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●						●								Ireland
—																																					Isle of Man
1949	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●																●			Israel
1955	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			1		●		●				●					●				Italy
1962	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●		●							●		●			●			●			Jamaica
1956	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●						●	●				●				Japan
—																																					Jersey
1955	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●								●								●			Jordan
1992	●		●	●	●	●		●	●	●	●	●	●	●	●	●	[illegible]											●						●			Kazakhstan
1963	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●		●			●					●										Kenya
1999	●		●		●	●		●	●	●	●	●	●	●	●	●			●							●	●	●									Kiribati
1991	●		●			●					●	●	●	●	●	●					●																Korea, North
1991	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●							●	●					●			Korea, South
—																																					Kosovo
1963	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●							●	●								●		●	Kuwait
1992	●		●	●	●	●		●	●	●		●	●	●	●	●	●											●						●			Kyrgyzstan
1955	●		●		●	●		●	●	●		●	●	●	●	●	1			●								●									Laos
1991	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●						●														Latvia
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1								●								●			Lebanon
1966	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●		●			●					●										Lesotho
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	[illegible]					●					●				●						Liberia
1955	●		●	●	●	●		●	●	●	●	●	●	●	●	●	[illegible]					●			●									●	●		Libya
1990	●			●								●				●	●																				Liechtenstein
1991	●		●	●	●	●			●	●	●	●	●	●	●	●	●					●														Lithuania
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●						●									Luxembourg
—										●	15	●	15		15		●																					Macau
1993	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●																				Macedonia
1960	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●					●						●									Madagascar
1964	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●		●			●						●									Malawi
1957	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●		●									●	●					●			Malaysia
1965	●		●		●	●		●		●	●	●	●	●	●	●	●		●									●						●			Maldives
1960	●		●	●	●	●	●	●	●	●		●	●	●	●	●	●					●									●	●		●			Mali
1964	●		●	●	●	●			●	●	●	●	●	●	●	●	●		●				●															Malta
1991	●		●	●	●	●		●	●	●	●	●	●	●	●												●	●	●								Marshall Islands
—																																		●				Martinique
1961	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					47						●						●			Mauritania
1968	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●		●			●						●									Mauritius
—												●																					●				Mayotte
1945	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●								●				●				●			Mexico
1991	●		●		●	●			●			●	●		●												●	●	●								Micronesia
1992	●		●	●	●	●			●	●		●	●	●	●	●	●																				Moldova
1993	●		●	●		●					●	●	●	●	●	●					●																Monaco
1961	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●																				Mongolia
2006	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1																				Montenegro
1956	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●								●									●			Morocco
1975	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●					●							●			Mozambique
1948	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●			●								●									Myanmar (Burma)
1990	●		●	●	●	●			●	●	●	●	●	●	●	●	●		●			●					●										Namibia
1999	●		●			●						●	●		●				35								●	●									Nauru
1955	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●											●									Nepal
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●		●					●						●			Netherlands, The
—									●	●		●																									Netherlands Antilles

Government and international organizations (continued)

country	date of independence[a]	date of current or last constitution[b]	type of government	executive branch[c]		legislative branch[d]		admin. subdivisions		seaward claims	
				chief of state	head of government	upper house (members)	lower house (members)	first-order (number)	second-order (number)	territorial (nautical miles)	fishing/economic (nautical miles)
New Caledonia	—	March 19, 2003	overseas country (Fr.)	French president [64]		54	—	3	33	12	200
New Zealand	Sept. 26, 1907	June 30, 1852[17]	constitutional monarchy	British monarch	prime minister	122	—	12[97]	74	12[98]	200[98]
Nicaragua	April 30, 1838	Jan. 9, 1987	republic	president		92	—	17	145	12	200
Niger	Aug. 3, 1960	Aug. 9, 1999	republic	president[8]		113	—	8	37	—	—
Nigeria	Oct. 1, 1960	May 5, 1999	federal republic	president		109	360	37	774	12	200[38]
Northern Mariana Is.	—	Jan. 9, 1978	commonwealth (U.S.)	U.S. president	governor	9	20	3	—	12	200
Norway	June 7, 1905	May 17, 1814	constitutional monarchy	king	prime minister	169	—	19	430	4	200[99]
Oman	Dec. 20, 1951	Nov. 6, 1996[100]	monarchy (sultanate)	sultan		70[34]	84[34]	9	63	12	200
Pakistan	Aug. 14, 1947	Aug. 14, 1973	republic	president[8]		100	342	6[101]	107[102]	12	200
Palau	Oct. 1, 1994	Jan. 1, 1981	republic	president		13	16	16	—	3	200
Panama	Nov. 3, 1903	Oct. 27, 2004[37]	republic	president[36]		78	—	12	75	12	200
Papua New Guinea	Sept. 16, 1975	Sept. 16, 1975	constitutional monarchy	British monarch	prime minister	109	—	20	87	3/12	200[11]
Paraguay	May 14, 1811	June 22, 1992	republic	president		45[103]	80	18	229	—	—
Peru	July 28, 1821	Dec. 31, 1993	republic	president[8]		120	—	25	195	200	200
Philippines	July 4, 1946	Feb. 11, 1987	republic	president		24	240	17	81	[104]	200[11]
Poland	Nov. 10, 1918	Oct. 17, 1997	republic	president	prime minister	100	460	16	379	12	[51]
Portugal	*c.* 1140	April 25, 1976	republic	president	prime minister	230	—	20	308	12	200
Puerto Rico	—	July 25, 1952	commonwealth (U.S.)	U.S. president	governor	27	51	78	—	12	200
Qatar	Sept. 3, 1971	June 9, 2005	constitutional emirate	emir[8]		35[34]	—	10	—	12	[51]
Réunion	—	Feb. 28, 1983	overseas dept. (Fr.)	French president [63]		49	45	4	24	12	200
Romania	May 21, 1877	Oct. 29, 2003	republic	president	prime minister	137	334	42	319	12	200
Russia	Dec. 8, 1991	Dec. 24, 1993	federal republic	president	prime minister	172	450	7	83	12	200
Rwanda	July 1, 1962	June 4, 2003	republic	president[8]		26	80	5	30	—	—
St Kitts and Nevis	Sept. 19, 1983	Sept. 19, 1983	constitutional monarchy	British monarch	prime minister	15	—	1	—	12	200
St Lucia	Feb. 22, 1979	Feb. 22, 1979	constitutional monarchy	British monarch	prime minister	11	17[10]	—	—	12	200
St Vincent	Oct. 27, 1979	Oct. 27, 1979	constitutional monarchy	British monarch	prime minister	22	—	—	—	12	200
Samoa	Jan. 1, 1962	Oct. 28, 1960	[105]	head of state	prime minister	49	—	11	—	12	200
San Marino	855	Oct. 8, 1600	republic	captains-regent (2)		60	—	9	—	—	—
São Tomé and Príncipe	July 12, 1975	Sept. 10, 1990	republic	president	prime minister	55	—	7	—	12[11]	200[11]
Saudi Arabia	Sept. 23, 1932	[106]	monarchy	king		150[34]	—	13	178	12	[2]
Senegal	Aug. 20, 1960	Jan. 7, 2001	republic	president[8]		100	150	11	34	12[26]	200[26]
Serbia	June 5, 2006	Nov. 8, 2006	republic	president	prime minister	250	—	1	25[107]	—	—
Seychelles	June 29, 1976	June 21, 1993	republic	president		34	—	26	...	12	200
Sierra Leone	April 27, 1961	Oct. 1, 1991	republic	president		124	—	19	..	12	200
Singapore	Aug. 9, 1965	June 3, 1959[18]	republic	president	prime minister	94	—	—	—	12[108]	[2]
Slovakia	Jan. 1, 1993	Jan. 1, 1993	republic	president	prime minister	150	—	8	79	—	—
Slovenia	June 25, 1991	Dec. 23, 1991	republic	president	prime minister	40	90	210	—	12[109]	[109]
Solomon Islands	July 7, 1978	July 7, 1978	constitutional monarchy	British monarch	prime minister	50	—	10	.	12[11]	200[11]
Somalia	July 1, 1960	March 12, 2004[110]	transitional regime	president[8, 111]		275[111]	—	...	...	200	200
South Africa	May 31, 1910	June 30, 1997	republic	president		90	400	9	52	12	200
Spain	1492	Dec. 29, 1978	constitutional monarchy	king	prime minister	259	350	19	50	12	[112]
Sri Lanka	Feb. 4, 1948	Sept. 7, 1978	republic	president[8]		225	—	9	25	12	200
Sudan, The	Jan. 1, 1956	July 9, 2005[96]	interim regime	president[36]		50	450	[113]	26	12	[2]
Suriname	Nov. 25, 1975	Nov. 25, 1987	republic	president		51	—	10	..	12	200
Swaziland	Sept. 6, 1968	Feb. 8, 2006[114]	monarchy	king[8]		30[34]	65[34]	4	55	—	—
Sweden	before 836	Jan. 1, 1975	constitutional monarchy	king	prime minister	349	—	21	288	12	[109]
Switzerland	Sept. 22, 1499	Jan. 1, 2000	federal state	president FC		46	200	26	150	—	—
Syria	April 17, 1946	March 14, 1973	republic	president		250	—	14	60	12	200
Taiwan	—	Dec. 25, 1947[17]	republic	president	premier	113	—	1	25	24	200
Tajikistan	Sept. 9, 1991	Nov. 6, 1994	republic	president	prime minister	34[115]	63	4	58	—	—
Tanzania	Dec. 9, 1961	April 25, 1977	republic	president		323	—	1	26	12	200
Thailand	1350	Aug. 24, 2007	constitutional monarchy	king	prime minister	150	480	76	877	12	200
Togo	April 27, 1960	Sept. 27, 1992	republic	president[8]		81	—	30	...	30	200
Tonga	June 4, 1970	Nov. 4, 1875	constitutional monarchy	king	prime minister	32	—	3	...	12	200
Trinidad and Tobago	Aug. 31, 1962	July 27, 1976	republic	president	prime minister	31	41	15	...	12[11]	200[11]
Tunisia	March 20, 1956	June 1, 2002[37]	republic	president	prime minister	126	189	24	262	12	[109]
Turkey	Oct. 29, 1923	Nov. 7, 1982	republic	president	prime minister	550	—	81	923	[116]	200[117]
Turkmenistan	Oct. 27, 1991	Sept. 26, 2008	republic	president		125	—	6	48/13[118]	—	—
Tuvalu	Oct. 1, 1978	Oct. 1, 1986	constitutional monarchy	British monarch	prime minister	15	—	8	—	12[11]	200[11]
Uganda	Oct. 9, 1962	Oct. 8, 1995	republic	president[8]		333[19]	—	80	146	—	—
Ukraine	Aug. 24, 1991	June 28, 1996[119]	republic	president	prime minister	450	—	27	490	12	200
United Arab Emirates	Dec. 2, 1971	Dec. 2, 1971	federation of emirates	president	prime minister	40[34]	—	7	...	12	200
United Kingdom	Dec. 6, 1921	[120]	constitutional monarchy	monarch	prime minister	732	646	3	468	12[80]	200
United States	July 4, 1776	March 4, 1789	federal republic	president		100	435	51	3,135[121]	12	200
Uruguay	Aug. 25, 1828	Feb. 15, 1967	republic	president		31[122]	99	19	...	12	200
Uzbekistan	Aug. 31, 1991	Dec. 8, 1992	republic	president	prime minister	100	120	14	157	—	—
Vanuatu	July 30, 1980	July 30, 1980	republic	president	prime minister	52	—	6	...	12[11]	200[11]
Venezuela	July 5, 1811	Dec. 20, 1999	federal republic	president		167	—	25	156	12	200
Vietnam	Sept. 2, 1945	April 15, 1992	socialist republic	president	prime minister	493	—	8	64	12	200
Virgin Islands (U.S.)	—	July 22, 1954	territory (U.S.)	U.S. president	governor	15	—	...	...	12	200
West Bank	—	May 4, 1994[65]	interim authority	president[123]	prime minister[123]	132	—	16[124]	..	—	—
Western Sahara	—	—	annexure of Morocco	—	—	—	—	...	...	12	200
Yemen	December 1918	Sept. 29, 1994	republic	president	prime minister	111[34]	301	21	333	12	200
Zambia	Oct. 24, 1964	May 28, 1996[3]	republic	president		158	—	9	72	—	—
Zimbabwe	April 18, 1980	April 18, 1980	republic	president		93	210	10	63	—	—

[1]Observer. [2]Territorial sea claim. [3]Date president signed new constitution. [4]Varies between 32 and 52 nautical miles. [5]Excludes nonvoting delegate from Swains Island. [6]Comprises 3 districts and 2 islands. [7]President of France and Bishop of Urgell, Spain. [8]Assisted by the prime minister. [9]Excludes 3 unfilled seats reserved for Angolans living abroad. [10]Excludes possible ex officio members. [11]Measured from claimed archipelagic baselines. [12]Promulgation date of significant amendments to July 9, 1853, constitution. [13]Date of referendum adopting significant amendments to 1995 constitution. [14]Executive responsibilities divided between (for The Netherlands) the governor and (locally) the prime minister. [15]Associate member. [16]Formally a constitutional monarchy. [17]Evolving body of constitutional law. [18]Date of referendum approving significant constitutional amendments [19]Statutory number of seats. [20]Defined by equidistant line. [21]Constitutionally allowable caretaker regime from January 2007. [22]Includes the Chittagong Hill Tracts, a tribal region formally established in 1999. [23]Per nondemocratic national referendum of Nov. 24, 1996, amending the constitution. [24]Excludes children of the monarch serving ex officio from age 18. [25]3 autonomous regions/3 linguistic communities. [26]Defined by coordinates of points. [27]Excludes speaker if designated from outside of the upper house. [28]Excludes speaker if elected from outside of the lower house. [29]6 districts; 8 town boards. [30]3 nautical miles from the mouth of the Sarstoon River (southern boundary with Guatemala) to Ranguana Caye. [31]Executive responsibilities divided between (for the U.K.) the governor and (locally) the premier. [32]Date of international treaty confirming the existence of a single state; the treaty included a constitution now in force. [33]Tripartite presidency under the final authority of the high representative/special representative. [34]Body with limited or no legislative authority. [35]Emergency powers since 1962. [36]Assisted by vice presidents. [37]Date significant amendments were adopted. [38]Cameroon-Nigeria maritime boundary over oil fields delimited in 2007. [39]Governor-general can exercise all the powers of the reigning monarch of the Commonwealth. [40]British monarch represented by governor. [41]Leader of Government Business. [42]Effective date of new government structure. [43]In actuality, a loose union of semiautonomous islands. [44]Implementation pending in late 2008. [45]124 towns; 426 municipalities. [46]Defined by geographical coordinates. [47]Suspended membership. [48]Republic of Cyprus only. [49]24 seats reserved for Turkish Cypriots are not occupied. [50]Represents number of municipalities (local governments for urban areas only). [51]National legislation in possible conjunction with a median (equidistant) line delimits maritime boundaries with adjacent states. [52]Effective date. [53]Around the Galápagos Islands and the marine area directly west of mainland Ecuador toward the Galápagos Islands only. [54]Limits of economic zones between Egypt and Cyprus were defined by agreement in 2003. [55]Constitution adopted in May 1997 had not been promulgated by November 2008. [56]Partially delimited by Eritrean-Yemeni arbitration. [57]Defined by coordinates in some parts of the Gulf of Finland. [58]Number of zones. [59]Executive responsibilities divided between (for Denmark) the high commissioner and (locally) the prime minister [60]Constitution not formally abrogated as a result of Dec. 5, 2006, military coup. [61]To as little as 3 nautical miles in particular circumstances.

membership in international organizations

United Nations (date of admission)	UN organs* and affiliated intergovernmental organizations																	The Commonwealth	regional multipurpose									economic								country
	UNCTAD*	ICJ*e	FAO	IAEA	IBRD	ICAO	ICC[f]	IDA	ILO	IMF	IMO	ITU	UNESCO	UNIDO	WHO	WIPO	WTO		AC	ASEAN	ATs	AU	EU	GCC	LAS	OAS	PC	ACP	ADB	APEC	CARICOM	ECOWAS	FZ	I-ADB	IDB	OPEC	
—												●			15												●					●				New Caledonia
1945	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●			●						●		●	●						New Zealand
1945	●		●		●	●		●	●			●	●	●	●	●	●									●							●			Nicaragua
1960	●		●	●	●	●		●	●	●		●	●	●	●	●	●					●					●				●	●		●		Niger
1960	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●				●					●				●			●	●	Nigeria
—												●			15												●									Northern Mariana Is.
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●		●		●							●					●			Norway
1971	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●							●	●								●		Oman
1947	●		●	●	●	●		●	●		●	●	●	●	●	●	●	●										●					●		Pakistan
1994	●		●	●	●	●		●		●			●		●											●	●	●								Palau
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●								●								●			Panama
1975	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●			●					●	●	●	●							Papua New Guinea
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●								●								●			Paraguay
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●				●				●				●			Peru
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●			●								●	●							Philippines
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●	●														Poland
1955	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●						●					●			Portugal
—												●			15																					Puerto Rico
1971	●		●	●	●	●			●	●	●	●	●	●	●	●	●							●	●								●	●	Qatar
—																																	●			Réunion
1955	●		●	●	●	●			●	●	●	●	●	●	●	●	●				●		●													Romania
1991	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	1		●		●								●							Russia
1962	●		●		●	●		●	●	●	●	●	●	●	●	●	●					●					●									Rwanda
1983	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●							●		●			●					St. Kitts and Nevis
1979	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●							●		●			●					St. Lucia
1980	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●							●		●			●					St. Vincent
1976	●		●		●	●		●	●	●	●	●	●		●	●	1	●								●	●	●							Samoa
1992	●		●		●	●			●	●	●	●	●		●	●																			San Marino
1975	●		●		●	●		●	●	●	●	●	●	●	●	●	1					●					●								São Tomé and Principe
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●							●	●								●	●	Saudi Arabia
1960	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●					●				●	●		●		Senegal
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1																		Serbia
1976	●		●	●	●	●			●	●	●	●	●	●	●	●	1					●					●									Seychelles
1961	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●				●					●				●			●		Sierra Leone
1965	●			●	●	●		●	●	●	●	●	●	●	●	●	●	●		●								●	●							Singapore
1993	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●				●		●													Slovakia
1992	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●						●													Slovenia
1978	●		●		●	●		●	●	●	●	●	●	●	●		●									●	●	●							Solomon Islands
1960	●		●		●	●		●	●	●	●	●	●	●	●	●	●					●					●							●		Somalia
1945	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●	●		●			●							●		South Africa
1955	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●		●					●								Spain
1955	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●										●								Sri Lanka
1956	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1					●		●			●							●		Sudan, The
1975	●		●		●	●		●	●	●	●	●	●	●	●	●	●								●		●			●				●		Suriname
1968	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●				●					●							●		Swaziland
1946	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●		●					●								Sweden
2002	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●						●								Switzerland
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●											●								Syria
—												●					●												●	●						Taiwan
1992	●		●	●	●	●		●	●	●		●	●	●	●	●	1											●								Tajikistan
1961	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●				●					●									Tanzania
1946	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●			●								●	●							Thailand
1960	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●					●				●	●		●		Togo
1999	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●								●	●	●								Tonga
1962	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●							●		●			●					Trinidad and Tobago
1956	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●					●					●							●		Tunisia
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●							●							●		Turkey
1992	●		●		●	●		●	●	●	●	●	●	●	●	●												●							●		Turkmenistan
2000	●		●						●		●	●	●	●	●			●								●	●	●								Tuvalu
1962	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●					●							●		Uganda
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●															Ukraine
1971	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●						●	●										●	●	United Arab Emirates
1945	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	1		●		●					●					●			United Kingdom
1945	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●		●		●					●	●	●					●			United States
1945	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●				●					●							●			Uruguay
1992	●		●	●	●	●		●	●	●		●	●	●	●	●	1											●							●		Uzbekistan
1981	●		●		●	●		●	●	●	●	●	●	●	●			●								●	●	●								Vanuatu
1945	●	●	●	●	●	●			●	●	●	●	●	●		●	●				●														●	Venezuela
1977	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●			●								●	●							Vietnam
—												●																								Virgin Islands (U S)
—												●[62]			15	67	1	67																●[67]		West Bank
—																						125														Western Sahara
1947	●		●	●	●	●		●	●	●	●	●	●	●	●	●	1																			Yemen
1964	●		●	●	●	●		●	●			●	●	●	●	●	●	●				●					●									Zambia
1980	●		●	●	●	●		●	●	47		●	●	●	●	●	●					●					●									Zimbabwe

[62]Excludes overseas departments. [63]Executive responsibilities divided among (for France) the prefect and (locally) the president of the General Council and the president of the Regional Council. [64]Executive responsibilities divided between (for France) the high commissioner and (locally) the president of the government. [65]Date of agreement providing for Palestinian self-rule. [66]Controlled by Hamas forces from June 14, 2007. [67]As Palestine. [68]Excludes Abkhazia. [69]69 local councils/7 city governments. [70]Date president approved constitutional amendments for 78 articles. [71]Represented by the lieutenant governor. [72]2 members have no voting rights. [73]Legal ambiguity persisted in November 2008. [74]Special administrative region (China). [75]Has been significantly amended. [76]Number of towns. [77]79 municipalities; 26 rural districts. [78]Shares coexecutive authority with spiritual leader. [79]Based on evolving body of statutes and common law in both the United Kingdom and the Isle of Man. [80]Median line boundary between the Isle of Man and the United Kingdom. [81]59 cities, 49 local councils, and 45 regional councils. [82]Where determined, the outer limit is determined by reference to a median line. [83]The emperor is symbol of state. [84]Number of cities in 2007. [85]3 nautical miles in 5 straits. [86]Number of cities and counties. [87]New constitution will become effective once key provisions put forward by the UN are met. [88]Number of towns. [89]De facto chief of state. [90]Includes the one child of the grand duke having the title hereditary grand duke. [91]28 districts; 3 cities, 1 municipality. [92]Not officially suspended as of late November 2008. [93]Under prince's authority. [94]Includes Western Sahara annexure. [95]Special member. [96]Interim constitution. [97]Excludes 3 district councils and 1 city council with regional powers. [98]Includes Tokelau. [99]Includes Jan Mayen and Svalbard. [100]Basic law promulgated by sultan. [101]4 provinces, 1 federal capital area, and 1 territory (the federally administered tribal areas); the two administrative entities of Jammu and Kashmir are excluded from this breakdown. [102]Districts of the 4 provinces only. [103]Excludes 2 former presidents serving as senators-for-life. [104]Rectangle defined by coordinates; claim extends beyond 12 mi. [105]Mix of parliamentary democracy and Samoan customs. [106]Royal decrees from March 1, 1992, created first written rules of governance. [107]All districts and the city of Belgrade. [108]Singapore is open to negotiation to the maritime claims of nearby states. [109]National legislation delimits maritime boundaries with adjacent states. [110]Approval date of federal transitional charter. [111]No effective central government in early December 2008. [112]200 km in the Atlantic Ocean; defined by geographical coordinates in the Mediterranean Sea. [113]Represents Southern Sudan government. [114]Effective date of controversial constitution by royal decree. [115]Includes seat for former president. [116]6 nautical miles in the Aegean Sea; 12 nautical miles in the Black Sea. [117]In the Black Sea only. [118]48 districts/13 cities. [119]Significant amendments became effective on Jan. 1, 2006, and March 26, 2006. [120]Based on evolving body of statutes and common law. [121]Includes counties, parishes, independent cities, boroughs, and census areas as of early 2007. [122]Includes the vice president of Uruguay serving ex officio. [123]Of Palestinian Authority. [124]Including the Gaza Strip. [125]Membership held by the Saharawi Arab Democratic Republic.

Area and population

This table provides the area and particular populations for each of the countries of the world and for all but the smallest political dependencies having a permanent civilian population. The data represent the latest published and unpublished data for both the surveyed area of the countries and their populations, the latter as of a single recent year (2008), as of a recent census to provide the fullest comparison of certain demographic measures that are not always available between successive national censuses, and as of decade population estimates over a seventy year (1950–2020) span. The 2008 midyear estimates (as a population estimate by decade) are based on a combination of national sources (both print and online), the United Nations' *World Population Prospects (2006 Revision)*, the U.S. Bureau of the Census International Data Base, databases of other international organizations, and *Encyclopædia Britannica*'s own estimates.

One principal point to bear in mind when studying these statistics is that all of them, whatever degree of precision may be implied by the exactness of the numbers, are estimates—all of varying, and some of suspect, accuracy—even when they *contain* a very full enumeration. The United States—which has a long tradition both of census taking and of the use of the most sophisticated analytical tools in processing the data—is unable to determine within 1.2% (the estimated 2000 undercount) its total population nationally. And that is an *average* underenumeration. In states and larger cities, where enumeration of particular populations, including illegal, is more difficult, the accuracy of the enumerated count may be off as much as 3.1% at a state level (in New Mexico, for instance) and by a greater percent for a single city. The high accuracy attained by census operations in China may approach 0.25% of rigorously maintained civil population registers. Other national census operations not so based, however, are inherently less accurate. For example, Ethiopia's first-ever census in 1984 resulted in figures that were 30% or more above prevailing estimates. An undercount of 2–8% is more typical, but even census operations offering results of 30% or more above or below prevailing estimates can still represent well-founded benchmarks from which future planning may proceed. The editors have tried to take account of the range of variation and accuracy in published data, but it is difficult to establish a value for many sources of inaccuracy unless some country or agency has made a conscientious effort to establish both the relative accuracy (precision) of its estimate and the absolute magnitude of the quantity it is trying to measure—for example, the number of people in Cambodia who died at the hands of the Khmer Rouge. If a figure of 2,000,000 is adopted, what is its accuracy: ± 1%, 10%, 50%? Are the original data documentary or evidentiary, complete or incomplete, analytically biased or unbiased, in good agreement with other published data?

Many similar problems exist and in endless variations: What is the extent of eastern European immigration to western Europe in search of jobs? How many registered and unregistered refugees from Afghanistan, The Sudan, or Iraq are there in surrounding countries? How many undocumented aliens are there in the United Kingdom, Japan, or the United States? How many Tamils have left Sri Lanka as a result of civil unrest in their homeland? How many Amerindians exist (remain, preserving their original language and a mode of life unassimilated by the larger national culture) in the countries of South America?

Still, much information is accurate, well founded, and updated regularly.

Area and population

country	area			population (latest estimate)					population (recent census)					
	square miles	square kilometres	rank	total midyear 2008	rank	density per sq mi	density per sq km	% annual growth rate 2003–08	census year	total	male (%)	female (%)	urban (%)	
Afghanistan	249,347	645,807	41	28,266,000	42	113.4	43.8	4.1	2002	21,800,000[1]	51.6[1]	48.4[1]	22.4[2]	
Albania	11,082	28,703	142	3,194,000	135	288.2	111.3	0.5	2001	3,069,275	49.9	50.1	42.2	
Algeria	919,595	2,381,741	11	34,574,000	35	37.6	14.5	1.6	1998	29,272,343	50.6	49.4	80.8	
American Samoa	77	200	209	69,400	206	901.3	347.0	2.1	2000	57,291	51.1	48.9	46.6[3]	
Andorra	179	464	195	84,100	203	469.8	181.3	3.8	2007[4, 5]	83,137	52.3[6]	47.7[6]	91.0[7]	
Angola	481,354	1,246,700	24	12,531,000	69	26.0	10.1	2.5	1970	5,673,046	52.1	47.9	14.2	
Antigua and Barbuda	171	442	198	87,500	201	511.7	198.0	1.9	2001	75,078[8]	47.6	52.4	37.1[9]	
Argentina	1,073,520	2,780,403	8	39,737,000	31	37.0	14.3	1.0	2001	36,260,130	48.7	51.3	88.3[9]	
Armenia	11,484	29,743	141	2,996,000	136	260.9	100.7	–0.3	2001	3,002,594	46.9	53.1	64.8	
Aruba	75	193	210	105,000	197	1,400.0	544.0	2.0	2000	90,506	48.0	52.0	50.5[3]	
Australia	2,969,978	7,692,208	6	21,338,000	52	7.2	2.8	1.4	2006	19,855,288[11]	49.4	50.6	88.2[7]	
Austria	32,383	83,871	113	8,338,000	90	257.5	99.4	0.5	2001	8,032,926	48.4	51.6	66.8	
Azerbaijan	33,409	86,530	112	8,178,000	92	244.8	94.5	0.6	1999	7,953,438	48.8	51.2	56.9[12]	
Bahamas, The	5,382	13,939	159	335,000	179	62.2	24.0	1.2	2000	303,611	48.7	51.3	88.4[3]	
Bahrain	281	728	188	1,084,000	156	3,857.7	1,489.0	7.4	2001	650,604	57.4	42.6	88.4	
Bangladesh	56,977	147,570	93	142,547,000	8	2,501.8	966.0	1.3	2001	123,151,246[11]	50.9	49.1	23.4	
Barbados	166	430	199	282,000	182	1,698.8	655.8	0.4	2000	250,010[13]	48.0	52.0	50.0[3]	
Belarus	80,153	207,595	85	9,675,000	84	120.7	46.6	–0.4	1999	10,045,237	47.0	53.0	69.3	
Belgium	11,787	30,528	139	10,697,000	75	907.5	350.4	0.6	1996[4, 5]	10,143,047	48.9	51.1	96.8	
Belize	8,867	22,965	150	323,000	180	36.4	14.1	3.5	2000	240,204	50.5	49.5	47.7	
Benin	43,484	112,622	101	8,295,000	91	190.8	73.7	2.8	2002	6,769,914	48.5	51.5	38.9	
Bermuda	21	54	216	65,100	207	3,100.0	1,205.6	0.4	2000[14]	62,059	48.0	52.0	100.0	
Bhutan	14,824	38,394	135	682,000	163	46.0	17.8	1.4	2005	672,425[11, 13]	54.2	45.8	30.9	
Bolivia	424,164	1,098,581	28	9,694,000	83	22.9	8.8	1.9	2001	8,274,325	49.8	50.2	62.4	
Bosnia and Herzegovina	19,772	51,209	127	3,858,000	126	195.1	75.3	0.1	1991	4,377,033	49.9	50.1	39.6	
Botswana	224,848	582,356	47	1,842,000	147	8.2	3.2	1.5	2001	1,680,863	48.4	51.6	51.5	
Brazil	3,287,612	8,514,877	5	187,163,000	5	56.9	22.0	1.3	2000	169,872,856	49.2	50.8	81.2	
Brunei	2,226	5,765	170	400,000	177	179.7	69.4	2.8	2001	332,844	50.8	49.2	72.8[9]	
Bulgaria	42,858	111,002	103	7,569,000	95	176.6	68.2	–0.7	2001	7,928,901	48.7	51.3	69.0	
Burkina Faso	103,456	267,950	75	14,391,000	63	139.1	53.7	3.0	2006	13,720,258	48.3	51.7	20.1	
Burundi	10,740	27,816	145	8,691,000	89	809.2	312.4	3.7	1990[14]	5,292,793	48.6	51.4	6.3	
Cambodia	69,898	181,035	89	14,242,000	64	203.8	78.7	1.7	1998	11,437,656	48.2	51.8	20.9	
Cameroon	183,649[15]	475,650[15]	53	18,468,000	58	100.6	38.8	2.3	1987	10,516,232	49.0	51.0	38.3	
Canada	3,855,103	9,984,670	2	33,213,000	36	8.6	3.3	0.8	2006	31,612,897[11]	49.0[11]	51.0[11]	80.1[7]	
Cape Verde	1,557	4,033	172	500,000	171	321.1	124.0	1.6	2000	434,625	48.5	51.5	53.4	
Cayman Islands	102	264	208	55,500	211	544.1	210.2	4.9	1999	39,020[19]	48.8[19]	51.2[19]	100.0[3]	
Central African Republic	240,324	622,436	43	4,424,000	120	18.4	7.1	1.7	2003	3,151,072[10]	49.8[10]	50.2[10]	37.9[10]	
Chad	495,755	1,284,000	21	10,111,000	79	20.4	7.9	2.9	1993	6,279,931	47.9	52.1	21.4	
Chile	291,930	756,096	38	16,454,000	59	56.4	21.8	1.0	2002	15,116,435	49.3	50.7	86.6	
China	3,696,100	9,572,900	3	1,324,681,000	1	358.4	138.4	0.6	2000	1,265,830,000	51.6	48.4	36.2	
Colombia	440,831	1,141,748	26	44,442,000	29	100.8	38.9	1.2	2005	42,090,502	49.1	50.9	75.0	
Comoros	719	1,862	178	645,000	164	897.1	346.4	2.3	2003	575,660	49.6	50.4	27.9	
Congo, Dem. Rep. of the	905,355	2,344,858	12	66,515,000	19	73.5	28.4	3.2	1984	29,671,407	49.2	50.8	29.1[20]	
Congo, Rep. of the	132,047	342,000	64	3,847,000	127	29.1	11.2	2.2	1984[14]	1,909,248	48.7	51.3	52.0	
Costa Rica	19,730	51,100	128	4,389,000	121	222.5	85.9	1.4	2000	3,810,179	49.9	50.1	59.0	
Côte d'Ivoire	123,863	320,803	68	19,624,000	55	158.4	61.2	1.8	1998	15,366,672	51.0	49.0	43.6[3]	
Croatia	21,851	56,594	126	4,433,000	119	202.9	78.3	–0.0	2001	4,437,460	48.1	51.9	58.1[9]	
Cuba	42,427	109,886	104	11,236,000	74	264.8	102.3	0.0	2002	11,177,743	50.1	49.9	75.9	
Cyprus[22]	3,572	9,251	167	1,076,000	158	301.2	116.3	2.4	2001[23]	689,565	49.1	50.9	68.8	
Czech Republic	30,450	78,866	116	10,408,000	77	341.8	132.0	0.4	2001	10,230,060	48.7	51.3	74.6	
Denmark	16,640	43,098	132	5,494,000	109	330.2	127.5	0.4	2003[4]	5,383,507	49.5	50.5	85.3	
Djibouti	8,950	23,200	149	506,000	170	56.5	21.8	2.1	1983	273,974	51.9	48.1	82.8[20]	
Dominica	290	750	186	72,500	205	250.0	96.7	0.2	2001	71,239	51.0	49.0	71.4[9]	
Dominican Republic	18,792	48,671	130	9,507,000	86	505.9	195.3	1.5	2002	8,562,541	49.8	50.2	63.6	
East Timor	5,760	14,919	158	1,078,000	157	187.2	72.3	3.1	2004	923,198	50.9	49.1	8.4[25]	

The sources of these data are censuses; national population registers (cumulated periodically); registration of migration, births, deaths, and so on; sample surveys to establish demographic conditions; and the like.

The statistics provided for area and population by country are ranked, and the population densities based on those values are also provided. The population densities, for purposes of comparison within this table, are calculated on the bases of the 2008 midyear population estimate as shown and of total area of the country. Elsewhere in individual country presentations the reader may find densities calculated on more specific population figures and more specialized area bases: land area for Finland (because of its many lakes) or ice-free area for Greenland (most of which is ice cap). The data in this section conclude with the estimated average annual growth rate for the country (including both natural growth and net migration) during the five-year period 2003–2008.

In the section containing census data, information supplied includes the census total (more often de facto, the population actually present, rather than de jure, the population legally resident, who might be anywhere); the male-female breakdown; the proportion that is urban (usually according to the country's own definition); and finally an analysis of the age structure of the population by 15-year age groups. This last analysis may be particularly useful in distinguishing the type of population being recorded—young, fast-growing nations show a high proportion of people under 30 (many countries in sub-Saharan Africa and the Middle East have about 40% of their population under 15 years), while other nations (for example, Sweden, which suffered no age-group losses in World War II) exhibit quite uniform proportions.

Finally, a section is provided giving the population of each country at 10-year intervals from 1950 to 2020 based on sources cited earlier. The projections for 2010 and 2020 represent the best fit of available data through the autumn of 2008. The evidence of the last 30 years with respect to similar estimates published about 1970, however, shows how cloudy is the glass through which these numbers are read. In 1970 no respectable Western analyst would have imagined proposing that mainland China could achieve the degree of birth control that it apparently has since then; on the other hand, even the Chinese admit that their methods have been somewhat Draconian and that they have already seen some backlash in terms of higher birth rates among those who have so far postponed larger families. How much is "some" by 2010? Compound that problem with all the social, economic, political, and biological factors (including the impact of AIDS) that can affect 220 countries' populations, and the difficulty facing the prospective compiler of such projections may be appreciated.

Specific data about the vital rates affecting the data in this table may be found in great detail in both the country statistical boxes in "The Nations of the World" section and in the *Vital statistics, marriage, family* table, beginning at page 774.

Percentages in this table for male and female population will always total 100.0, but percentages by age group may not, for reasons such as nonresponse on census forms, "don't know" responses (which are common in countries with poor birth registration systems), and the like.

age distribution (%)						population (by decade, '000s)								country
0–14	15–29	30–44	45–59	60–74	75 and over	1950	1960	1970	1980	1990	2000	2010 projection	2020 projection	
45.4[1]	23.4[1]	15.2[1]	9.9[1]	—6.1—		8,151	9,616	11,840	13,946	12,659	20 737	30,389	40,993	Afghanistan
29.3	24.1	21.2	14.2	8.7	2.5	1,215	1,611	2,136	2,671	3,289	3,080	3,231	3,415	Albania
36.2	30.6	17.7	8.9	5.1	1.5	8,753	10,800	13,746	18,811	25,283	30,506	35,630	40,868	Algeria
38.8	25.5	19.4	10.8	4.5	1.0	19	20	27	32	47	59	72	82	American Samoa
14.6	19.0	29.1	20.8	10.3	6.2	6	8	20	34	53	66	88	99	Andorra
41.7	23.2	17.0	7.4	3.8	1.0	4,118	4,797	5,606	6 743	8,297	10,377	13,068	15,898	Angola
26.4[10]	25.4[10]	23.9[10]	13.9[10]	—10.4[10]—		46	55	66	69	63	75	91	100	Antigua and Barbuda
28.3	25.0	18.6	14.7	9.3	4.1	17,150	20,616	23,962	28,094	32 581	36,784	40,519	44,163	Argentina
24.8	24.9	21.8	13.6	12.1	2.8	1,354	1,867	2 518	3,096	3,545	3,082	2,987	2,955	Armenia
23.2	19.4	28.0	18.2	8.6	2.6	51	57	61	60	63	91	107	120	Aruba
19.8	20.1	21.9	20.1	11.7	6.4	8,219	10.315	12,552	14.471	17,065	19,153	21 994	24,110	Australia
16.9	18.6	24.9	18.6	13.8	7.2	6,935	7,047	7,467	7,549	7,678	8,012	8,395	8,689	Austria
31.8	25.6	24.1	9.5	7.6	1.4	2,885	3,882	5,169	6,169	7,200	7,809	8,304	9,058	Azerbaijan
29.6	25.8	24.2	12.6	5.9	1.9	79	110	170	210	255	303	343	381	Bahamas, The
27.9	27.5	29.6	11.0	3.2	0.8	110	149	210	334	503	629	1,166	1,350	Bahrain
35.9	31.5	17.6	9.9	4.0	1.1	45,646	54,622	67 403	88,077	109,897	128,100	146,394	167,247	Bangladesh
21.8	22.5	24.4	16.0	—15.3—		211	232	239	252	263	273	284	292	Barbados
19.5	21.8	23.4	16.4	—18.9—		7,745	8,190	9,040	9,650	10,186	10,005	9,614	9,316	Belarus
17.9	20.0	23.0	17.7	15.0	6.4	8,639	9,153	9,690	9,859	9,967	10,251	10,843	11,353	Belgium
41.0	27.7	17.4	8.1	—5.8—		68	90	120	146	189	250	340	411	Belize
46.8	—47.7—			—5.5—		1,673	2.055	2,620	3,444	4,676	6,628	8,731	10,886	Benin
19.1	18.4	27.9	19.6	10.9	4.1	39	44	53	55	59	63	65	67	Bermuda
33.0[15]	31.0[15]	18.0[15]	10.0[15]	6.0[15]	2.0[15]	164	212	309	446	615	606	700	782	Bhutan
38.6	27.4	17.0	10.0	5.2	1.8	2,714	3,351	4,212	5 355	6,669	8,317	10,031	11,638	Bolivia
23.5[16]	26.3[16]	22.6[16]	16.9[16]	8.9[16]	2.7[16]	2,661	3,180	3,564	3,914	4 308	3,781	3,863	3,756	Bosnia and Herzegovina
40.2[9]	31.2[9]	14.8[9]	7.7[9]	4.4[9]	1.7[9]	430	497	584	900	1,263	1,639	1,893	2,098	Botswana
29.6	28.2	21.1	12.5	6.5	2.1	53.975	72,742	95.989	118,563	146,593	169,564	192,013	212 615	Brazil
30.8[9]	27.0[9]	25.4[9]	12.5[9]	3.5[9]	0.8[9]	45	83	128	185	253	325	415	488	Brunei
15.0[17]	21.3[17]	20.4[17]	20.9[17]	16.1[17]	6.3[17]	7,251	7,867	8,490	8,862	8,718	7 973	7 456	6,859	Bulgaria
46.6[6]	27.4[6]	15.1[6]	6.8[6]	3.4[6]	0.7[6]	4 376	4,866	5,304	6 315	8,336	11,417	15,313	20,720	Burkina Faso
46.4	25.3	15.4	7.0	4.0	1.7	2,363	2,815	3,522	4.300	5,505	6,621	9,281	12,266	Burundi
42.8	26.1	17.2	8.5	4.3	1.1	4 471	5,761	7,396	6,888	9,345	12 396	14,753	17,601	Cambodia
46.4	24.5	14.6	8.7	4.1	1.6	4,888	5,609	6,727	8,762	11,884	15,343	19,294	23,471	Cameroon
16.9[6]	20.2[6]	21.6[6]	22.0[6]	12.3[6]	7.0[6]	14,011	18,267	21 750	24,593	27,791	31,100	33,760	36,387	Canada
43.6[3]	24.8[3]	17.1[3]	5.8[3]	6.3[3]	2.4[3]	146	196	267	289	355	437	518	622	Cape Verde
22.1[12]	19.8[12]	29.1[12]	18.6[12]	7.8[12]	2.6[12]	6	8	10	17	26	40	58	72	Cayman Islands
42.8[2]	27.9[2]	15.3[2]	7.8[2]	4.9[2]	1.3[2]	1,314	1,530	1,871	2,329	3,008	3,864	4,592	5,434	Central African Republic
48.1	24.6	14.7	7.2	4.2	1.3	2,608	3,042	3,727	4,522	5,841	7,943	10,543	12,756	Chad
25.7	24.3	23.6	15.0	8.3	3.1	6,091	7,585	9,369	11,094	13,129	15,156	16,746	18,058	Chile
22.9	25.4	25.6	15.7	8.2	2.2	562 580	650,661	820.403	984.736	1,148,364	1,268,853	1,338,442	1,407,520	China
30.3[6]	27.1[6]	21.6[6]	13.4[6]	5.6[6]	2.0[6]	12,568	16,841	22,500	28,356	34,875	40,282	45,508	50,912	Colombia
						148	183	236	334	433	539	668	814	Comoros
47.3[20]	25.9[20]	14.1[20]	8.1[20]	3.8[20]	0.8[20]	13,569	16.610	21 781	29,013	39,047	51,849	70,916	95,605	Congo, Dem. Rep. of the
44.7	27.2	13.3	9.1	4.6	0.7	808	1,003	1 323	1,802	2,422	3,203	4,011	4,907	Congo, Rep. of the
31.9	27.1	21.7	11.4	5.7	2.2	862	1,236	1 758	2,302	3,032	3,929	4,512	5,103	Costa Rica
46.5[21]	27.5[21]	14.9[21]	7.6[21]	3.0[21]	0.5[21]	2,505	3,557	5,310	8,344	12,780	17.049	20,375	24,315	Côte d'Ivoire
17.1	20.4	21.4	19.5	16.3	5.3	3,837	4,036	4,205	4,383	4,508	4 453	4,415	4,256	Croatia
20.5	21.2	27.0	16.6	10.2	4.5	5,920	7,141	8,710	9,823	10,605	11 142	11,228	11,219	Cuba
21.5[24]	22.6[24]	22.0[24]	17.8[24]	11.2[24]	4.9[24]	494	573	615	658	751	906	1 120	1,250	Cyprus[22]
16.3	23.5	20.1	21.8	12.8	5.5	8.925	9,539	9.805	10,326	10,363	10,273	10,517	10,730	Czech Republic
18.8	17.9	22.3	20.9	13.1	7.0	4,271	4,581	4,929	5,123	5,140	5,337	5,542	5,721	Denmark
39.4	32.9	16.9	7.4	2.8	0.6	60	78	158	279	366	431	526	627	Djibouti
32.7	28.4	17.2	9.5	—12.2—		51	60	70	74	70	71	73	74	Dominica
34.0	27.0	20.0	11.0	5.8	2.2	2,353	3,231	4,423	5,697	7,083	8,410	9,794	11,236	Dominican Republic
43.2	24.7	17.0	9.4	4.5	1.2	435	509	598	557	746	847	1,143	1,467	East Timor

Area and population (continued)

country	area			population (latest estimate)					population (recent census)					
	square miles	square kilo-metres	rank	total midyear 2008	rank	density per sq mi	density per sq km	% annual growth rate 2003–08	census year	total	male (%)	female (%)	urban (%)	
Ecuador	105,037	272,045	73	13,481,000	66	128.3	49.6	1.1	2001	12,156,608	49.5	50.5	61.0[26]	
Egypt	385,229	997,739	30	74,805,000	16	194.2	75.0	2.0	2006	72,579,030[13]	51.1	48.9	42.6	
El Salvador	8,124	21,041	152	5,794,000	107	713.2	275.4	0.8	2007	5,744,113	47.3	52.7	62.7	
Equatorial Guinea	10,831	28,051	144	616,000[27]	166	56.9	22.0	2.8	2002	1,014,999[28]	49.4[28]	50.6[28]	45.2[3]	
Eritrea	46,774	121,144	99	5,028,000	114	107.5	41.5	2.4	1984	2,703,998	49.9	50.1	15.1	
Estonia	17,462	45,227	131	1,340,000	153	76.7	29.6	–0.2	2000	1,370,052	46.1	53.9	69.2	
Ethiopia	435,186	1,127,127	27	78,254,000	15	179.8	69.4	2.4	1994	53,477,265	50.3	49.7	14.4[20]	
Faroe Islands	540	1,399	180	48,400	214	89.6	34.6	0.2	2007[4, 5]	48,327	52.0	48.0	40.1[6]	
Fiji	7,055	18,272	155	839,000	160	118.9	45.9	0.7	2007	827,900	50.7[7]	49.3[7]	50.9	
Finland	130,664	338,417	65	5,310,000	111	40.6	15.7	0.4	2003[4, 5]	5,206,295	48.9	51.1	83.3	
France[31]	210,026	543,965	48	62,028,000	21	295.3	114.0	0.6	1999	58,518,748	48.6	51.4	75.5	
French Guiana	32,253	83,534	115	217,000	186	6.7	2.6	3.1	1999	157,274	50.4	49.6	77.8[12]	
French Polynesia	1,544	4,000	173	263,000	183	170.3	65.8	1.3	2007	259,596	51.2[32]	48.8[32]	51.6[7]	
Gabon	103,347	267,667	76	1,486,000	150	14.3	5.6	2.2	1993	1,011,710	49.3	50.7	73.2	
Gambia, The	4,363	11,300	162	1,754,000	148	402.0	155.2	2.9	2003	1,364,507	49.6	50.4	26.1[2]	
Gaza Strip	140	363	202	1,444,000	152	10,314.3	3,978.0	3.3	2007	1,416,539	50.7	49.3	...	
Georgia	27,086[34]	70,152[34]	121	4,360,000[35]	122	196.0[35]	75.7[35]	0.1	2002	4,371,534[36]	47.2	52.8	52.3	
Germany	137,874	357,093	63	82,143,000	14	595.8	230.0	–0.1	2003[4]	82,536,700	48.9	51.1	88.1[2]	
Ghana	92,098	238,533	81	23,383,000	48	253.9	98.0	2.1	2000	18,912,079	49.5	50.5	43.8	
Greece	50,949	131,957	96	11,239,000	73	220.6	85.2	0.4	2001	10,964,020	49.5	50.5	72.8	
Greenland	836,330	2,166,086	13	56,700	210	0.07	0.03	–0.0	2003[4, 5]	56,676	53.4	46.6	82.2	
Grenada	133	344	204	108,000	195	812.0	314.0	0.8	2001	102,632	49.2	50.8	38.4	
Guadeloupe	629	1,630	179	419,000	174	666.1	257.1	0.9	1999	422,496[38]	48.1[38]	51.9[38]	99.7[12, 38]	
Guam	217	561	193	179,000	190	824.9	319.1	1.8	2000	154,805	51.1	48.9	93.2[3]	
Guatemala	42,130	109,117	105	13,002,000	67	308.6	119.2	2.1	2002	11,237,196	48.9	51.1	46.1	
Guernsey	30	78	214	64,300	208	2,143.3	824.4	0.3	2001	59,807[39]	48.7	51.3	28.9[9, 40]	
Guinea	94,918	245,836	78	9,572,000	85	100.8	38.9	2.0	1996	7,165,750	48.8	51.2	26.0	
Guinea-Bissau	13,948	36,125	137	1,503,000	149	107.8	41.6	2.0	1991	983,367	48.4	51.6	20.3[16]	
Guyana	83,012	214,999	84	736,000	162	8.9	3.4	–0.1	2002	751,223	50.1	49.9	28.4	
Haiti	10,695	27,700	146	9,751,000	82	911.7	352.0	1.6	2003	8,373,750	48.2	51.8	40.8	
Honduras	43,433	112,492	102	7,639,000	93	175.9	67.9	2.2	2001	6,535,344	49.4	50.6	44.8	
Hong Kong	426	1,104	182	6,992,000	98	16,413.1	6,333.3	0.8	2006	6,864,346	47.7	52.3	100.0	
Hungary	35,919	93,030	109	10,032,000	80	279.3	107.8	–0.2	2001	10,198,135	47.6	52.4	64.3	
Iceland	39,769	103,000[43]	106	315,000	181	7.8	3.0	1.7	2003[4, 5]	288,471	50.0	50.0	93.8	
India	1,222,559	3,166,414	7	1,147,996,000	2	939.0	362.6	1.7	2001	1,028,610,328	51.7	48.3	27.8	
Indonesia	718,289	1,860,360	16	234,342,000	4	326.3	126.0	1.2	2000	206,264,595	50.1	49.9	42.0	
Iran	636,374	1,648,200	18	72,269,000	17	113.6	43.8	1.6	2006	70,495,782	50.9	49.1	68.5	
Iraq	167,618	434,128	58	29,492,000[44]	38	173.0	66.8	1.9	1997	21,941,050	49.7	50.3	67.9	
Ireland	27,133	70,273	122	4,467,000	118	164.6	63.6	2.2	2006	4,239,848	50.0	50.0	60.5[7]	
Isle of Man	221	572	192	81,800	204	370.1	143.0	1.0	2006	80,058	49.4	50.6	71.6	
Israel[46, 47]	8,357	21,643	151	7,018,000	97	839.8	324.3	1.7	1995[14, 48]	5,548,523	49.3	50.7	92.9[20]	
Italy	116,346	301,336	71	59,760,000	23	513.6	198.3	0.7	2001	56,995,744	48.4	51.6	67.3	
Jamaica	4,244	10,991	163	2,688,000	137	633.4	244.6	0.5	2001	2,607,632	49.2	50.8	52.0	
Japan	145,914	377,915	62	127,674,000	10	875.0	337.8	–0.0	2005	127,756,000	48.6	51.4	86.3	
Jersey	46	118	213	91,200	200	2,000.0	771.6	0.8	2001	87,186	48.7	51.3	28.9[9, 40]	
Jordan	34,277	88,778	111	5,844,000	106	170.5	65.8	2.2	2004	5,103,639	51.5	48.5	78.3	
Kazakhstan	1,052,090	2,724,900	9	15,655,000	61	14.9	5.7	1.0	1999	14,953,126	48.2	51.8	55.9	
Kenya	224,961	582,646	46	37,954,000	34	168.7	65.1	2.8	1999	28,686,607	49.5	50.5	32.2[12]	
Kiribati	313	811	184	97,200	199	310.5	119.9	1.9	2005	92,533	49.3	50.7	47.5[7]	
Korea, North	47,399	122,762	98	23,867,000	47	501.9	193.8	0.4	1993	21,213,378	48.7	51.3	58.9	
Korea, South	38,486	99,678	107	50,187,000	24	1,304.2	503.5	0.6	2005	47,278,951	50.0	50.0	81.5	
Kosovo	4,212	10,908	164	2,143,000	142	508.8	196.5	1.4	1991	1,956,196	51.6	48.4	...	
Kuwait	6,880	17,818	156	3,530,000	130	513.1	198.1	7.3	2005	2,213,403[49]	59.2	40.8	98.3[7]	
Kyrgyzstan	77,182	199,900	86	5,281,000	112	68.4	26.4	1.0	1999	4,822,938	49.4	50.6	34.8	
Laos	91,429	236,800	83	5,963,000	104	65.2	25.2	1.7	2005	5,621,982	49.8	50.2	27.1	
Latvia	24,938	64,589	124	2,266,000	141	90.9	35.1	–0.5	2000	2,377,383	46.1	53.9	68.1	
Lebanon	4,016	10,400	166	4,142,000	124	1,031.4	398.3	1.1	1997	4,005,025[50]	50.2[50]	49.8[50]	85.0[20]	
Lesotho	11,720	30,355	140	2,020,000	146	172.4	66.5	0.7	2006[13, 14]	1,872,721	48.7	51.3	23.3[7]	
Liberia	37,743	97,754	108	3,543,000	129	93.9	36.2	4.7	1984	2,101,628	50.6	49.4	38.8	
Libya	679,362	1,759,540	17	5,871,000	105	8.6	3.3	1.5	2006	5,673,031	51.9	48.1	77.0[7]	
Liechtenstein	62	160	212	35,500	215	572.6	221.9	0.8	2003[4, 5]	33,863	49.1	50.9	21.6[2]	
Lithuania	25,212	65,300	123	3,358,000	131	133.2	51.4	–0.6	2001	3,483,972	46.8	53.2	66.9	
Luxembourg	999	2,586	175	488,000	173	488.5	188.7	1.5	2001	439,539	49.3	50.7	91.9[9]	
Macau	11.3	29.2	217	549,000	167	48,584.1	18,801.4	4.3	2006	502,113	48.8	51.2	100.0	
Macedonia	9,928	25,713	148	2,039,000	144	205.4	79.3	0.1	2002	2,022,547	50.2	49.8	59.5[2]	
Madagascar	226,662	587,051	45	20,215,000	54	89.2	34.4	2.8	1993	12,238,914	49.7	50.3	22.9	
Malawi	45,747	118,484	100	13,932,000	65	304.5	117.6	2.4	1998	9,933,868	49.0	51.0	14.0	
Malaysia	127,366	329,876	67	27,027,000	45	212.2	81.9	1.8	2000	23,274,690	50.9	49.1	62.0	
Maldives	115	298	206	386,000[51]	178	3,356.5	1,295.3	3.9	2006	298,968[52]	50.7	49.3	34.7	
Mali	482,077	1,248,574	23	12,324,000	70	25.6	9.9	2.6	1998	9,790,492	49.5	50.5	26.9	
Malta	122	316	205	412,000	175	3,379.8	1,305.4	0.7	2005	404,962	49.6	50.4	95.3[7]	
Marshall Islands	70	181	211	53,200	212	760.0	293.9	0.5	1999	50,848	51.2	48.8	65.2	
Martinique	436	1,128	181	403,000	176	924.3	357.3	0.6	1999	381,427	47.4	52.6	97.3	
Mauritania	398,000	1,030,700	29	3,204,000	134	8.1	3.1	2.7	2000	2,508,159	49.5	50.5	57.7[3]	
Mauritius	788	2,040	177	1,269,000	155	1,610.4	622.1	0.7	2000[14]	1,179,137	49.5	50.5	42.7[3]	
Mayotte	144	374	201	192,000	188	1,333.3	513.4	3.1	2002	160,265	50.1	49.9	...	
Mexico	758,450	1,964,375	15	106,683,000	11	140.7	54.3	0.9	2005	103,263,388	48.7	51.3	76.0[7]	
Micronesia	271	701	190	110,000	194	406.2	156.8	0.4	2000	107,008	50.6	49.4	28.3[3]	
Moldova	13,067	33,843	138	3,760,000	128	287.7	111.1	–1.1	2004	3,383,332[55]	48.1	51.9	61.4	
Monaco	0.78	2.02	220	34,300	216	43,974.4	16,980.2	1.0	2000	32,020	48.5	51.5	100.0	
Mongolia	603,909	1,564,116	19	2,652,000	139	4.4	1.7	1.3	2000	2,373,500	49.6	50.4	58.6	
Montenegro	5,333	13,812	160	626,000	165	117.4	45.3	0.2	2003	620,145	49.2	50.8	56.1	
Morocco[58]	177,117	458,730	55	31,606,000	37	178.4	68.9	1.2	2004	29,680,069[59, 60]	49.3[60]	50.7[60]	55.1[60]	
Mozambique	308,642	799,379	35	21,285,000	53	69.0	26.6	1.9	2007	20,530,714[13]	47.7[10]	52.3[10]	34.5[7]	
Myanmar (Burma)	261,228	676,577	40	47,758,000	26	182.8	70.6	0.9	1983	35,307,913	49.6	50.4	24.0	

age distribution (%)						population (by decade, '000s)								country
0–14	15–29	30–44	45–59	60–74	75 and over	1950	1960	1970	1980	1990	2000	2010 projection	2020 projection	
34.0[26]	28.0[26]	19.0[26]	10.0[26]	6.0[26]	3.0[26]	3,387	4,439	5,970	7,961	10,272	12,306	13,775	15,376	Ecuador
31.8	—48.2—		13.7	—6.3—		20,461	26,085	33,329	40,546	51,959	63,809	77,450	90,149	Egypt
33.9	26.9	18.5	11.3	6.5	2.9	1,951	2,578	3,598	4,586	5,110	5,441	5,885	6,366	El Salvador
42.5[29]	26.3[29]	16.1[29]	8.7[29]	5.2[29]	1.2[29]	211	244	270	256	371	491	651	836	Equatorial Guinea
46.1	23.0	15.9	8.9	4.4	1.6	1,402	1,615	2,160	2,569	2,996	4,357	5,278	6,590	Eritrea
18.1	21.4	20.8	18.6	15.6	5.5	1,096	1,211	1,360	1,477	1,569	1,370	1,339	1,346	Estonia
46.1[30]	26.0[30]	15.1[30]	8.3[30]	3.8[30]	0.7[30]	20,175	24,169	29,469	36,036	48,197	64,690	81,754	99,279	Ethiopia
22.4	19.3	20.6	18.9	12.2	6.6	31	35	39	43	48	46	48	49	Faroe Islands
33.0[7]	28.0[7]	18.5[7]	13.8[7]	5.8[7]	0.9[7]	289	394	520	634	724	795	850	921	Fiji
17.8	18.6	20.6	22.5	13.6	6.9	4,009	4,430	4,606	4,800	4,986	5,176	5,350	5,541	Finland
17.9	20.2	21.9	18.7	13.6	7.7	41,736	45,684	50,770	53,880	56,699	59,032	62,677	65,393	France[31]
34.0	24.2	23.3	12.5	4.3	1.7	27	33	49	68	116	165	228	280	French Guiana
26.5[32]	26.8[32]	23.1[32]	15.2[32]	6.8[32]	1.6[32]	62	84	117	151	197	235	269	298	French Polynesia
33.8[33]	23.7[33]	17.0[33]	17.4[33]	6.9[33]	1.2[33]	416	446	515	714	938	1,236	1,545	1,877	Gabon
44.9[2]	26.4[2]	15.5[2]	8.8[2]	3.6[2]	0.8[2]	294	360	482	671	962	1,384	1,845	2,301	Gambia, The
45.0[32]	28.9[32]	14.9[32]	7.3[32]	2.9[32]	1.0[32]	245	308	370	456	630	1,111	1,530	1,979	Gaza Strip
21.0	22.8	21.9	15.6	14.6	4.1	3,527[37]	4,159[37]	4,707[37]	5,073[37]	5,439[37]	4,418[35]	4,298[35]	4,060[35]	Georgia
14.9[2]	17.0[2]	24.3[2]	19.3[2]	16.9[2]	7.6[2]	68,377	72,674	77,709	78,275	79,433	82,212	81,943	80,148	Germany
41.3	26.3	16.5	8.7	4.5	2.7	5,297	6,958	8,789	11,017	15,414	19,736	24,279	28,567	Ghana
15.2	22.0	22.3	18.0	16.5	6.0	7,566	8,327	8,793	9,643	10,161	10,917	11,329	11,453	Greece
26.2	19.7	27.9	17.4	7.5	1.3	23	32	46	50	56	56	57	59	Greenland
35.1	28.1	17.6	9.0	—10.2—		76	90	95	89	95	101	109	114	Grenada
23.6[38]	22.4[38]	24.3[38]	15.7[38]	9.3[38]	4.7[38]	…	266	310	318	355	391	425	443	Guadeloupe
30.5	24.1	23.3	13.9	6.7	1.5	60	67	85	107	134	155	189	226	Guam
43.6[29]	27.4[29]	14.4[29]	9.4[29]	4.1[29]	1.1[29]	2,969	4,100	5,264	6,650	8,966	11,085	13,550	16,264	Guatemala
17.2	18.8	23.2	20.0	13.4	7.4	44	45	51	53	61	62	65	66	Guernsey
44.1[41]	26.5[41]	15.9[41]	9.0[41]	3.9[41]	0.6[41]	2,619	3,118	3,819	4,575	6,033	8,203	10,028	12,966	Guinea
43.9[16]	26.5[16]	16.1[16]	8.8[16]	3.7[16]	1.0[16]	573	617	620	789	996	1,279	1,565	1,893	Guinea-Bissau
35.6[42]	25.6[42]	20.9[42]	10.9[42]	4.7[42]	1.6[42]	423	569	709	761	731	734	731	700	Guyana
42.7[2]	29.3[2]	14.2[2]	8.2[2]	4.5[2]	1.1[2]	3,221	3,869	4,713	5,691	7,110	8,573	10,060	11,584	Haiti
42.2[9]	29.1[9]	15.1[9]	8.3[9]	4.1[9]	1.2[9]	1,431	1,952	2,761	3,402	4,792	6,348	7,944	9,360	Honduras
13.7	20.6	26.2	23.5	10.4	5.6	2,237	3,075	3,959	5,063	5,688	6,665	7,112	7,738	Hong Kong
16.6	22.2	19.8	21.0	14.3	6.1	9,338	9,984	10,337	10,707	10,374	10,211	9,997	9,732	Hungary
22.9	22.1	21.9	17.8	9.9	5.4	143	176	204	228	255	281	321	355	Iceland
35.3	26.6	19.5	10.9	—7.7—		369,880	445,393	553,889	684,868	838,159	1,004,124	1,184,090	1,362,053	India
30.4	29.3	21.8	11.3	5.8	1.4	79,538	95,931	120,532	151,108	182,847	211,693	239,600	261,868	Indonesia
25.1	35.4	20.6	11.6	5.4	1.9	16,913	21,704	28,805	39,330	54,134	63,683	74,330	84,306	Iran
43.8[45]	30.2[45]	14.5[45]	6.9[45]	3.6[45]	1.0[45]	5,340	7,332	10,112	14,093	18,515	25,052	30,688	39,161	Iraq
20.4	23.7	23.0	17.6	10.5	4.8	2,969	2,834	2,954	3,401	3,515	3,801	4,686	5,610	Ireland
16.9	17.2	22.0	21.1	14.4	8.4	55	49	52	64	69	76	83	87	Isle of Man
29.2	25.0	19.6	13.1	9.1	4.0	1,258	2,114	2,958	3,862	4,613	6,098	7,252	8,361	Israel[46, 47]
14.1[9]	18.9[9]	23.8[9]	19.0[9]	16.0[9]	8.2[9]	47,104	50,200	53,822	56,434	56,719	57,645	60,497	62,462	Italy
32.4	25.9	20.6	11.0	6.8	3.3	1,403	1,629	1,869	2,133	2,369	2,589	2,714	2,828	Jamaica
13.6	16.8	20.4	21.3	18.4	9.5	83,625	94,096	104,331	116,807	123,537	126,861	127,281	122,837	Japan
16.9	18.4	25.9	19.7	12.6	6.5	57	63	71	76	84	87	93	97	Jersey
38.2	30.1	18.6	8.0	4.2	0.9	472	896	1,623	2,225	3,254	4,857	6,095	7,055	Jordan
28.7	25.7	22.1	12.9	—10.6—		6,693	9,982	13,106	14,967	16,398	14,884	15,997	16,976	Kazakhstan
43.2	30.3	14.7	7.0	—4.8—		6,121	8,157	11,247	16,331	23,354	30,508	40,047	48,319	Kenya
36.9	28.3	18.7	10.7	4.5	0.9	33	41	49	58	71	84	101	120	Kiribati
29.5[33]	31.9[33]	21.3[33]	11.0[33]	5.0[33]	1.2[33]	9,737	10,946	14,247	17,239	20,143	22,946	24,015	24,838	Korea, North
18.6[7]	22.5[7]	26.0[7]	19.2[7]	10.7[7]	3.0[7]	20,846	24,784	32,241	38,124	43,223	47,693	50,572	51,327	Korea, South
37.4	28.8	16.5	10.3	5.3	1.7	764	944	1,220	1,555	1,930	1,950	2,202	2,523	Kosovo
23.7[7]	28.3[7]	33.2[7]	11.7[7]	2.7[7]	0.4[7]	145	292	748	1,358	2,141	2,236	3,852	4,659	Kuwait
36.2[12]	27.3[12]	18.6[12]	8.9[12]	7.2[12]	1.8[12]	1,740	2,173	2,964	3,627	4,395	4,879	5,400	5,917	Kyrgyzstan
39.4	28.3	17.0	9.5	4.4	1.4	1,524	1,986	2,551	3,103	4,076	5,224	6,173	7,223	Laos
18.1	21.2	21.4	18.3	15.7	5.3	1,949	2,121	2,359	2,512	2,713	2,373	2,245	2,136	Latvia
28.0[50]	30.0[50]	19.8[50]	12.4[50]	—9.8[50]—		1,443	1,888	2,443	2,785	2,974	3,772	4,227	4,616	Lebanon
36.2	31.0	15.9	9.9	5.0	2.0	734	851	1,033	1,296	1,601	1,886	2,044	2,163	Lesotho
43.2	28.2	14.7	7.7	4.4	1.8	824	1,055	1,397	1,849	2,117	2,695	3,755	4,595	Liberia
30.3[7]	31.9[7]	21.0[7]	10.8[7]	4.9[7]	1.1[7]	1,029	1,349	1,994	3,063	4,364	5,209	6,050	7,026	Libya
17.0	20.2	25.9	21.2	10.8	4.9	14	16	21	26	29	33	36	36	Liechtenstein
19.5	21.2	22.8	17.2	14.2	5.1	2,553	2,765	3,138	3,436	3,698	3,500	3,324	3,176	Lithuania
18.9	18.6	25.5	18.4	12.9	5.7	296	314	339	364	382	436	503	561	Luxembourg
15.2	25.6	26.3	23.0	6.6	3.3	205	186	261	256	352	432	571	618	Macau
21.1	23.8	22.0	18.1	11.7	3.3	1,230	1,392	1,568	1,795	1,909	2,031	2,037	2,024	Macedonia
44.7	27.7	15.6	7.2	3.9	0.9	4,234	5,371	6,930	9,059	12,033	16,187	21,299	27,005	Madagascar
43.7	28.7	14.8	7.3	4.2	1.3	2,817	3,450	4,508	6,259	9,536	11,560	14,613	18,313	Malawi
33.0[3]	28.3[3]	21.0[3]	11.6[3]	4.9[3]	1.2[3]	6,110	8,140	10,853	13,763	18,103	23,274	27,920	32,020	Malaysia
31.1[53]	33.2[53]	18.3[53]	9.2[53]	5.2[53]	1.3[53]	79	92	115	153	217	300	396	392	Maldives
46.3	25.0	14.9	8.2	4.5	1.1	3,688	4,495	5,546	6,758	8,085	10,049	13,025	17,505	Mali
17.2	21.7	19.7	22.3	13.5	5.6	312	329	326	364	360	390	417	432	Malta
42.9	28.7	16.7	8.2	2.6	0.9	11	15	22	31	44	51	54	62	Marshall Islands
22.0	21.0	24.4	16.0	11.1	5.5	222	282	325	326	360	385	405	408	Martinique
43.9	27.0	15.9	7.7	4.3	1.2	692	892	1,150	1,503	1,945	2,566	3,363	4,153	Mauritania
25.2	26.0	24.8	14.9	6.8	2.3	479	662	829	966	1,059	1,187	1,287	1,370	Mauritius
42.2	29.2	17.7	7.3	2.9	0.7	17	25	35	52	89	147	201	252	Mayotte
30.7[54]	26.3[54]	20.4[54]	11.8[54]	5.9[54]	2.2[54]	27,741	37,877	52,028	69,325	84,002	98,439	108,396	115,762	Mexico
40.3	28.4	16.9	9.1	3.9	1.4	32	45	61	73	96	107	111	116	Micronesia
19.1[56]	26.3[56]	20.9[56]	19.1[56]	—14.3[56]—		2,341	3,004	3,595	4,010	4,389	4,145	3,707	3,580	Moldova
13.2	13.4	22.1	22.4	17.4	11.5	18	21	24	27	30	32	35	37	Monaco
35.8	30.2	20.5	8.3	—5.2—		747	931	1,248	1,663	2,086	2,390	2,723	3,015	Mongolia
20.6[57]	23.1[57]	20.5[57]	18.2[57]	12.8[57]	3.9[57]	397	467	520	579	591	612	627	627	Montenegro
31.3[60]	28.9[60]	20.1[60]	11.7[60]	6.0[60]	2.0[60]	8,953	11,626	15,310	19,567	24,808	28,827	32,381	36,200	Morocco[58]
44.7[32]	26.4[32]	15.6[32]	8.8[32]	3.8[32]	0.7[32]	6,250	7,472	9,304	12,103	12,667	18,125	22,061	26,480	Mozambique
38.6	28.7	15.5	10.9	5.2	1.1	19,488	22,839	27,393	33,061	39,243	44,301	48,511	51,787	Myanmar (Burma)

Area and population (continued)

country	area			population (latest estimate)					population (recent census)				
	square miles	square kilometres	rank	total midyear 2008	rank	density per sq mi	density per sq km	% annual growth rate 2003–08	census year	total	male (%)	female (%)	urban (%)
Namibia	318,193	824,116	34	2,089,000	143	6.6	2.5	1.0	2001	1,830,330	48.5	51.5	33.0
Nauru	8.2	21.2	219	10,200	219	1,243.9	481.1	0.2	2002	10,065	51.0	49.0	100.0
Nepal	56,827	147,181	94	28,757,000	40	506.0	195.4	2.0	2001	23,151,423	49.9	50.1	14.2
Netherlands, The	16,040	41,543	133	16,433,000	60	1,024.5	395.6	0.3	2001	15,985,538	49.5	50.5	89.6[9]
Netherlands Antilles	308	800	185	196,000	187	636.4	245.0	2.0	2001	175,653	47.0	53.0	69.3[9]
New Caledonia	7,172	18,575	154	247,000	184	34.4	13.3	1.8	2004	230,789	50.5	49.5	63.7[7]
New Zealand	104,515	270,692	74	4,268,000	123	40.8	15.8	1.2	2006	4,143,282	48.8	51.2	86.2[7]
Nicaragua	50,337	130,373	97	5,667,000	108	112.6	43.5	1.3	2005	5,142,098	49.3	50.7	55.9
Niger	459,286	1,189,546	22	14,731,000	62	32.1	12.4	3.6	2001	11,060,291	49.9	50.1	16.3
Nigeria	356,669	923,768	32	146,255,000	7	410.1	158.3	2.1	2006	140,003,542[13]	51.2	48.8	48.2[7]
Northern Mariana Islands	176	457	196	63,000	209	358.0	137.9	–1.3	2000	69,221	46.2	53.8	90.1
Norway	148,726[61]	385,199[61]	61	4,762,000	116	32.0	12.4	0.9	2001	4,520,947	49.6	50.4	76.5
Oman	119,500	309,500	70	2,651,000	140	22.2	8.6	1.5	2003	2,340,815	56.1	43.9	71.5
Pakistan[63]	307,374	796,096	36	161,910,000	6	526.8	203.4	1.7	1998	130,579,571	52.0	48.0	33.3
Palau	188	488	194	20,300	218	108.0	41.6	0.7	2005	19,907	53.7	46.3	70.0[7]
Panama	29,024	75,173	118	3,310,000	133	114.0	44.0	1.6	2000	2,839,177	50.5	49.5	56.3
Papua New Guinea	178,704	462,840	54	6,474,000	101	36.2	14.0	2.3	2000	5,130,365	51.9	48.1	13.2[3]
Paraguay	157,048	406,752	59	6,238,000	102	39.7	15.3	1.9	2002	5,163,198	50.4	49.6	56.7
Peru	496,218	1,285,198	20	28,534,000	41	57.5	22.2	1.6	2007	27,419,294[11]	49.7[11]	50.3[11]	72.6[7]
Philippines	115,831	300,000	72	90,227,000	12	779.0	300.8	2.0	2000	76,504,077	50.4	49.6	58.5[3]
Poland	120,726	312,679	69	38,111,000	33	315.7	121.9	–0.0	2002	38,230,100	48.4	51.6	61.8
Portugal	35,556	92,090	110	10,649,000	76	299.5	115.6	0.4	2001	10,356,117[14]	48.3[14]	51.7[14]	65.8[9]
Puerto Rico	3,515	9,104	168	3,958,000	125	1,126.0	434.8	0.3	2000	3,808,610	48.1	51.9	94.6[3]
Qatar	4,184	10,836	165	1,448,000	151	346.1	133.6	14.8	2004	744,029	66.7	33.3	92.0[2]
Reunion	968	2,507	176	807,000	161	833.7	321.9	1.3	1999	706,300	49.1	50.9	82.7
Romania	92,043	238,391	82	21,508,000	51	233.7	90.2	–0.2	2002	21,680,974	48.7	51.3	52.7
Russia	6,592,800	17,075,400	1	141,841,000	9	21.5	8.3	–0.4	2002	145,166,731	46.6	53.3	73.3
Rwanda	10,185	26,379	147	10,009,000	81	982.7	379.4	2.3	2002	8,128,553	47.7	52.3	16.9
St. Kitts and Nevis	104	269	207	51,300	213	493.3	190.7	1.3	2001	46,111	49.7	50.3	34.2[9]
St. Lucia	238	617	191	171,000	191	718.5	277.1	1.3	2001	151,156	48.9	51.1	38.0[9]
St. Vincent and the Grenadines	150	389	200	106,000	196	706.7	272.5	0.4	1991	106,499	49.9	50.1	24.6
Samoa	1,093	2,831	174	180,000	189	164.7	63.6	0.2	2006	179,186[13]	51.9	48.1	20.8
San Marino	24	61	215	31,000	217	1,291.7	508.2	1.3	2003[4, 5]	28,753	48.9	51.1	88.7[2]
São Tomé and Príncipe	386	1,001	183	160,000	192	414.5	159.8	1.6	2001	137,599	49.6	50.4	47.7[9]
Saudi Arabia	830,000	2,149,690	14	24,780,000	46	29.9	11.5	2.4	2004	22,673,538	55.4	44.6	87.7[2]
Senegal	76,070	197,021	87	12,688,000	68	166.8	64.4	2.6	2002	9,855,338	49.2	50.8	40.7
Serbia[66]	29,922	77,498	117	7,352,000	96	245.7	94.9	–0.3	2002	7,498,001	48.6	51.4	56.4
Seychelles	176	455	197	85,500	202	486.6	187.9	0.7	2002	81,755	49.8	50.2	64.6[9]
Sierra Leone	27,699	71,740	119	5,969,000	103	215.5	83.2	2.9	2004	4,976,871	48.6	51.4	38.8[2]
Singapore	273	707	189	4,839,000[67]	115	17,725.3	6,844.4	3.3	2000[14]	3,263,209	50.0	50.0	100.0
Slovakia	18,932	49,034	129	5,401,000	110	285.3	110.1	0.1	2001	5,379,455	48.6	51.4	55.0
Slovenia	7,827	20,273	153	2,029,000	145	259.2	100.1	0.3	2002	1,964,036	48.8	51.2	50.8
Solomon Islands	10,954	28,370	143	517,000	168	47.2	18.2	2.8	1999	409,042	51.7	48.3	15.6
Somalia	246,201	637,657	42	8,956,000	88	36.4	14.0	3.0	1975	4,089,203	50.1	49.9	25.4
South Africa	471,359	1,220,813	25	48,783,000	25	103.5	40.0	0.9	2001	44,819,778	47.8	52.2	57.7[9]
Spain	195,364	505,990	51	45,661,000	28	233.7	90.2	1.7	2001	40,847,371	49.0	51.0	77.8[9]
Sri Lanka	25,332	65,610	122	19,394,000	57	765.6	295.6	0.4	2001	16,864,544[68]	49.5[68]	50.5[68]	14.6[68]
Sudan, The	967,499	2,505,810	10	39,445,000	32	40.8	15.7	2.2	1993	24,940,683	50.2	49.8	31.3[20]
Suriname	63,251	163,820	91	516,000	169	8.2	3.1	1.2	2004	492,829	50.3	49.7	76.1[2]
Swaziland	6,704	17,364	157	1,018,000	159	151.8	58.6	–0.4	2007	1,018,449	47.3	52.7	22.1
Sweden	173,860	450,295	56	9,214,000	87	53.0	20.5	0.6	2003[4, 5]	8,940,788	49.5	50.5	84.0
Switzerland	15,940	41,284	134	7,617,000	94	477.9	184.5	0.7	2000[71]	7,288,010	49.0	51.0	68.0
Syria	71,498	185,180	88	19,514,000	56	272.9	105.4	2.5	2004	17,921,000[73]	51.1	48.9	50.6[7]
Taiwan	13,973	36,190	136	22,996,000	50	1,645.7	635.4	0.4	2000[14]	22,300,929	51.1	48.9	80.0[3]
Tajikistan	55,300	143,100	95	6,839,000	99	123.7	47.8	1.4	2000	6,127,493	50.3	49.7	26.6
Tanzania	364,901	945,090	31	40,213,000	30	110.2	42.5	2.1	2002	34,569,232	48.9	51.1	23.0
Thailand	198,117	513,120	50	64,316,000	20	324.6	125.3	0.7	2000	60,617,200	49.2	50.8	31.1
Togo	21,925	56,785	125	6,762,000	100	308.4	119.1	2.7	1981	2,719,567	48.7	51.3	15.2
Tonga	290	750	187	103,000	198	355.2	137.3	0.4	2006	101,991	50.8	49.2	23.2
Trinidad and Tobago	1,990	5,155	171	1,305,000	154	655.8	253.2	0.4	2000	1,262,366	50.1	49.9	74.1[3]
Tunisia	63,170	163,610	92	10,325,000	78	163.4	63.1	1.0	2004	9,910,872	50.1	49.9	64.9
Turkey	302,535	783,562	37	71,002,000	18	234.7	90.6	1.2	2007	70,586,256	50.1	49.9	70.5
Turkmenistan	188,500	488,100	52	5,180,000	113	27.5	10.6	1.7	1995	4,483,251	49.6	50.4	46.0
Tuvalu	9.9	25.6	218	9,700	220	979.8	378.5	0.3	2002	9,561	49.5	50.5	47.0
Uganda	93,263	241,551	80	29,166,000	39	312.7	120.7	3.5	2002	24,442,084	48.8	51.2	12.3
Ukraine	233,062	603,628	44	46,222,000	27	198.3	76.6	–0.7	2001	48,457,102	46.3	53.7	67.2
United Arab Emirates	32,280	83,600	114	4,660,000	117	144.4	55.7	5.6	2005	3,769,080[13, 76]	67.6	32.4	76.7[7]
United Kingdom	93,851	243,073	79	61,446,000	22	654.7	252.8	0.6	2001	58,789,194	48.6	51.4	89.5[9]
United States	3,676,486[77]	9,522,055[77]	4	305,146,000	3	83.0	32.0	0.9	2000	281,421,906	49.1	50.9	79.0
Uruguay	68,679	177,879	90	3,350,000	132	48.8	18.8	0.1	2004	3,241,003	48.3	51.7	91.8
Uzbekistan	172,700	447,400	57	27,345,000	44	158.3	61.1	1.0	1989	19,905,158	49.3	50.7	40.7
Vanuatu	4,707	12,190	161	233,000	185	49.5	19.1	2.6	1999	186,678	51.3	48.7	21.5
Venezuela	353,841	916,445	33	27,884,000	43	78.8	30.4	1.7	2001	23,054,210	49.5	50.5	87.2[9]
Vietnam	127,882	331,212	66	88,537,000	13	692.3	267.3	1.4	1999	76,323,173	49.1	50.9	23.7
Virgin Islands (U.S.)	136	352	203	113,000	193	830.9	320.1	0.5	2000	108,612	47.8	52.2	92.6[3]
West Bank[78]	2,278	5,900	169	2,656,000[79]	138	1,165.9	450.2	2.5	2007	2,345,107	50.7	49.3	71.6[80]
Western Sahara	97,344	252,120	77	497,000	172	5.1	2.0	5.0	…	…	…	…	…
Yemen	203,891	528,076	49	23,013,000	49	112.9	43.6	3.5	2004	19,685,161	51.0	49.0	28.6
Zambia	290,585	752,612	39	11,670,000	71	40.2	15.5	1.6	2000	9,885,591	50.0	50.0	34.7
Zimbabwe	150,872	390,757	60	11,350,000	72	75.2	29.0	–0.8	2002	11,634,663	48.4	51.6	34.9[2]

[1]Official estimate excluding nomads. [2]2003 estimate. [3]2000 estimate. [4]Civil register not a census. [5]Beginning of year. [6]2006 estimate. [7]2005 estimate. [8]2001 census household population. [9]2001 estimate. [10]Based on preliminary census figures. [11]Unadjusted for undercount. [12]1999 estimate. [13]Preliminary figure. [14]Data are for de jure population. [15]Rounded percentage based on 2005 census. [16]1991 estimate. [17]Beginning of 2002 estimate based on 2001 census. [18]Excludes Bakassi Peninsula. [19]Excludes institutionalized population. [20]1995 estimate. [21]1998 estimate. [22]Data are for the island of Cyprus (except census information). [23]Republic of Cyprus only. [24]End of 2001 estimate based on 2001 census. [25]2004 estimate. [26]Rounded percentage of 2001 census. [27]Estimate of the U.S. Bureau of the Census International Database (March 2008 update). [28]Officially reported census figure. [29]2002 estimate. [30]1994 estimate. [31]Metropolitan France only; overseas departments and territories are excluded. [32]2007 estimate. [33]1993 estimate. [34]Areas of Georgia excluding Abkhazia and South Ossetia are 22,244 sq mi and 57,612 sq km, respectively. [35]Excludes Abkhazia and South Ossetia. [36]Excludes about 230,000 people in Abkhazia and South Ossetia. [37]Includes Abkhazia and South Ossetia. [38]Includes Saint-Martin and Saint-Barthélemy. [39]Excludes Alderney and Sark. [40]Combined percentage for Guernsey and Jersey. [41]1996 estimate. [42]Excludes a part of 0.7% unknown. [43]Total area cited by National Land Survey of Iceland. [44]Includes 2.3 million Iraqis seeking temporary refuge in neighbouring countries. [45]1997 estimate. [46]Area figures exclude the West Bank and the Gaza Strip. [47]Population figures (unless otherwise indicated) exclude Israelis in the West Bank and the Gaza Strip. [48]Census data include Israelis in the West Bank and the Gaza Strip. [49]Census data are more narrowly defined than country estimates in particular regard to

age distribution (%)						population (by decade, '000s)								country
0–14	15–29	30–44	45–59	60–74	75 and over	1950	1960	1970	1980	1990	2000	2010 projection	2020 projection	
42.7[9]	28.6[9]	15.5[9]	7.9[9]	3.9[9]	1.4[9]	464	591	765	1,058	1,471	1,893	2,128	2,263	Namibia
38.5	27.7	21.0	10.2	2.2	0.4	3	4	7	8	9	10	11	13	Nauru
39.3	27.0	17.1	10.1	5.2	1.3	8,643	10,070	12,155	15,159	19,114	24,419	29,898	35,868	Nepal
18.6	18.8	24.3	20.0	12.2	6.1	10,090	11,494	13,020	14,150	14,952	15,926	16,551	16,810	Netherlands, The
24.2	18.2	25.5	19.0	9.4	3.7	112	136	163	174	188	179	201	209	Netherlands Antilles
28.0	24.3	23.4	14.9	7.2	2.2	65	78	105	143	171	213	254	290	New Caledonia
21.1	20.5	22.0	19.4	11.4	5.6	1,909	2,377	2,820	3,144	3,452	3,860	4,344	4,726	New Zealand
37.6	29.9	17.1	9.3	4.3	1.8	1,295	1,764	2,395	3,257	4,141	5,098	5,816	6,518	Nicaragua
47.5	25.0	16.2	6.8	3.3	1.2	2,208	3,053	4,217	5,784	7,822	11,124	15,791	22,222	Niger
42.1[6]	28.1[6]	16.3[6]	8.7[6]	4.0[6]	0.8[6]	31,797	41,547	55,586	74,821	96,604	123,179	152,217	182,344	Nigeria
22.5	31.9	32.2	10.7	2.3	0.4	6	9	12	17	44	69	63	65	Northern Mariana Islands
20.0[62]	18.8[62]	22.4[62]	19.6[62]	11.4[62]	7.8[62]	3,265	3,581	3,877	4,086	4,241	4,491	4,856	5,172	Norway
33.8	32.3	20.8	8.9	3.2	1.0	456	565	747	1,187	1,843	2,402	2,767	3,339	Oman
43.2	26.9	15.6	8.8	4.3	1.2	39,448	50,387	65,706	85,219	109,710	139,760	167,765	200,370	Pakistan[63]
24.1	21.7	28.7	17.3	5.7	2.5	7	9	12	13	15	19	21	22	Palau
32.0	26.8	20.6	12.0	6.1	2.5	893	1,148	1,531	1,960	2,393	2,900	3,411	3,894	Panama
40.0	28.5	18.6	8.8	3.5	0.6	1,798	2,080	2,554	3,199	4,131	5,402	6,762	8,309	Papua New Guinea
37.1	27.3	17.9	10.6	5.1	2.0	1,473	1,907	2,484	3,198	4,248	5,349	6,460	7,533	Paraguay
31.1[11, 64]	28.0[11, 64]	20.0[11, 64]	12.1[11, 64]	6.3[11, 64]	2.5[11, 64]	7,632	9,931	13,193	17,325	21,762	25,192	29,244	32,493	Peru
37.0	27.6	19.1	10.3	4.7	1.3	19,996	27,054	36,551	48,088	61,226	76,763	93,599	109,447	Philippines
18.2	24.4	20.4	20.0	12.1	4.9	24,824	29,561	32,526	35,578	38,031	38,259	38,111	38,111	Poland
17.0[9]	22.5[9]	21.7[9]	18.1[9]	14.4[9]	6.3[9]	8,443	9,037	9,044	9,778	9,923	10,239	10,713	10,778	Portugal
23.8	23.3	20.4	17.1	10.6	4.8	2,218	2,358	2,722	3,210	3,537	3,816	3,986	4,080	Puerto Rico
22.5	25.0	34.4	15.6	2.2	0.3	25	45	111	229	467	617	1,712	2,281	Qatar
27.0	24.8	24.4	13.8	7.2	2.8	244	338	447	507	601	723	825	914	Réunion
17.6	23.4	21.0	18.7	14.4	4.9	16,311	18,407	20,253	22,201	23,207	22,072	21,422	20,998	Romania
16.4	24.0	22.5	18.6	—— 18.5 ——		101,937	119,632	130,245	139,039	147,973	146,710	141,280	138,507	Russia
43.8	30.1	14.7	7.1	3.3	1.0	2,162	2,887	3,776	5,197	7,294	8,176	10,601	13,731	Rwanda
30.7[3]	26.5[3]	21.1[3]	10.8[3]	—— 10.9[3] ——		49	51	46	44	41	44	52	56	St. Kitts and Nevis
31.2	27.4	20.6	10.7	6.6	3.5	83	90	104	118	138	156	175	193	St. Lucia
37.2	29.5	16.1	8.3	6.4	2.5	67	81	90	100	109	112	107	110	St. Vincent and the Grenadines
40.8[65]	25.6[65]	17.9[65]	9.2[65]	5.0[65]	1.5[65]	82	110	142	155	161	175	180	184	Samoa
14.1	16.6	27.3	19.7	14.2	8.1	13	15	19	21	23	27	32	34	San Marino
42.1	30.3	14.5	6.9	4.7	1.5	60	64	74	94	115	135	165	197	São Tomé and Príncipe
34.3	28.6	23.8	9.1	3.2	1.0	3,201	4,075	5,745	9,320	15,187	20,474	25,890	31,450	Saudi Arabia
42.4	28.5	15.8	8.6	3.9	0.8	2,543	3,277	4,402	5,871	7,896	10,334	13,311	16,442	Senegal
15.8	20.3	20.1	21.2	17.3	5.3	5,869	6,610	7,153	7,670	7,834	7,661	7,297	7,028	Serbia[66]
25.7	26.6	25.3	12.0	7.2	3.2	34	42	54	63	70	81	86	91	Seychelles
41.7	27.1	16.7	8.0	4.3	2.2	1,944	2,256	2,697	3,236	4,087	4,521	6,185	7,747	Sierra Leone
21.5	21.2	28.4	18.2	8.2	2.5	1,022[67]	1,646[67]	2,075[67]	2,414[67]	3,047[67]	4,028[67]	5,215[67]	6,299[67]	Singapore
18.9	25.1	21.5	18.9	11.0	4.6	3,463	4,145	4,528	4,976	5,256	5,401	5,410	5,410	Slovakia
15.3	21.5	22.7	20.5	14.4	5.6	1,467	1,580	1,727	1,901	1,998	1,990	2,041	2,065	Slovenia
44.6[12]	29.0[12]	14.3[12]	7.5[12]	3.7[12]	0.9[12]	90	118	161	229	314	416	545	692	Solomon Islands
45.6	24.9	15.5	7.4	—— 5.4 ——		2,264	2,819	3,600	6,485	6,717	7,055	9,486	12,291	Somalia
32.0	29.5	20.2	11.0	5.5	1.8	13,596	17,417	22,740	29,252	38,476	45,064	49,109	48,530	South Africa
14.5	22.4	23.7	17.8	14.2	7.4	27,868	30,303	33,779	37,636	38,798	40,263	46,437	50,516	Spain
26.0[69]	27.5[69]	22.3[69]	14.5[69]	7.3[69]	2.4[69]	7,339	9,698	12,342	14,941	17,114	18,714	19,576	20,229	Sri Lanka
43.0	27.0	16.4	9.3	3.7	0.6	9,190	11,439	14,495	19,641	25,933	33,349	41,230	50,027	Sudan, The
30.0	26.2	22.7	12.5	6.6	2.0	215	290	372	356	402	465	528	583	Suriname
44.3[70]	28.6[70]	14.4[70]	7.7[70]	3.4[70]	1.6[70]	273	353	454	615	865	1,058	1,018	1,018	Swaziland
18.0	18.1	20.8	20.6	13.6	8.9	7,014	7,480	8,042	8,310	8,559	8,872	9,335	9,878	Sweden
17.1[72]	18.0[72]	24.3[72]	20.1[72]	13.2[72]	7.3[72]	4,694	5,328	6,181	6,319	6,712	7,184	7,720	8,216	Switzerland
39.5	30.2	16.9	8.5	—— 4.9 ——		3,495	4,533	6,258	8,774	12,436	16,106	20,582	24,563	Syria
21.2	25.5	25.4	15.9	9.0	3.0	7,619	10,668	14,583	17,642	20,279	22,185	23,179	23,376	Taiwan
39.4	27.7	18.4	7.6	5.4	1.5	1,532	2,082	2,942	3,953	5,303	6,173	7,062	8,342	Tajikistan
44.3	27.7	15.3	7.1	4.1	1.5	7,935	10,260	13,807	18,665	25,214	33,712	41,893	49,989	Tanzania
24.1	25.6	25.9	15.0	7.5	1.9	20,607	27,652	37,247	46,809	54,291	60,666	65,125	67,990	Thailand
49.8	24.8	13.1	6.8	3.3	2.0	1,329	1,572	2,138	2,784	3,961	5,403	7,122	8,984	Togo
38.2	26.3	17.2	10.1	6.1	2.1	50	65	80	92	96	99	104	109	Tonga
25.5[74]	27.5[74]	22.6[74]	14.5[74]	7.2[74]	2.7[74]	668	828	941	1,082	1,235	1,263	1,315	1,359	Trinidad and Tobago
26.6	29.6	21.3	13.1	7.0	2.4	3,517	4,149	5,099	6,443	8,154	9,564	10,527	11,562	Tunisia
29.8[75]	29.2[75]	20.6[75]	12.0[75]	6.9[75]	1.5[75]	21,484	28,233	36,207	46,316	57,345	64,571	72,708	80,537	Turkey
40.1[20]	27.1[20]	18.8[20]	7.9[20]	4.9[20]	1.2[20]	1,204	1,585	2,181	2,875	3,659	4,520	5,345	6,148	Turkmenistan
36.2	21.2	20.2	13.8	6.8	1.8	5	5	6	8	9	9	10	10	Tuvalu
49.3	27.3	13.4	5.6	3.3	1.1	5,158	6,787	9,442	12,661	17,841	22,925	31,095	42,705	Uganda
17.0[26]	22.0[26]	21.0[26]	18.5[26]	15.5[26]	6.0[26]	36,906	42,783	47,317	50,034	51,892	49,176	45,661	42,957	Ukraine
20.3	31.6	35.6	10.8	1.4	0.3	72	103	248	982	1,773	2,995	5,025	6,560	United Arab Emirates
18.9	18.8	22.6	18.9	13.3	7.5	50,290	52,372	55,632	56,330	57,237	58,886	62,162	65,854	United Kingdom
21.4	20.8	23.3	18.2	10.4	5.9	152,271	180,671	204,879	227,726	249,806	282,430	310,233	341,387	United States
23.9	22.9	19.5	16.0	11.8	5.9	2,239	2,538	2,808	2,914	3,106	3,318	3,374	3,495	Uruguay
40.8	28.4	15.0	9.3	4.7	1.8	6,293	8,531	11,940	15,994	20,530	25,042	27,866	30,565	Uzbekistan
42.2	26.9	17.0	8.8	3.7	1.4	48	64	86	117	149	190	245	313	Vanuatu
33.1	27.5	20.7	11.7	5.1	1.9	5,094	7,579	10,721	15,091	19,731	24,296	28,807	33,038	Venezuela
33.1	28.5	21.2	9.2	6.0	2.0	27,367	33,648	42,898	53,005	66,173	79,094	90,845	101,656	Vietnam
26.1	19.4	21.2	20.5	9.8	3.0	27	32	63	98	102	109	114	112	Virgin Islands (U.S.)
38.8[32, 81]	29.0[32, 81]	18.4[32, 81]	8.6[32, 81]	3.9[32, 81]	1.3[32, 81]	...	...	608[82]	733[82]	1,011[82]	2,175[82]	2,745[82]	3,176[82]	West Bank[78]
...	...	...	...	...	...	14	33	77	150	221	315	530	723	Western Sahara
45.6	29.5	12.8	6.9	3.8	1.4	4,777	5,872	7,098	9,133	12,416	17,495	24,658	34,234	Yemen
47.0[3]	30.0[3]	12.9[3]	5.9[3]	3.4[3]	0.8[3]	2,553	3,254	4,252	5,700	7,978	10,205	12,057	13,948	Zambia
40.0[29]	32.3[29]	15.2[29]	7.4[29]	4.0[29]	1.1[29]	2,853	4,011	5,515	7,170	10,156	11,820	11,652	15,832	Zimbabwe

the number of non-Kuwaitis. [50]Derived figures from sample survey. [51]Includes foreign workers. [52]Excludes foreign workers. [53]Excludes a part of 1.7% unknown. [54]Excludes a part of 2.7% unknown. [55]De facto figure excluding Transdniestria and Moldovans abroad. [56]Excludes a part of 0.3% unknown. [57]Excludes a part of 0.9% unknown. [58]Excludes Western Sahara, an annexure of Morocco, unless otherwise indicated. [59]Base for data; actual final census figure is 29,891,708. [60]Includes Western Sahara. [61]Includes Svalbard and Jan Mayen. [62]Mean figures for 2002. [63]Excludes Afghan refugees and the area (33,125 sq mi [85,793 sq km]) and population (2008; 4,795,000) of Pakistan-occupied Jammu and Kashmir. [64]2005 census. [65]2001 census. [66]Excludes the disputed transitional republic of Kosovo. [67]De facto population includes temporary nonresident workers. [68]Excludes 7 districts experiencing civil war whose 2001 estimated population equaled 1,867,711. [69]2001 estimate for entire country. [70]1997 census. [71]Includes resident aliens; excludes seasonal workers. [72]Beginning of 2002 estimate based on 2000 census. [73]Rounded census figure. [74]Based on known census population of 1,114,772. [75]2000 census. [76]Excludes 335,615 non-nationals (2,944,159 non-nationals are included). [77]Includes inland water area of 78,797 sq mi (204,083 sq km) and Great Lakes water area of 60,251 sq mi (156,049 sq km); excludes coastal water area of 42,225 sq mi (109,362 sq km) and territorial water area of 75,372 sq mi (195,213 sq km). [78]Excludes East Jerusalem. [79]Includes 290,000 Israeli Jews in the West Bank. [80]2005 estimate for both the West Bank and Gaza Strip. [81]Excludes Israeli Jews in the West Bank. [82]Includes Israeli Jews in the West Bank.

Major cities and national capitals

The following table lists the principal cities or municipalities (those exceeding 100,000 in population) of the countries of the world, together with figures for each national capital or seat of government (indicated by a ★), regardless of size.

Most of the populations given refer to a so-called city proper, that is, a legally defined, incorporated, or chartered area defined by administrative boundaries and by national or state law. In some instances, where cities proper do not exist or are not strictly demarcated, populations of locally defined urban areas may be used. In a few cases, data refer to the municipality, or commune, similar to the medieval city-state in that the city is governed together with its immediately adjoining, economically dependent areas, whether urban or rural in nature. Some countries define no other demographic or legal entities within such communes or municipalities, but many identify a centre, seat, head (*cabecera*), or locality that corresponds to the most densely populated, compact, contiguous core of the municipality. Figures referring to municipalities or communes may be given (identified by the abbreviation "MU"), even though the country itself may define a smaller, more closely knit city proper.

Populations for urban agglomerations as defined by the United Nations are occasionally inset beneath the populations of cities proper. Specifically that is when the urban agglomeration populations are at least three times the size of cities proper.

For certain countries, more than one form of the name of the city is given, usually to permit recognition of recent place-name changes or of *forms* of the place-name likely to be encountered in press stories if the title of the city's entry in the *Encyclopædia Britannica* is spelled according to a different romanization or spelling policy.

Chinese names for China are usually given in their Pinyin spelling, the official Chinese system encountered in official documents and maps. For Taiwan, the Wade-Giles spelling of place-names is used.

Sources for this data were often national censuses and statistical abstracts of the countries concerned, supplemented by Internet sources.

Internet sources for further information

- City Population: http://www.citypopulation.de/cities.html
- World Urbanization Prospects: http://esa.un.org/unup

Major cities and national capitals

country city	population
Afghanistan (2006 est.)	
Herat	349,000
Jalālābad	168,600
★ Kabul	700,000[1]
agglomeration	2,536,300
Kandahār (Qandahār)	324,800
Mazār-e Sharīf	300,600
Albania (2008 est.)	
★ Tirane	400,000
Algeria (2004 est.)	
★ Algiers	1,790,700
Annaba	410,700
Batna	285,800
Bechar	154,400
Bejaia	173,300
Biskra (Beskra)	201,500
Blida (el-Boulaida)	180,400
Bordj Bou Arreridj	151,500
Constantine (Qacentina)	544,700
Djelfa	181,800
Ech-Cheliff (el-Asnam)	157,800
El-Eulma	123,900
El-Wad	123,500
Ghilizane	122,900
Guelma	128,100
Jijel	124,900
Khenchela	125,000
Medea	145,600
Mostaganem	146,600
Oran (Wahran)	772,900
Saida	130,600
Setif (Slif)	249,700
Sidi bel Abbès	212,400
Skikda	179,500
Souq Ahras	136,600
Tebessa (Tbessa)	180,600
Tihert	171,300
Tlemcen (Tilimsen)	141,600
Wargla (Quargla)	139,900
American Samoa (2000)	
★ Fagatogo (legislative and judicial)	2,096[2]
★ Utulei (executive)	807[2]
Andorra (2008 est.)	
★ Andorra la Vella	24,754
Angola (2004 est.)	
Huambo	173,600
★ Luanda	2,783,000
Antigua and Barbuda (2005 est.)	
★ Saint John's	31,000
Argentina (2001)	
Almirante Brown	514,491
Avellaneda	328,980
Bahia Blanca	274,509
Belen de Escobar	173,155
Berazategui	286,735
★ Buenos Aires	2,776,138
agglomeration	12,046,799
Caseros	336,467
Catamarca	140,741
Comodoro Rivadavia	135,632
Concordia	138,099
Córdoba	1,267,521
Corrientes	314,546
Esteban Echeverria	243,186
Ezeiza	118,072
Florencio Valera	341,507
Formosa	198,074
General San Martin	403,107
Godoy Cruz	182,563
Hurlingham	172,245
Ituzaingo	158,121
José Carlos Paz	230,208
La Plata	563,943
La Rioja	143,684
Lanus	453,082
Las Heras	169,248
Lomas de Zamora	591,345
Los Polvorines	290,691
Mar del Plata	541,733
Mendoza	110,993
Merlo	468,745
Moreno	379,300
Morón	309,380
Neuquen	201,868
Parana	235,967
Pilar	226,517
Posadas	252,981
Quilmes	518,788
Resistencia	274,490
Rio Cuarto	144,021
Rosario	908,163
Salta	462,051
San Fernando	148,064
San Isidro	291,505
San Justo (La Matanza)	1,253,921
San Luis	153,322
San Miguel	253,086
San Miguel de Tucuman	527,150
San Nicolas de los Arroyos	125,408
San Salvador de Jujuy	231,229
Santa Fe	368,668
Santiago del Estero	230,614
Tandil	101,010
Tigre	296,189
Vicente Lopez	274,082
Villa Nueva	223,365
Armenia (2007 est.)	
Gyumri (Kumayri, Leninakan)	147,700
Vanadzor	105,200
★ Yerevan	1,104,900
Aruba (2007 est.)	
★ Oranjestad	32,000
Australia (2006)[3]	
Adelaide	1,040,719
Brisbane	1,676,389
★ Canberra	356,120
Geelong	137,220
Gold Coast	454,436
Gosford	282,726
Hobart	128,577
Melbourne	3,371,888
Newcastle	288,732
Perth	1,256,035
Sunshine Coast	184,662
Sydney	3,641,422
Townsville	128,808
Wollongong	234,482
Austria (2007 est.)	
Graz	247,698
Innsbruck	117,693
Linz	188,894
Salzburg	149,018
★ Vienna	1,664,146
Azerbaijan (2007 est.)	
★ Baku (Baky)	1,917,000
Ganca (Gyandzha)	309,700
Sumqayit (Sumgait)	299,700
Bahamas, The (2007 est.)	
★ Nassau	226,100
Bahrain (2007 est.)	
★ Manama	157,000
Bangladesh (2001)	
Barisal	195,955[4]
Bogra	150,138
Brahmanbaria	131,334
Chittagong	2,532,421[4]
Comilla	404,200[4]
★ Dhaka (Dacca)	6,737,774[4]
Dinajpur	157,303
Jamalpur	116,764
Jessore	178,273
Khulna	842,995[4]
Kotwali	285,308
Madhabdi	126,736
Mymensingh	225,811
Naogaon	123,101
Narayanganj	241,694
Nawabganj (Nowabgonj)	153,252
Pabna	116,371
Rajshahi	459,682[4]
Rangpur	251,699
Shailakupa	317,881
Sirajganj	127,147
Sylhet	445,798[4]
Tangail	128,543
Tongi	352,900[4]
Barbados (2000)	
★ Bridgetown	5,996
agglomeration	116,000[4]
Belarus (2008 est.)	
Babruysk	219,100
Baranavichy	167,900
Barysaw	149,900
Brest	301,400
Homyel	481,500
Hrodna	318,600
Mahilyow	367,700
Mazyr	111,600
★ Minsk	1,741,000
Navapolack	100,800
Orsha	123,900
Pinsk	129,600
Vitsyebsk	343,600
Belgium (2008 est.)	
Antwerp	472,071
Brugge (Bruges)	117,073
★ Brussels	148,873
agglomeration	1,048,491
Charleroi	201,593
Ghent	237,250
Liège (Luik)	190,102
Schaerbeek	116,039
Belize (2007 est.)	
★ Belmopan	16,435
Benin (2007 est.)	
Abomey	126,800[5]
★ Cotonou (de facto)	762,000
Djougou	206,500[5]
Parakou	227,900[5]
★ Porto-Novo (official)	257,000
Bermuda (2000)	
★ Hamilton	969
Bhutan (2005)	
★ Thimphu	79,185
Bolivia (2008)	
Cochabamba	603,300
El Alto	890,500
★ La Paz (administrative)	835,300
Oruro	216,700
Potosí	152,000
Quillacollo	95,000
Sacaba	141,500
Santa Cruz	1,506,200
★ Sucre (judicial)	265,300
Tarija	182,700
Bosnia and Herzegovina (2007 est.)	
Banja Luka	198,000
Juzla	131,444
Mostar	111,198
★ Sarajevo	304,065
Zenica	127,334
Botswana (2007 est.)	
★ Gaborone	224,000
Brazil (2007)	
Abaetetuba	138,005
Aguas Lindas de Goias	139,804
Alagoinhas	137,202
Alvorada	211,276
Americana	203,283
Ananindeua	495,480
Anapolis	331,329
Angra dos Reis	164,191
Aparecida de Goiânia	494,919
Apucarana	120,123
Aracaju	536,785
Araçatuba	181,143
Araguaina	119,128
Araguari	110,334
Arapiraca	208,447
Araraquara	199,132
Araucária	115,849
Alibaia	125,418
Bage	115,755
Barbacena	127,328
Barra Mansa	176,469
Barreiras	135,650
Barretos	112,804
Barueri	264,619
Bauru	355,675
Belém	1,424,124
Belford Roxo	495,694
Belo Horizonte	2,434,642
Betim	429,507
Blumenau	296,151
Boa Vista	260,930
Botucatu	128,397
Bragança Paulista	144,066
★ Brasília	2,557,158
Cabo (de Santo Agostinho)	169,986
Cabo Frio	180,635
Cachoeirinha	117,203
Cachoeiro de Itapemirim	198,962
Camaçari	227,955
Camaragibe	141,973
Cametá	115,377
Campina Grande	381,422
Campinas	1,056,644
Campo Grande	747,189
Campo Largo	110,796
Campos dos Goytacazes	431,839
Canoas	329,903
Carapicuiba	388,532
Cariacica	362,277
Caruaru	294,558
Cascavel	291,747
Castanhal	159,110
Catanduva	114,069
Caucaia	326,811
Caxias	147,416
Caxias do Sul	405,858
Chapecó	171,789
Codó	113,768
Colombo	241,505
Conselheiro Lafaiete	113,576
Contagem	617,749
Cotia	179,100
Crato	115,724
Criciúma	187,018
Cubatão	127,702
Cuiabá	544,737
Curitiba	1,828,092
Diadema	394,266
Divinópolis	213,277
Dourados	187,601
Duque de Caxias	864,392
Embu	245,093
Feira de Santana	584,497
Ferraz de Vasconcelos	175,939
Florianópolis	402,346
Fortaleza	2,473,614
Foz do Iguaçu	319,189
Franca	327,176
Francisco Morato	155,224
Franco de Rocha	129,304
Garanhuns	130,154
Goiânia	1,265,394
Governador Valadares	261,981
Gravataí	266,230
Guarapuava	171,230
Guaratinguetá	112,596
Guarujá	304,274
Guarulhos	1,279,202
Hortolândia	201,049
Ibirite	155,290
Ilhéus	219,710
Imperatriz	236,311
Indaiatuba	180,524
Ipatinga	241,720
Itabira	109,380
Itaborai	225,309
Itabuna	212,245
Itaituba	124,865
Itajaí	169,927
Itapecerica da Serra	159,102
Itapetininga	146,760

country city	population
Itapevi	201,995
Itapipoca	112,662
Itaquaquecetuba	351,493
Itu	155,457
Jaboatão	678,346
Jacarei	210,988
Jandira	110,325
Jaraguá do Sul	136,282
Jaú	133,469
Jequié	150,351
Ji-Paraná	110,707
João Pessoa	693,082
Joinville	492,101
Juàzeiro	237,627
Juàzeiro do Norte	246,515
Juiz de Fora	520,612
Jundiaí	347,738
Lages	166,983
Lauro de Freitas	153,016
Limeira	278,776
Linhares	130,901
Londrina	505,184
Luziânia	203,800
Macaé	188,787
Macapá	359,020
Maceió	924,143
Magé	240,940
Manaus	1,709,010
Marabá	199,946
Maracanaù	199,808
Maranguape	108,525
Maricá	119,231
Marília	223,454
Maringá	331,412
Mauá	412,753
Mesquita	187,949
Mogi das Cruzes	371,372
Mogi-Guaçu	138,494
Montes Claros	358,271
Mossoró	241,645
Natal	798,065
Nilópolis	159,005
Niterói	477,912
Nossa Senhora de Socorro	153,253
Nova Friburgo	178,310
Nova Iguaçu	855,500
Novo Hamburgo	255,945
Olinda	394,850
Osasco	713,066
Ourinhos	103,631
Palhoça	128,360
Palmas	184,010
Paranaguá	138,748
Parauapebas	145,326
Parnaíba	144,892
Parnamirim	178,819
Passo Fundo	185,882
Passos	106,735
Patos de Minas	138,466
Paulista	314,302
Pelotas	343,167
Petrolina	276,174
Petrópolis	312,776
Pindamonhangaba	142,997
Pinhais	116,984
Piracicaba	365,440
Poá	111,016
Poços de Caldas	150,095
Ponta Grossa	311,106
Porto Alegre	1,430,220
Porto Seguro	120,460
Porto Velho	379,186
Pouso Alegre	126,100
Praia Grande	244,533
Presidente Prudente	206,164
Queimados	137,870
Recife	1,549,980
Resende	127,763
Ribeirão das Neves	340,033
Ribeirão Pires	111,402
Ribeirão Preto	558,136
Rio Branco	301,398
Rio Claro	189,834
Rio de Janeiro	6,161,047
Rio Grande	195,582
Rio Verde	158,818
Rondonópolis	179,094
Sabará	125,285
Salvador	2,948,733
Santa Bárbara d'Oeste	187,908
Santa Cruz do Sul	121,168
Santa Luzia	227,438
Santa Maria	266,822
Santa Rita	125,858
Santana de Parnaíba	110,730
Santarém	275,571
Santo André	671,696
Santos	417,518
São Bernardo do Campo	801,580
São Caetano do Sul	151,103
São Carlos	218,080
São Gonçalo	982,832
São João de Meriti	468,309
São José	199,280
Sao Jose de Ribamar	135,821
São José do Rio Prêto	414,272
São José dos Campos	609,229
São Jose dos Pinhais	272,530
São Leopoldo	210,145
São Luís	986,826
São Mateus	100,655
São Paulo	10,990,249
São Vicente	328,522
Sapucaia do Sul	126,085
Serra	397,226
Sertãozinho	109,565
Sete Lagoas	221,764
Simões Filho	114,649
Sobral	180,046
Sorocaba	576,312
Sumaré	237,135
Susano (Suzano)	279,394
Taboão da Serra	224,757
Tatuí	107,651
Taubate	270,918
Teixeira de Freitas	123,858
Teófilo Otoni	130,521
Teresina	793,915
Teresopolis	159,968
Timon	148,804
Toledo	115,136
Uberaba	292,377
Uberlândia	622,441
Uruguaiana	127,138
Valinhos	105,282
Valparaiso de Goias	120,878
Varginha	120,691
Várzea Grande	237,925
Viamão	257,844
Vila Velha	407,579
Vitória	317,817
Vitória da Conquista	313,898
Vitória de Santo Antão	125,681
Volta Redonda	259,811
Brunei (2008 est.)	
★ Bandar Seri Begawan	32,331
Bulgaria (2008 est.)	
Burgas	187,514
Pleven	112,570
Plovdiv	345,249
Ruse	156,761
★ Sofia	1,156,796
Stara Zagora	140,303
Varna	313,983
Burkina Faso (2006)	
Bobo Dioulasso	435,943
★ Ouagadougou	1,181,702
Burundi (2007 est.)	
★ Bujumbura	429,000
Cambodia (2007 est.)	
★ Phnom Penh	1,466,000
Cameroon (2004 est.)	
Bafoussam	319,902
Bamenda	298,500
Bertoua	252,866
Douala	1,776,000[4]
Edéa	234,072
Foumban	252,886
Garoua	409,000
Kumba	155,171
Loum	199,808
Maroua	297,600
Mbouda	125,288
Ngaoundéré	257,179
Nkongsamba	120,231
★ Yaoundé	1,611,000[4]
Canada (2006)	
Abbotsford	123,864
Barrie	128,430
Brampton	433,806
Burlington	164,415
Burnaby	202,799
Calgary	988,193
Cambridge	120,371
Cape Breton	102,250
Chatham-Kent	108,177
Coquitlam	114,565
Edmonton	730,372
Gatineau	242,124
Greater Sudbury	157,857
Guelph	114,943
Halifax	372,679
Hamilton	504,559
Kelowna	106,707
Kingston	117,207
Kitchener	204,668
Laval	368,709
Levis	130,006
London	352,395
Longueuil	229,330
Markham	261,573
Mississauga	668,549
Montreal	1,620,693
Oakville	165,613
Oshawa	141,590
★ Ottawa	812,129
Quebec	491,142
Regina	179,246
Richmond	174,461
Richmond Hill	162,704
Saanich	108,265
Saguenay	143,692
Saint Catharines	131,989
St John's	100,646
Saskatoon	202,340
Sherbrooke	147,427
Surrey	394,976
Thunder Bay	109.140
Toronto	2,503,281
Trois-Rivières	126,323
Vancouver	578,041
Vaughan	238,866
Whitby	111,184
Windsor	216,473
Winnipeg	633,451
Cape Verde (2007 est.)	
★ Praia	125,000
Cayman Islands (2007 est.)	
★ George Town	31,785
Central African Republic (2003)	
★ Bangui	622,771
Bimbo	124,176
Chad (2000)	
Moundou	108,728
★ N'Djamena	721,000[6]
Chile (2002)	
Antofagasta	285,255
Arica	175,441
Calama	126,135
Chillán	165,528
Concepción	212,003
Copiapó	125,983
Coquimbo	148,434
Iquique	164,396
La Serena	147,815
Los Ángeles	117,972
Osorno	132,245
Puente Alto	492,603
Puerto Montt	153,118
Punta Arenas	116,005
Quilpué	126,893
Rancagua	206,971
San Bernardo	237,708
★ Santiago (administrative)	200,792
agglomeration	5,428,590
Talca	189,505
Talcahuano	161,692
Temuco	227,086
Valdivia	127,750
★ Valparaíso (legislative)	263,499
Viña del Mar	286,931
China (2006 est.)	
Acheng	246,305
Aksu	341,558
Altay	146,075
Anda	190,345
Ankang	206,484
Anlu	105,264
Anning	144,308
Anqing	453,390
Anqiu	264,968
Anshan	1,293,028
Anshun	213,215
Anyang	679,184
Baicheng	289,506
Baise	125,613
Baishan	269,456
Baiyin	299,427
Baoding	885,303
Baoji	526,212
Baoshan	121,597
Baotou	1,194,613
Bazhong	226,793
Bazhou	205,366
Bei'an	279,140
Beihai	264,633
★ Beijing (Peking)	8,580,376
Beilu	132,511
Beining	109,285
Beipiao	209,064
Bengbu	623,945
Benxi	846,740
Bijie	159,022
Binzhou	438,125
Bole	148,971
Botou	111,817
Bozhou	179,291
Cangzhou	465,214
Cenxi	129,675
Changchun	2,455,899
Changde	486,659
Changge	116,540
Changji	279,745
Changle	123,136
Changning	148,773
Changsha	1,731,937
Changshu	478,748
Changyi	191,387
Changzhi	526,219
Changzhou	1,103,856
Chaohu	210,158
Chaoyang (*Liaoning*)	329,823
Chaozhou	343,641
Chengde	343,359
Chengdu	3,582,019
Chenzhou	315,828
Chibi	159,633
Chifeng	513,922
Chizhou	131,967
Chongqing (Chungking)	4,776,027
Chongzhou	164,130
Chuxiong	144,137
Chuzhou	231,408
Cixi	160,813
Conghua	224,324
Da'an	154,874
Dafeng	212,869
Dali	209,507
Dalian	2,407,345
Dandong	597,930
Dangyang	124,522
Danjiangkou	204,199
Danyang	203,631
Danzhou	391,076
Daqing	976,188
Dashiqiao	196,968
Datong	1,105,121
Daye	907,212
Dazhou	225,983
Dehui	147,329
Dengfeng	154,781
Dengzhou	155,387
Dexing	118,356
Deyang	303,731
Dezhou	409,050
Diaobingshan	176,824
Dingzhou	218,575
Dongfang	106,903
Donggang	127,204
Dongguan	667,350
Dongtai	433,382
Dongyang	130,965
Dongying	628,428
Dujiangyan	169,588
Dunhua	265,263
Duyun	169,325
Emeishan	137,193
Enping	177,373
Enshi	194,597
Ezhou	369,619
Fangchenggang	135,706
Feicheng	224,202
Fengcheng (*Guangdong*)	178,659
Fengcheng (*Jiangxi*)	303,573
Fenghua	100,833
Foshan	3,544,802
Fu'an	161,715
Fuding	194,435
Fujin	180,494
Fuqing	194,669
Fushun	1,264,685
Fuxin	691,815
Fuyang (*Anhui*)	428,969
Fuyang (*Zhejiang*)	119,651
Fuzhou (*Fujian*)	1,457,626
Fuzhou (*Jiangxi*)	301,516
Gaizhou	180,093
Ganzhou	361,913
Gao'an	182,600
Gaobeidian	119,305
Gaomi	242,814
Gaoyao	107,541
Gaoyou	213,257
Gaozhou	477,258
Gejiu	216,476
Genhe	167,133
Gongyi	149,368
Gongzhuling	333,997
Guang'an	211,990
Guanghan	135,286
Guangshui	159,882
Guangyuan	300,669
Guangzhou (Canton)	6,172,839
Guigang	241,205
Guilin	573,828
Guiping	165,318
Guixi	118,138
Guiyang	1,475,927
Gujiao	135,580
Haicheng	289,645
Haikou	864,879
Hailin	261,250
Hailun	168,241
Haimen	176,688
Haining	223,418
Haiyang	203,012
Hami	284,336
Hancheng	126,508
Hanchuan	210,611
Handan	1,221,916
Hangzhou	2,455,584
Hanzhong	247,119
Haocheng	204,732
Harbin	3,075,326
Hebi	349,719
Hechi	113,679
Hechuan	279,068
Hefei	1,502,782
Hegang	611,852
Heihe	134,925
Helong	129,386
Hengshui	256,039
Hengyang	677,157
Heshan	150,077
Heyuan	290,515
Heze	678,852
Hezhou	152,664
Hohhot	825,911
Honghu	175,784
Hongjiang	126,420
Hotan	108,346
Houma	122,717
Huadian	204,069
Huai'an	1,113,658
Huaibei	674,224
Huaihua	235,946
Huainan	932,210
Huanggang	371,918
Huanghua	131,422
Huangshan	182,252
Huangshi	627,976
Huazhou	245,549
Huichun	145,968
Huixian	495,743
Huizhou	1,144,654
Hulin	190,313
Huludao	509,989
Huozhou	109,769
Huzhou	401,586
Jiamusi	599,275
Ji'an (*Jiangxi*)	233,062
Jiande	122,618
Jiangdu	316,194
Jiangjin	373,233
Jiangmen	1,338,280
Jiangyan	270,508
Jiangyin	484,088
Jiangyou	239,267
Jian'ou	159,533
Jianyang (*Fujian*)	121,060
Jianyang (*Sichuan*)	195,231
Jiaohe	176,182
Jiaonan	367,838
Jiaozhou	282,820
Jiaozuo	637,722
Jiaxing	363,201
Jiayuguan	152,067
Jieshou	109,103
Jiexiu	104,691
Jieyang	666,079
Jilin	1,263,884
Jimo	429,357
Jinan	2,726,435
Jinchang	149,664
Jincheng	242,177
Jingdezhen	357,211
Jinghong	153,880
Jingjiang	281,291
Jingmen	363,060

Major cities and national capitals (continued)

country city	population
Jingzhou	636,801
Jinhua	313,574
Jining (*Inner Mongolia*)	235,985
Jining (*Shandong*)	542,390
Jinjiang	365,341
Jinshi	143,129
Jintan	231,891
Jinzhong	280,520
Jinzhou	721,515
Jishou	145,965
Jiujiang	462,766
Jiuquan	148,825
Jiutai	184,083
Jixi	740,470
Jiyuan	195,329
Jurong	199,411
Kaifeng	591,303
Kaili	171,050
Kaiping	250,314
Kaiyuan (*Liaoning*)	140,410
Kaiyuan (*Yunnan*)	108,680
Karamay	248,797
Kashgar (Kashi)	246,524
Korla	278,682
Kuitun	280,325
Kunming	1,700,210
Kunshan	364,771
Laibin	158,094
Laiwu	494,638
Laixi	311,493
Laiyang	295,036
Laizhou	374,670
Langfang	445,234
Langzhong	183,080
Lanxi	118,983
Lanzhou	1,708,168
Laohekou	290,909
Lechang	256,361
Leiyang	191,760
Leizhou	291,232
Leling	171,068
Lengshuijiang	249,478
Leping	180,408
Leqing	118,805
Leshan	440,545
Lhasa	156,096
Lianjiang	348,528
Lianyuan	159,296
Lianyungang	594,504
Liaocheng	588,956
Liaoyang	597,386
Liaoyuan	387,813
Liling	159,015
Lin'an	105,907
Linfen	341,543
Lingbao	118,137
Lingwu	110,344
Lingyuan	148,960
Linhai	144,095
Linhe	242,918
Linjiang	114,067
Linqing	293,078
Linxia	111,810
Linxiang	118,541
Linyi	1,389,193
Linzhou	164,221
Lishui	126,857
Liu'an	322,505
Liupanshui	420,414
Liuyang	143,881
Liuzhou	871,634
Liyang	269,881
Longhai	144,552
Longjing	141,025
Longkou	298,836
Longyan	305,289
Loudi	420,793
Lufeng	630,220
Luoding	369,735
Luohe	436,325
Luoyang	1,065,137
Luzhou	443,988
Ma'anshan	494,259
Macheng	279,728
Manzhouli	160,003
Maoming	1,213,554
Meihekou	261,024
Meishan	275,736
Meizhou	307,352
Mianyang	593,745
Mianzhu	105,257
Miluo	533,030
Mingguang	113,114
Mishan	185,421
Mudanjiang	649,244
Muling	134,450
Nan'an	376,038
Nanchang	1,613,244
Nanchong	575,520
Nanjing (Nanking)	4,105,366
Nankang	122,275
Nanning	1,277,300
Nanping	263,564
Nantong	853,309
Nanyang	527,638
Nehe	134,327
Neijiang	340,533
Ning'an	145,153
Ningbao	1,214,361
Ningde	118,326
Ordos	162,317
Panjin	519,103
Panshi	174,937
Panzhihua	524,505
Penglai	171,433
Pengzhou	188,787
Pingdingshan	727,576
Pingdu	423,536
Pinghu	154,957
Pingliang	148,844
Pingxiang	416,036
Pizhou	422,364
Pulandian	217,005
Puning	636,665
Putian	397,965
Puyang	386,847
Qian'an	105,566
Qianjiang	300,077
Qidong	187,285
Qingdao	2,654,340
Qingyuan	544,389
Qingzhen	109,808
Qingzhou	300,477
Qinhuangdao	776,320
Qinzhou	196,687
Qionghai	140,757
Qionglai	191,590
Qiqihar (Tsitsihar)	1,115,061
Qitaihe	352,274
Qixia	152,530
Quanzhou	611,078
Quhu	189,938
Qujing	239,050
Quzhou	194,700
Renqiu	285,306
Rizhao	580,395
Rongcheng	318,841
Rugao	428,445
Rui'an	191,197
Ruichang	102,928
Ruijin	107,263
Rushan	156,901
Ruzhou	109,693
Sanhe	153,692
Sanmenxia	220,533
Sanming	211,055
Sanya	256,169
Shanghai	11,283,714
Shangluo	155,907
Shangqiu	848,548
Shangrao	202,606
Shangyu	193,603
Shangzhi	251,570
Shantou	4,840,520
Shanwei	464,857
Shaoguan	907,139
Shaowu	133,965
Shaoxing	459,022
Shaoyang	375,370
Shengzhou	137,737
Shenyang	4,101,197
Shenzhen	1,819,322
Shihezi	513,559
Shijiazhuang	2,241,451
Shishi	111,591
Shishou	140,472
Shiyan	467,641
Shizuishan	350,577
Shouguang	480,336
Shuangcheng	169,972
Shuangliao	169,096
Shuangyashan	453,427
Shulan	199,954
Shuozhou	172,979
Sihui	140,339
Siping	544,052
Songyuan	319,212
Songzi	145,358
Suihua	288,371
Suining	347,642
Suizhou	323,847
Suqian	1,091,692
Suzhou (*Anhui*)	382,043
Suzhou (*Jiangsu*)	1,416,234
Tacheng	102,315
Tai'an	698,165
Taicang	197,954
Taishan	272,125
Taixing	384,741
Taiyuan	2,162,014
Taizhou (*Jiangsu*)	587,903
Taizhou (*Zhejiang*)	295,293
Tangshan	1,658,162
Taonan	156,529
Tengzhou	370,233
Tianchang	154,800
Tianjin (Tientsin)	5,332,140
Tianmen	227,090
Tianshui	590,347
Tieli	279,452
Tieling	342,492
Tongcheng	103,618
Tongchuan	385,874
Tonghua	397,373
Tongliao	432,834
Tongling	352,239
Tongren	123,000
Tongxiang	148,422
Tongzhou	410,215
Tumen	105,948
Ulanhot	222,120
Ürümqi	1,504,252
Wafangdian	328,609
Weifang	975,298
Weihai	452,163
Weihui	118,583
Weinan	250,162
Wenchang	117,529
Wendeng	249,530
Wenling	181,915
Wenzhou	633,577
Wuchang	235,005
Wuchuan	289,546
Wudalianchi	204,287
Wuhai	431,062
Wuhan	8,001,541
Wuhu	727,872
Wujiang	282,979
Wuwei	207,358
Wuxi	2,095,304
Wuxue	242,773
Wuzhong	166,667
Wuzhou	281,459
Xiamen (Amoy)	961,758
Xi'an (Sian)	3,094,267
Xiangcheng	187,748
Xiangfan	945,883
Xiangtan	576,399
Xiangxiang	120,411
Xianning	246,290
Xiantao	406,881
Xianyang	591,067
Xiaogan	893,043
Xiaoyi	191,622
Xichang	195,291
Xilinhot	133,966
Xingcheng	130,735
Xinghua	315,555
Xingning	317,541
Xingping	117,709
Xingtai	563,575
Xingyang	110,403
Xingyi	131,526
Xining	692,472
Xinji	201,055
Xinle	117,333
Xinmi	180,917
Xinmin	140,652
Xintai	393,179
Xinxiang	694,874
Xinyang	439,411
Xinyi (*Guangdong*)	343,557
Xinyi (*Jiangsu*)	203,318
Xinyu	311,911
Xinzheng	164,933
Xinzhou	178,576
Xuancheng	158,852
Xuanwei	135,515
Xuchang	391,592
Xuzhou	1,536,501
Ya'an	141,612
Yakeshi	373,618
Yan'an	196,049
Yancheng	765,388
Yangchun	222,727
Yangjiang	634,958
Yangquan	515,913
Yangzhou	790,596
Yanji	374,350
Yantai	1,258,082
Yanzhou	194,747
Yibin	343,888
Yichang	694,635
Yicheng	228,046
Yichun (*Heilongjiang*)	786,418
Yichun (*Jiangxi*)	248,608
Yidu	114,784
Yima	128,165
Yinchuan	663,655
Yingcheng	267,803
Yingde	215,272
Yingkou	651,479
Yingtan	132,394
Yining	285,809
Yiwu	203,884
Yixing	576,716
Yiyang	333,667
Yizheng	207,820
Yizhou	103,316
Yong'an	172,056
Yongcheng	174,616
Yongchuan	268,924
Yongzhou	287,382
Yuanjiang	145,554
Yuanping	118,418
Yucheng	164,893
Yueyang	855,823
Yulin (*Guangxi*)	209,299
Yulin (*Shaanxi*)	157,510
Yuncheng	211,913
Yunfu	284,710
Yushu	189,095
Yuxi	135,105
Yuyao	169,255
Yuzhou	189,469
Zaoyang	351,838
Zaozhuang	762,948
Zengcheng	317,008
Zhalantun	165,999
Zhangjiagang	396,375
Zhangjiajie	121,289
Zhangjiakou	719,798
Zhangqiu	264,007
Zhangshu	154,944
Zhangye	179,269
Zhangzhou	338,205
Zhanjiang	1,433,366
Zhaodong	279,327
Zhaoqing	483,933
Zhaotong	114,884
Zhaoyuan	197,464
Zhengzhou	1,883,232
Zhenjiang	594,310
Zhijiang	134,729
Zhongshan	721,082
Zhongwei	128,084
Zhongxiang	214,682
Zhoukou	231,563
Zhoushan	266,665
Zhuanghe	182,082
Zhucheng	362,201
Zhuhai	895,994
Zhuji	146,566
Zhumadian	248,580
Zhuozhou	187,142
Zhuzhou	602,625
Zibo	1,426,551
Zigong	596,938
Zixing	127,588
Ziyang	184,976
Zoucheng	389,027
Zunyi	411,829
Colombia (2007, MU)	
Apartado	122,228
Armenia	278,695
Barrancabermeja	171,499
Barranquilla	1,144,470
Bello	370,832
★ Bogotá	7,033,914
Bucaramanga	514,596
Buenaventura	304,206
Cali	2,139,535
Cartagena	871,342
Cartago	122,721
Cúcuta	582,332
Dos Quebradas	175,453
Envigado	174,828
Facatativá	101,523
Florencia	125,382
Floridablanca	251,808
Girón	125,497
Ibagué	481,790
Itagüí	216,752
Manizales	358,488
Medellín	2,248,912
Montería	299,715
Neiva	305,345
Palmira	233,267
Pasto	321,435
Pereira	379,589
Popayán	230,542
Quibdó	108,515
Riohacha	139,783
Santa Marta	407,093
Sincelejo	229,852
Soacha	425,648
Soledad	502,736
Tuluá	166,223
Tunja	152,197
Valledupar	315,396
Villavicencio	378,668
Comoros (2007 est.)	
★ Moroni	46,000
Congo, Dem. Rep. of the (2004 est.; MU)	
Bandundu	117,197
Boma	171,552
Bukavu	471,789
Bunia	230,625
Butembo	165,333
Gandajika	120,170
Gemena	113,879
Goma	249,862
Isiro	147,524
Kabinda	126,723
Kamina	115,626
Kananga	720,362[7]
Kikwit	294,210
★ Kinshasa	7,273,947[7]
Kisangani	682,599
Kolwezi	456,446
Likasi	367,219
Lubumbashi	1,283,380[7]
Matadi	245,862
Mbanadaka	262,814
Mbuji-Mayi	1,213,726[7]
Mwene-Ditu	170,786
Tshikapa	366,503
Uvira	235,136
Congo, Rep. of the (2005 est.)	
★ Brazzaville	1,355,000[4]
Dolisie	106,262
Pointe-Noire	663,359
Costa Rica (2006 est.)	
★ San José	346,799[8]
Côte d'Ivoire (1998)	
★ Abidjan	3,802,000[4]
Bouaké	461,618
Daloa	173,107
Korhogo	142,093
Man	116,657
San Pédro	131,800
Yamoussoukro	110,013
Croatia (2001)	
Rijeka	143,800
Split	175,140
★ Zagreb	690,000[4]
Cuba (2006 est.)	
Bayamo	144,664
Camaguey	301,574
Ciego de Avila	106,225
Cienfuegos	140,734
Guantánamo	208,145
★ Havana	2,201,610
Holguín	269,618
Las Tunas	143,582
Matanzas	127,287
Pinar del Río	139,336
Santa Clara	210,220
Santiago de Cuba	423,392
Cyprus (2006 est.)	
★ Lefkosia (Nicosia)	47,832[9]
agglomeration	228,400[9]
Czech Republic (2008 est.)	
Brno	368,533
Olomouc	100,373
Ostrava	308,374
Plzeň	165,238
★ Prague	1,212,097
Denmark (2008 est.)	
Ålborg	100,873
Århus	237,551
★ Copenhagen	1,153,781
Odense	158,163
Djibouti (2006 est.)	
★ Djibouti	325,000
Dominica (2004 est.)	
★ Roseau	20,200
Dominican Republic (2004 est.)	
La Romana	171,500
La Vega	123,400
Puerto Plata	135,600
San Cristóbal	120,200

country city	population
San Francisco de Macoris	132,700
San Pedro de Macoris	152,600
Santiago	505,600
★ Santo Domingo	2,154,000[4]
East Timor (2004)	
★ Dili	151,026
Ecuador (2003)	
Ambato	169,103
Cuenca	303,994
Eloy Alfaro	183,731
Esmeraldas	103,063
Guayaquil	2,090,039
Ibarra	118,116
Loja	129,429
Machala	217,266
Manta	193,232
Milagro	119,420
Portoviejo	194,916
Quevedo	128,068
★ Quito	1,482,447
Riobamba	140,558
Santo Domingo	211,689
Egypt (2006)	
Abū Kabīr	103,175
Al-Ahrām	130,267
Akhmīm	101,509
Alexandria	4,084,672
Al-'Arīsh	137,944
Aswān	266,013
Asyūt	389,307
Banhā	157,701
Banī Suwayf	193,048
Bilbays	137,182
Būr Sa'īd (Port Said)	570,603
★ Cairo	6,758,581
Damanhūr	244,043
Disūq	106,827
Dumyāt	206,664
Al-Fayyūm	315,940
Al-Ghurdaqah	160,901
Hulwān	649,571
Al-Ismā'īlīyah	293,184
Jirjā	102,597
Al-Jīzah (Giza)	2,891,275
Kafr ad-Dawwar	114,030
Kafr ash-Shaykh	147,393
Al-Mahallah al-Kubrā	442,958
Mallawī	139,929
Al-Mansūrah	439,348
Marza	120,539
Al-Matarīyah	100,566
Al-Minyā	236,043
Mīt Ghamr	116,593
Qalyūb	107,303
Qinā	201,191
Sawhāj	190,132
Shibīn al-Kawm	177,112
Shubrā al-Khaymah	1,025,569
As-Suways (Suez)	500,000
Tantā	422,854
Al-Uqsur (Luxor)	202,232
Az-Zaqāzīq	302,840
El Salvador (2007; MU)	
Apopa	131,286[10]
Delgado	112,161[10]
Ilopango	103,862[10]
Mejicanos	140,751[10]
Nueva San Salvador	108,840
San Miguel	158,136
★ San Salvador	316,090
Santa Ana	204,340
Soyapango	241,403[10]
Equatorial Guinea (2007 est.)	
★ Malabo	96,000
Eritrea (2007 est.)	
★ Asmara	601,000
Estonia (2008 est.)	
★ Tallinn	397,617
Tartu	102,414
Ethiopia (2006 est.)	
★ Addis Ababa	3,100,000[4]
Awasa	125,300
Bahir Dar	167,300
Debre Zeyit	131,200
Dese	169,104
Dire Dawa	281,750
Gonder	194,773
Harer (Harar)	122,000
Jima	159,000
Mekele	169,200
Nazret	228,623
Faroe Islands (2008 est., MU)	
★ Tórshavn	12,342
Fiji (2007)	
★ Suva	173,137
Finland (2008 est.)	
Espoo	238,017
★ Helsinki	568,531
Oulu	131,585
Tampere	207,866
Turku	175,286
Vantaa	192,522
France (2005 est.)	
Aix-en-Provence	139,800
Amiens	136,300
Angers	152,700
Argenteuil	101,300
Besançon	115,400
Bordeaux	229,500[4]
Boulogne-Billancourt	109,400
Brest	145,200
Caen	109,200
Clermont-Ferrand	140,700
Dijon	150,800
Grenoble	156,600
Le Havre	183,600[4]
Le Mans	144,500
Lille	224,900[4]
Limoges	135,100
Lyon	467,400[4]
Marseille	826,700[4]
Metz	124,500
Montpellier	248,000[4]
Mulhouse	111,700
Nancy	105,400
Nantes	281,800[4]
Nice	346,900[4]
Nîmes	143,000
Orléans	113,500
★ Paris	2,166,200[4]
agglomeration	11,818,500
Perpignan	114,800
Reims	184,800[4]
Rennes	210,500[4]
Rouen	109,600
Saint-Étienne	175,700
Strasbourg	272,500[4]
Toulon	166,800
Toulouse	437,100[4]
Tours	136,600
Villeurbanne	134,500
French Guiana (2007 est.)	
★ Cayenne	63,000
French Polynesia (2008)	
★ Papeete	26,004
Gabon (2007 est.)	
★ Libreville	576,000
Gambia, The (2007 est.)	
★ Banjul	34,828[11]
agglomeration	406,000
Gaza Strip (2005 est.)	
★ Gaza (Ghazzah; acting administrative centre)	479,400
Jabālyah	168,600
Khān Yūnus	173,200
Rafah	126,300
Georgia (2007 est.)	
Bat'umi (Batumi)	121,806
K'ut'aisi (Kutaisi)	185,965
Rust'avi (Rustavi)	116,384
★ Tbilisi	1,073,345
Germany (2007 est.)	
Aachen	258,770
Augsburg	262,512
Bergisch Gladbach	105,587
★ Berlin	3,104,037
Bielefeld	325,846
Bochum	383,743
Bonn	314,299
Bottrop	118,975
Braunschweig	245,467
Bremen	547,934
Bremerhaven	116,045
Chemnitz	245,700
Cologne (Köln)	989,766
Cottbus	103,837
Darmstadt	141,257
Dortmund	587,624
Dresden	504,795
Duisburg	499,111
Düsseldorf	577,505
Erfurt	202,658
Erlangen	103,753
Essen	583,198
Frankfurt am Main	652,610
Freiburg im Breisgau	217,547
Furth	113,627
Gelsenkirchen	266,772
Gera	102,733
Göttingen	121,581
Hagen	195,671
Halle	235,720
Hamburg	1,754,182
Hamm	183,672
Hannover	516,343
Heidelberg	144,634
Heilbronn	121,384
Herne	169,991
Hildesheim	103,249
Ingolstadt	122,167
Karlsruhe	286,327
Kassel	193,518
Kiel	235,366
Koblenz	105,888
Krefeld	237,104
Leipzig	506,578
Leverkusen	161,336
Lübeck	211,213
Ludwigshafen	163,560
Magdeburg	229,826
Mainz	196,425
Mannheim	307,914
Moers	107,180
Monchengladbach	260,951
Mülheim an der Ruhr	169,414
Munich (Munchen)	1,294,608
Münster	272,106
Neuss	151,626
Nürnberg	500,855
Oberhausen	218,181
Offenbach am Main	117,564
Oldenburg	159,060
Osnabrück	163,020
Paderborn	144,258
Pforzheim	119,156
Potsdam	148,813
Recklinghausen	121,521
Regensburg	131,342
Remscheid	114,925
Reutlingen	112,431
Rostock	199,868
Saarbrücken	177,870
Salzgitter	106,665
Siegen	105,697
Solingen	162,948
Stuttgart	593,923
Trier	103,518
Ulm	120,925
Wiesbaden	275,562
Witten	100,248
Wolfsburg	120,493
Wuppertal	358,330
Würzburg	134,913
Ghana (2002 est.)	
★ Accra	2,121,000[4]
Kumasi	627,600
Obuasi	122,600
Tamale	269,200
Tema	237,700
Greece (2001)	
★ Athens	745,514
agglomeration	3,187,734
Iráklion	133,012
Kallithéa	109,609[12]
Larissa	124,786
Pátrai (Patras)	161,114
Peristérion	137,918[12]
Piraiévs (Piraeus)	175,697[12]
Thessaloniki	363,987
Greenland (2005 est.)	
★ Nuuk (Godthåb)	14,501
Grenada (2007 est.)	
★ Saint George's agglomeration	4,300[5] 32,000
Guadeloupe (2003 est.)	
★ Basse-Terre	12,900
Guam (2000)	
★ Hagåtña (Agana) agglomeration	1,122 149,000[4]
Guatemala (2002)	
★ Guatemala City	1,024,000[4]
Mixco	277,400
Quetzaltenango	106,700
Villa Nueva	187,700
Guernsey (2001)	
★ St. Peter Port	16,488
Guinea (2007 est.)	
★ Conakry	1,494,000
Kankan	113,900[5]
Guinea-Bissau (2007 est.)	
★ Bissau	330,000
Guyana (2002)	
★ Georgetown	35,440
Haiti (2003)	
Cap-Haïtien	111,094
★ Port-au-Prince	703,023
agglomeration	1,977,036
Honduras (2007 est.)	
Choloma	200,400
El Progresso	114,500
La Ceiba	162,200
San Pedro Sula	600,600
★ Tegucigalpa	944,400
Hong Kong (2006 est.)	
★ Hong Kong	2,019,533
Hungary (2008 est.)	
★ Budapest	1,702,297
Debrecen	205,084
Győr	128,808
Kecskemét	110,316
Miskolc	171,096
Nyíregyháza	116,874
Pécs	156,664
Szeged	167,039
Iceland (2008 est.)	
★ Reykjavik	117,988
India (2001)	
Abohar	124,339
Adilabad	109,529
Adityapur	119,233
Adoni	157,305
Agartala	189,998
Agra	1,275,134
Ahmadabad	3,520,085
Ahmadnagar	307,615
Aizawl	228,280
Ajmer	485,575
Akola	400,520
Alandur	146,287
Alappuzha (Alleppey)	177,029
Aligarh	669,087
Allahabad (Prayag Raj)	975,393
Alwar	260,593
Ambala	139,279
Ambala Sadar	106,568
Ambarnath	203,804
Ambattur	310,967
Amravati	549,510
Amritsar	966,862
Amroha	165,129
Anand	130,685
Anantapur	218,808
Ara (Arrah)	203,380
Asansol	475,439
Ashoknagar Kalyangarh	111,607
Aurangabad	873,311
Avadi	229,403
Bahadurgarh	119,846
Baharampur	160,143
Bahraich	168,323
Baidyabati	108,229
Baleshwar	106,082
Bally	260,906
Balurghat	135,737
Banda	134,839
Bangalore	4,301,326
Bankura	128,781
Bansberia	104,412
Baranagar (Barahanagar)	250,768
Barasat	231,521
Barddhaman (Burdwan)	285,602
Bareilly	718,395
Barrackpore (Barrackpur)	144,391
Barshi	104,785
Basirhat	113,159
Basti	107,601
Batala	125,677
Bathinda (Bhatinda)	217,256
Beawar	123,759
Belgaum	399,653
Bellary	316,766
Bettiah	116,670
Bhadravati	160,662
Bhadreswar	106,071
Bhagalpur	340,767
Bhalswa Jahangir Pur	152,339
Bharatpur	204,587
Bharuch (Broach)	148,140
Bhatpara	442,385
Bhavnagar	511,085
Bhilainagar	556,336
Bhilwara	280,128
Bhimavaram	137,409
Bhind	153,752
Bhiwandi	598,741
Bhiwani	169,531
Bhopal	1,437,354
Bhubaneshwar	648,032
Bhusawal	172,372
Bid (Bhir)	138,196
Bidar	172,877
Bidhan Nagar	164,221
Bihar Sharif (Bihar)	232,071
Bijapur	228,175
Bikaner	529,690
Bilaspur	275,694
Bokaro (Bokaro Steel City)	393,805
Bommanahalli	201,652
Brahmapur	307,792
Budaun	148,029
Bulandshahr	176,425
Burhanpur	193,725
Byatarayanapura	181,744
Champdani	103,246
Chandannagar	162,187
Chandigarh	808,515
Chandrapur	289,450
Chapra	179,190
Chennai (Madras)	4,343,645
Chhindwara	122,247
Chitradurga	122,702
Chittoor	152,654
Coimbatore	930,882
Cuddalore	158,634
Cuddapah	126,505
Cuttack	534,654
Dallo Pura	132,621
Damoh	112,185
Darbhanga	267,348
Darjiling	107,197
Dasarahalli	264,940
Davanagere	364,523
Dehra Dun	426,674
Dehri	119,057
Delhi	9,879,172
Delhi Cantonment	124,917
Deoli	119,468
Deoria	104,227
Dewas	231,672
Dhanbad	199,258
Dhule (Dhulia)	341,755
Dibrugarh	121,893
Dinapur Nizamat	131,176
Dindigul	196,955
Durg	232,517
Durgapur	493,405
Eluru	190,062
Erode	150,541
Etah	107,110
Etawah	210,453
Faizabad	144,705
Faridabad	1,055,938
Farrukhabad-cum-Fatehgarh	228,333
Fatehpur	152,078
Firozabad	279,102
Gadag-Betigeri	154,982
Gajuwaka	259,180
Gandhidham	151,693
Gandhinagar	195,985
Ganganagar	210,713
Gaya	385,432
Ghatlodiya	106,684
Ghaziabad	968,256
Godhra	121,879
Gonda	120,301
Gondia	120,902
Gorakhpur	622,701
Gudivada	113,054
Gulbarga	422,569
Guna	137,175
Guntakal	117,103
Guntur	514,461
Gurgaon	172,955

Major cities and national capitals (continued)

country city	population
Guwahati (Gauhati)	809,895
Gwalior	827,026
Habra	127,602
Hajipur	119,412
Haldia	170,673
Haldwani-cum-Kathgodam	129,015
Halisahar	124,510
Hanumangarh	129,556
Haora (Howrah)	1,007,532
Hapur	211,983
Hardoi	112,486
Haridwar (Hardwar)	175,340
Hassan	116,574
Hathras	123,244
Hazaribag	127,269
Hindupur	125,074
Hisar (Hissar)	256,689
Hoshiarpur	149,668
Hospet	164,240
Hubli-Dharwad	786,195
Hugli (Hooghly-Chinsurah)	170,206
Hyderabad	3,637,483
Ichalkaranji	257,610
Imphal	221,492
Indore	1,474,968
Ingraj Bazar (English Bazar)	161,456
Jabalpur	932,484
Jagadhri	101,290
Jaipur	2,322,575
Jalandhar (Jullundur)	714,077
Jalgaon	368,618
Jalna	235,795
Jalpaiguri	100,348
Jammu	369,959
Jamnagar	443,518
Jamshedpur	573,096
Jamuria	129,484
Jaunpur	160,055
Jetpur Navagadh	104,312
Jhansi	383,644
Jind	135,855
Jodhpur	851,051
Junagadh	168,515
Kaithal	117,285
Kakinada	296,329
Kalyan-Dombivali	1,193,512
Kamarhati	314,507
Kanchipuram	153,140
Kanchrapara	126,191
Kanpur	2,551,337
Kapra	159,002
Karawal Nagar	148,624
Karimnagar	205,653
Karnal	207,640
Katihar	175,199
Khammam	159,544
Khandwa	172,242
Kharagpur	188,761
Khardaha	116,470
Kirari Suleman Nagar	154,633
Kishangarh	116,222
Kochi (Cochin)	595,575
Kolar	113,907
Kolhapur	493,167
Kolkata (Calcutta)	4,580,546
Kollam (Quilon)	361,560
Korba	315,690
Kota	694,316
Kozhikode (Calicut)	436,556
Krishnanagar	139,110
Krishnarajapura	186,210
Kukatpalle	292,289
Kulti-Barakar (Kulti)	289,903
Kumbakonam	139,954
Kurnool	269,122
Lakhimpur	121,486
Lalbahadur Nagar (L.B. Nagar)	268,689
Lalitpur	111,892
Latur	299,985
Loni	120,945
Lucknow	2,185,927
Ludhiana	1,398,467
Machilipatnam (Masulipatam)	179,353
Madhyamgram	155,451
Madurai	928,869
Mahadevapura	135,794
Mahbubnagar	130,986
Maheshtala	385,266
Malegaon	409,403
Malerkotla	107,009
Malkajgiri	193,863
Mandsaur	116,505
Mandya	131,179
Mangalore	399,565
Mango	166,125
Mathura	302,770
Maunath Bhanjan	212,657
Medinipur (Midnapore)	149,769
Meerut	1,068,772
Mira-Bhayandar	520,388
Mirzapur-cum-Vindhyachal	205,053
Modinagar	113,218
Moga	125,573
Moradabad	641,583
Morena	150,959
Morvi	145,719
Motihari	100,683
Mumbai (Bombay)	11,978,450
Munger (Monghyr)	188,050
Murwara (Katni)	187,029
Muzaffarnagar	316,729
Muzaffarpur	305,525
Mysore	755,379
Nabadwip	115,016
Nadiad	192,913
Nagaon	107,667
Nagercoil	208,179
Nagpur	2,052,066
Naihati	215,303
Nala Sopara (Nalasopara)	184,538
Nalgonda	110,286
Nanded-Waghala	430,733
Nandyal	152,676
Nangloi Jat	150,948
Nashik (Nasik)	1,077,236
Navghar-Manikpur	116,723
Navi Mumbai (New Mumbai)	704,002
Navsari	134,017
Neemuch	107,663
Nellore	378,428
★ New Delhi	302,363
Neyveli	127,552
Nizamabad	288,722
Noida	305,058
North Barrackpore	123,668
North Dum Dum	220,042
Ongole	150,471
Orai	139,318
Ozhukarai	217,707
Palakkad	130,767
Palanpur	110,419
Pali	187,641
Pallavaram	144,623
Palwal	100,722
Panchkula	140,925
Panihati	348,438
Panipat	261,740
Panvel	104,058
Parbhani	259,329
Patan	112,219
Pathankot	157,925
Patiala	303,151
Patna	1,366,444
Pilibhit	124,245
Pimpri-Chinchwad	1,012,472
Pondicherry	220,865
Porbandar	133,051
Proddatur	150,309
Pudukkottai	109,217
Puna	119,092
Pune	2,538,473
Puri	157,837
Purnia (Purnea)	171,687
Puruliya	113,806
Puthbullapur	231,108
Rae Bareli	169,333
Raichur	207,421
Raiganj	165,212
Raigarh	111,154
Raipur	605,747
Raj Nandgaon	143,770
Rajahmundry	315,251
Rajapalaiyam	122,307
Rajarhat Gopalpur	271,811
Rajendranagar	143,240
Rajkot	967,476
Rajpur Sonarpur	336,707
Ramagundam	236,600
Rampur	281,494
Ranchi	847,093
Raniganj	111,116
Ratlam	222,202
Raurkela	224,987
Raurkela Township	206,693
Rewa	183,274
Rishra	113,305
Robertson Pet	141,424
Rohtak	286,807
S A S Nagar (Mohali)	123,484
Sagar	232,133
Saharanpur	455,754
Saharsa	125,167
Salem	696,760
Sambalpur	153,643
Sambhal	182,478
Sangli-Miraj	436,781
Santipur (Shantipur)	138,235
Sasaram	131,172
Satara	108,048
Satna	225,464
Secunderabad	206,102
Serampore	197,857
Serilingampalle	153,364
Shahjahanpur	296,662
Shambajinagar (Aurangabad)	873,311
Shiliguri (Siliguri)	472,374
Shillong	132,867
Shimla	142,555
Shimoga	274,352
Shivpuri	146,892
Sholapur (Solapur)	872,478
Sikandarabad (Secundarabad) Cantonment	206,102
Sikar	185,323
Silchar	142,199
Singrauli	185,190
Sirsa	160,735
Sitapur	151,908
Siwan	109,919
Sonipat (Sonepat)	214,974
South Dum Dum	392,444
Srikakulam	109,905
Srinagar	898,440
Sultan Pur Majra	164,426
Sultanpur	100,065
Surat	2,433,835
Surendranagar Dudhrej	156,161
Tambaram	137,933
Tenali	153,756
Thane (Thana)	1,262,551
Thanesar	119,687
Thanjavur	215,314
Thiruvananthapuram (Trivandrum)	744,983
Thoothukkudi (Tuticorin)	216,054
Thrissur (Trissur)	317,526
Tiruchchirappalli	752,066
Tirunelveli	411,831
Tirupati	228,202
Tirupper (Tiruppur)	344,543
Tiruvannamalai	130,567
Tiruvottiyur	212,281
Titagarh	124,213
Tonk	135,689
Tumkur	248,929
Udaipur	389,438
Udupi	113,112
Ujjain	430,427
Ulhasnagar	473,731
Uluberia	202,135
Unnao	144,662
Uppal Kalan	117,217
Uttarpara-Kotrung	150,363
Vadodara (Baroda)	1,306,227
Varanasi (Benares)	1,091,918
Vejalpur	113,445
Vellore	177,230
Veraval	141,357
Vidisha	125,453
Vijayawada	851,282
Virar	118,928
Vishakhapatnam	982,904
Vizianagaram	174,651
Warangal	530,636
Wardha	111,118
Yamunanagar	189,696
Yavatmal (Yeotmal)	120,676

Indonesia (2005 est., MU)[13]

city	population
Ambon	204,218
Balikpapan	440,552
Banda Aceh	284,000
Bandar Lampung	790,057
Bandung	2,288,570
Banjarbaru	145,929
Banjarmasin	576,413
Batam	587,227
Batu	113,052
Bekasi	1,940,308
Bengkulu	252,768
Binjai	222,299
Bitung	131,999
Blitar	126,776
Bogor	891,467
Bontang	118,405
Cilacap	206,928
Cilegon-Merak	276,820
Cimahi	546,879
Ciomas	187,379[14]
Ciparay	111,467[14]
Ciputat	363,489
Cirebon	308,771
Denpasar	574,610
Depok (*West Java*)	1,339,263
Depok (*Yogyakarta*)	106,825[14]
Dumai	140,032
Gorontalo	137,461
★ Jakarta	8,839,247
Jambi	409,202
Jayapura	164,220
Jember	218,529[14]
Karawang (Krawang)	145,041[14]
Kediri	248,640
Kendari	195,006
Kupang	230,784
Langsa	137,586
Lhokseumawe	154,634
Lubuklinggau	126,365
Madiun	171,390
Magelang	124,374
Malang	773,174
Manado	370,139
Mataram	342,896
Medan	2,029,797
Mojokerto	111,860
Padang	686,908
Padang Sidempuan	129,489
Palangkaraya	148,139
Palembang	1,323,169
Palu	251,844
Pangkalpinang	139,385
Pasuruan	166,519
Pekalongan	263,921
Pekanbaru	703,956
Pemalang	152,667
Pematang Siantar	229,525
Percut	129,036[14]
Pondokgede	263,152[14]
Pontianak	501,843
Probolinggo	168,734
Purwokerto	215,195
Salatiga	152,913
Samarinda	505,664
Semarang	1,352,869
Serang	171,200[15]
Singkawagang	113,656
Sorong	143,430
Sukabumi	280,373
Surabaya	2,611,506
Surakarta	506,397
Tangerang	1,451,595
Tanjung Balai	133,897
Tanjung Pinang	167,958
Tarakan	147,030
Tasikmalaya	456,278
Tebingtinggi	134,548
Tegal	238,676
Ternate	133,078
Ujung Pandang	1,168,258
Waru	124,282[14]
Yogyakarta	433,539

Iran (2006)

city	population
Abadan	219,772
Ahvaz	996,000[4]
Amol	199,698
Andimeshk	120,177
Arak	446,760
Ardabil	418,262
Babol	201,335
Bandar 'Abbas	379,301
Bandar-e-Anzali	110,643
Bandar-e Bushehr (Bushehr)	169,966
Bandar-e-Mahshahr	111,448
Birjand	166,138
Bojnurd	176,726
Borujerd	229,541
Bukan	150,703
Dezful	235,819
Emamshahr (Shahrud)	132,379
Esfahan (Isfahan)	1,628,000[4]
Golestan	231,905
Gonbad-e Kavus	129,167
Gorgan	274,438
Hamadan	479,640
Ilam	160,355
Iranshahr	100,642
Islamshahr (Eslamshahr)	357,389
Izeh	104,364
Jahrom	105,285
Karaj	1,423,000[4]
Kashan	253,509
Kerman	515,114
Kermanshah (Bakhtaran)	794,863
Khomeynishahr	223,071
Khorramabad	333,945
Khorramshahr	125,859
Khvoy (Khoy)	181,465
Mahabad	135,780
Malard	228,713
Malayer	156,289
Mandoab	114,153
Maragheh	149,929
Marv Dasht	124,530
Mashhad (Meshed)	2,469,000[4]
Masjed-e Soleyman	108,682
Najafabad	208,647
Neyshabur	208,860
Orumiyeh	583,255
Qa'emshahr	174,768
Qarchak	174,006
Qazvin	355,338
Qods	230,147
Qom	973,000[4]
Rasht	557,366
Sabzevar	214,582
Sanandaj	316,862
Saqqez	133,331
Sari	261,293
Saveh	180,548
Semnan	126,780
Shahinshahr	127,412
Shahr-e Kord	131,612
Shahreza	109,601
Shahriyar	189,421
Shahrud	132,379
Shiraz	1,240,000[4]
Sirjan	170,916
Tabriz	1,413,000[4]
★ Tehran	7,873,000[4]
Varamin	208,996
Yazd	432,194
Yazuj	100,544
Zabol	136,956
Zahedan	567,449
Zanjan	349,713

Iraq (2003 est.)

city	population
Al-'Amarah	325,000
★ Baghdad	5,054,000[4]
Ba'qubah	160,000
Al-Basrah	890,000
Diwaniyah	300,000
Al-Fallujah	284,500[5]
Al-Hillah	350,000
Irbil	926,000
Karbala'	475,000
Karkuk	750,000
Al-Kufah	123,500[5]
Al-Kut	300,000
Mosul	1,316,000
An-Najaf	500,000
An-Nasiriyah	400,000
Ar-Ramadi	300,000
Samarra	125,000
As-Samawah	125,000
As-Sulaymaniyah	825,000
Tall 'Afar	167,800[5]
Az-Zubayr	180,900[5]

Ireland (2006)

city	population
Cork	119,418[16]
★ Dublin	506,211[16]
agglomeration	1,186,159

Isle of Man (2006)

city	population
★ Douglas	26,218

Israel (2008 est.)

city	population
Ashdod	207,000
Ashqelon	108,900
Bat Yam	129,100
Beersheba (Be'er Sheva')	186,100
Bene Beraq	151,000
Haifa (Hefa)	264,900
Holon	168,800
★ Jerusalem (Yerushalayim, Al-Quds)	747,600
Netanya	176,500
Petah Tiqwa	188,900
Ramat Gan	129,900
Rehovot	106,200
Rishon LeZiyyon	224,300
Tel Aviv–Yafo	390,100

Italy (2008 est.)

city	population
Ancona	101,424
Bari	322,511
Bergamo	115,781
Bologna	372,256
Brescia	189,742
Cagliari	158,041

country city	population
Catania	298,957
Ferrara	133,591
Florence (Firenze)	364,710
Foggia	153,469
Forlì	114,683
Genoa (Genova)	610,887
Giugliano in Campania	112,340
Latina	115,490
Livorno	160,949
Messina	243,997
Milan (Milano)	1,299,633
Modena	179,937
Monza	120,826
Naples (Napoli)	973,132
Novara	102,862
Padua (Padova)	210,173
Palermo	663,173
Parma	178,718
Perugia	163,287
Pescara	122,790
Prato	185,603
Ravenna	153,388
Reggio di Calabria	185,577
Reggio nell'Emilia	162,290
Rimini	138,465
★ Rome (Roma)	2,718,768
Salerno	140,580
Sassari	129,086
Syracuse (Siracusa)	123,595
Taranto	195,130
Terni	110,933
Trento	908,263
Trieste	112,637
Turin (Torino)	205,356
Venice (Venezia)	268,993
Verona	264,191
Vicenza	114,108
Jamaica (2006 est.)	
★ Kingston	96,052[17]
agglomeration	585,300
Portmore	103,900
Spanish Town	148,800
Japan (2008 est.)	
Abiko	133,533
Ageo	222,698
Aizuwakamatsu	129,388
Akashi	292,228
Akishima	111,763
Akita	327,651
Amagasaki	460,956
Anjō	176,046
Aomori	304,657
Asahikawa	356,318
Asaka	126,092
Ashikaga	157,793
Atsugi	225,732
Beppu	127,345
Chiba	943,568
Chigasaki	231,703
Chikusei	110,813
Chōfu	221,120
Daitō	125,847
Ebetsu	123,671
Ebina	126,035
Fuchu	250,745
Fuji	237,184
Fujieda	129,637
Fujimi	105,286
Fujimino	103,724
Fujinomiya	122,122
Fujisawa	404,239
Fukaya	146,128
Fukui	268,210
Fukuoka	1,434,650
Fukushima	288,602
Fukuyama	460,292
Funabashi	589,307
Gifu	411,753
Habikino	118,281
Hachinohe	240,178
Hachiōji	569,991
Hadano	169,201
Hakodate	288,155
Hakusan	110,563
Hamamatsu	811,553
Hanamaki	103,718
Handa	117,927
Hatsukaichi	115,184
Higashiomi	117,847
Higashi-Hiroshima	187,711
Higashi-Kurume	115,405
Higashi-Murayama	146,585
Higashi-Ōsaka	508,255
Hikone	110,945
Himeji	535,756
Hino	179,482
Hirakata	406,189
Hiratsuka	260,241
Hirosaki	185,865
Hiroshima	1,164,885
Hitachi	195,844
Hitachinaka	155,338
Hōfu	116,393
Ibaraki	272,153
Ichihara	279,478
Ichikawa	471,861
Ichinomiya	376,586
Ichinoseki	123,155
Iida	107,129
Iizuka	132,208
Ikeda	104,426
Ikoma	115,359
Imabari	170,986
Inazawa	137,475
Iruma	148,203
Isahaya	142,635
Ise	133,547
Isehara	100,779
Isesaki	204,343
Ishinomaki	163,840
Itami	194,488
Iwaki	348,403
Iwakuni	146,885
Iwata	172,583
Izumi	179,352
Izumo	146,115
Joetsu	206,175
Kadoma	130,026
Kagoshima	604,268
Kakamigahara	145,126
Kakegawa	118,660
Kakogawa	267,455
Kamagaya	104,564
Kamakura	173,588
Kanazawa	455,952
Kanoya	105,673
Kanuma	103,690
Karatsu	129,194
Kariya	145,117
Kashihara	124,679
Kashiwa	391,210
Kasuga	107,845
Kasugai	300,399
Kasukabe	236,601
Kawachinagano	114,428
Kawagoe	336,625
Kawaguchi	495,250
Kawanishi	157,461
Kawasaki	1,385,003
Kirishima	127,726
Kiryu	124,892
Kisarazu	123,743
Kishiwada	200,058
Kita-Kyūshū	985,046
Kitami	127,338
Kobe	1,532,305
Kochi	345,418
Kodaira	185,829
Kofu	199,374
Koga	144,392
Koganei	115,116
Kokubunji	118,801
Komaki	149,060
Komatsu	109,285
Konan	100,064
Kōnosu	119,768
Koriyama	338,712
Koshigaya	319,435
Kumamoto	670,014
Kurashiki	471,876
Kure	245,188
Kurume	304,683
Kusatsu	123,512
Kushiro	190,890
Kuwana	140,816
Kyōto	1,468,065
Machida	415,325
Maebashi	317,167
Marugame	110,550
Matsubara	125,274
Matsudo	479,888
Matsue	195,875
Matsumoto	227,042
Matsuyama	514,771
Matsuzaka	169,571
Mihara	103,209
Minōh	127,757
Misato	128,956
Mishima	112,320
Mitaka	180,797
Mito	263,299
Miyakonojō	169,384
Miyazaki	368,984
Moriguchi	146,294
Morioka	298,959
Musashino	138,516
Nagano	377,328
Nagaoka	280,292
Nagareyama	156,686
Nagasaki	446,551
Nagoya	2,243,564
Naha	313,436
Nara	366,863
Narashino	159,758
Narita	124,773
Nasushiobara	115,633
Neyagawa	238,822
Niigata	811,613
Niihama	123,329
Niiza	155,926
Nishinomiya	477,844
Nishio	106,643
Nishitokyo	193,350
Nobeoka	132,480
Noda	153,422
Numazu	206,137
Obihiro	170,066
Odawara	198,841
Ōgaki	163,047
Ōita	467,617
Okayama	700,646
Okazaki	372,089
Okinawa	128,421
Ōme	141,708
Ōmuta	127,474
Onomichi	148,085
Ōsaka	2,649,601
Osaki	137,164
Oshū	128,273
Ōta	214,282
Otaru	138,876
Ōtsu	330,044
Oyama	162,283
Saga	239,003
Sagamihara	707,976
Saijo	112,543
Saitama	1,197,471
Sakai	835,202
Sakata	114,964
Sakura	171,472
Sanda	113,600
Sano	123,034
Sapporo	1,896,604
Sasebo	253,874
Sayama	156,634
Sendai	1,029,576
Seto	132,311
Shibata	103,490
Shimonoseki	284,981
Shizuoka	709,888
Shunan	150,299
Sōka	238,626
Suita	354,864
Suzuka	197,437
Tachikawa	175,639
Tajimi	114,866
Takamatsu	417,671
Takaoka	178,965
Takarazuka	222,713
Takasaki	342,046
Takatsuki	354,257
Tama	149,404
Toda	118,591
Tōkai	106,708
Tokorozawa	338,896
Tokushima	265,248
★ Tokyo	8,717,529
Tomakomai	173,986
Tondabayashi	122,205
Toride	109,953
Tottori	200,315
Toyama	420,584
Toyohashi	376,716
Toyokawa	161,595
Toyonaka	388,043
Toyota	421,820
Tsu	287,849
Tsuchiura	143,986
Tsukuba	206,679
Tsuruoka	140,097
Tsuyama	109,493
Ube	176,370
Ueda	161,887
Uji	191,297
Urasoe	108,052
Urayasu	159,312
Uruma	114,087
Utsunomiya	508,114
Wakayama	371,504
Yachiyo	184,655
Yaizu	120,331
Yamagata	254,724
Yamaguchi	192,008
Yamato	223,605
Yao	272,163
Yatsushiro	134,491
Yokkaichi	306,374
Yokohama	3,643,641
Yokosuka	422,572
Yonago	149,140
Zama	127,582
Jersey (2001)	
★ St Helier	28,310
Jordan (2004)	
★ Amman	1,036,330
Irbid	250,645
Al-Ouwaysimah	135,500
Ar-Rusayfah	227,735
Wādī as-Sir	122,032
Az-Zarqā'	395,227
Kazakhstan (2008 est.)	
Almaty (Alma-Ata)	1,247,896
Aqtaū (Aktau, Shevchenko)	165,931
Aqtobe (Aktyubinsk)	258,014
★ Astana (Aqmola, Tselinograd)	550,438
Atyraū (Guryev)	175,737
Ekibastuz	132,455
Kökshetaū (Kokchetav)	129,885
Oral (Uralsk)	230,070
Öskemen (Ust-Kamenogorsk)	288,509
Pavlodar	304,809
Petropavl (Petropavlovsk)	190,092
Qaraghandy (Karaganda)	446,139
Oostanay (Kustanay)	207,802
Oyzylord (Kzyl-Orda)	183,716
Rudny	120,006
Semey (Semipalatinsk)	281,814
Shymkent (Shimkent, Chimkent)	526,140
Taldykorgan (Taldy-Kurgan	106,900
Taraz (Auliye-Ata, Dzhambul)	336,057
Temirtaū	170,667
Kenya (2006 est.)	
Eldoret	227,800
Kisumu	220,000
Mombasa	823,500
★ Nairobi	2,864,700
Nakuru	266,500
Ruiru	120,900
Thika	102,300
Kiribati (2005)	
★ Ambo (legislative)	1,688
★ Bairiki (executive, agglomeration)	2,766
★ Betio (judicial)	12,509
Korea, North (2005 est.)	
Anju	186,000[18]
Ch'ŏngjin	582,480[19]
Haeju	273,600
Hamhŭng-Hungnam	804,000
Hŭich'ŏn	163,000[18]
Hyesan	178,020[19]
Kaesŏng	334,433[19]
Kanggye	262,600
Kimch'aek (Songjin)	179,000[18]
Kusŏng	177,000[18]
Namp'o	1,102,000
P'yŏngsŏng	320,800[11]
★ P'yŏngyang	3,351,000
Sariwŏn	298,700[20]
Sinp'o	158,000[18]
Sinŭiju	326,011[20]
Sunch'ŏn	356,000[18]
Tanch'ŏn	284,000[18]
Tŏkch'ŏn	217,000[18]
Wŏnsan	358,300
Korea, South (2007 est.)	
Andong	169,239
Ansan	734,713
Ansŏng	168,446
Anyang	630,688
Asan	227,815
Ch'angwŏn	510,120
Chech'ŏn	137,545
Cheju (Jeju)	408,364
Chinhae	165,252
Chinju	333,256
Ch'ŏnan	540,742
Ch'ŏngju	638,384
Chŏng-üp	125,524
Chŏnju	627,339
Ch'unch'ŏn	260,439
Ch'ungju	207,036
Hanam	139,002
Hwasŏng	392,832
Ich'ŏn	198,790
Iksan (Iri)	316,911
Inch'ŏn (Incheon)	2,710,040
Kangnŭng	222,100
Kimch'ŏn	140,564
Kimhae	475,093
Kimp'o	216,931
Kŏje	213,638
Kongju	128,573
Koyang	935,643
Kumi	396,884
Kunp'o	279,536
Kunsan	263,213
Kuri	198,238
Kwangju (*Gwangju*)	1,423,460
Kwangju (*Kyŏnggi*)	238,044
Kwangmyŏng	316,354
Kwangyang	139,735
Kyŏngju	276,877
Kyŏngsan	242,744
Masan	419,251
Miryang	112,451
Mokp'o	244,801
Namyangju	497,941
Nonsan	131,365
Osan	148,580
P'aju	311,625
Pocheon	166,383
P'ohang	508,684
Puch'ŏn	876,569
Pusan (Busan)	3,615,101
P'yŏngt'aek	412,757
Sach'ŏn	113,716
Sangju	107,266
★ Seoul (Sŏul)	10,421,782
Shihŭng	405,428
Sŏgwip'o	155,024
Sŏngnam	968,203
Sŏsan	155,185
Sunch'ŏn	271,781
Suwŏn	1,086,995
Taegu	2,512,670
Taejŏn	1,487,836
Tongyŏng	136,047
Ŭijŏngbu	425,693
Uiwang	136,264
Ulsan	1,112,799
Wŏnju	301,101
Yangju	187,308
Yangsan	235,299
Yŏngch'ŏn	107,701
Yongin	813,653
Yŏngju	116,062
Yŏsu	257,196
Kosovo (2004 est.)	
★ Priština	107,614
Prizren	165,844
Kuwait (2005)	
Hawalli	106,992
★ Kuwait (Al-Kuwayt)	32,403
agglomeration	1,810,000
Oalib ash-Shuyūkh	179,264
As-Sālimīyah	145,328
Kyrgyzstan (2006 est.)	
★ Bishkek	839,600
Osh	224,300
Laos (2003 est.)	
★ Vientiane (Viangchan)	194,200
agglomeration	716,000
Latvia (2008 est.)	
Daugavpils	105,958
★ Riga	717,371
Lebanon (2003 est.)	
★ Beirut (Bayrūt)	1,171,000
Sidon	149,000
Tripoli (Tarābulus)	212,900
Tyre (Sūr)	117,100
Lesotho (2007 est.)	
★ Maseru	210,000
Liberia (2008)	
★ Monrovia	1,010,970
Libya (2005 est., MU)	
Banghāzī	685,367
Misrātah	354,823
★ Tripoli (Tarābulus)	1,113,000
agglomeration	2,189,000[4]
Liechtenstein (2008 est.)	
★ Vaduz	5,109

Major cities and national capitals (continued)

country city	population
Lithuania (2008 est.)	
Kaunas	355,586
Klaipeda	184,657
Panevežys	113,653
Šiauliai	127,059
★ Vilnius	544,206
Luxembourg (2008 est.)	
★ Luxembourg	85,467
Macau (2006)	
★ Macau	502,133
Macedonia (2004 est., MU)	
Kumanovo	105,484
★ Skopje (Skopije)	506,926
Madagascar (2001 est.)	
★ Antananarivo	1,697,000[4]
Antsirabe	160,356
Fianarantsoa	144,225
Mahajanga	135,660
Toamasina	179,045
Toliara	101,661
Malawi (2008)	
★ Blantyre (judicial)	661,444
★ Lilongwe (executive, legislative)	669,021
Mzuzu	128,432
Malaysia (2000)	
Alor Setar	186,433
George Town (Pinang)	181,380
Ipoh	536,832
Johor Bahru	642,944
Klang	626,699
Kluang	134,150
Kota Baharu	251,801
Kota Kinabalu	306,920
★ Kuala Lumpur	1,305,792
Kuala Terengganu	255,109
Kuantan	288,727
Kuching	422,240
Miri	169,005
Petaling Jaya	432,619
★ Putrajaya (partly completed in 2007)	.
Sandakan	276,791
Selayang Baru	174,628
Seremban	290,709
Shah Alam	314,440
Sibu	167,427
Sungai Petani	174,962
Taiping	199,489
Tawau	213,745
Maldives (2006)	
★ Male	103,693
Mali (2007 est.)	
★ Bamako	1,494,000
Sikasso	113,803[20]
Malta (2008 est.)	
★ Valletta agglomeration	6,319 81,204
Marshall Is. (2004 est.)	
★ Majuro	20,800
Martinique (2007 est.; MU)	
★ Fort-de-France	93,000
Mauritania (2007 est.)	
★ Nouakchott	673,000
Mauritius (2006 est.)	
Beau Bassin–Rose Hill	109,182
★ Port Louis	148,878
Vacoas-Phoenix	106,255
Mayotte (2007, MU)	
★ Mamoudzou	53,022
Mexico (2005)	
Acapulco	616,394
Aguascalientes	663,671
Atizapán de Zaragoza (Ciudad López Mateos)	471,904
Boca del Rio	129,416
Buenavista	198,404
Campeche	211,671
Cancún	526,701
Celaya	310,413
Chalco	144,311
Chetumal	136,825
Chicoloapan de Juárez	168,591
Chihuahua	748,518
Chilpancingo	166,796
Chimalhuacan	524,223
Ciudad Acuña (Acuña)	124,232
Ciudad Apodaca (Apodaca)	393,195
Ciudad del Carmen	154,197
Ciudad Madero	193,045
Ciudad Obregón	270,992
Ciudad Santa Catarina (Santa Catarina)	259,202
Ciudad Valles	116,261
Ciudad Victoria (Victoria)	278,455
Coacalco	285,822
Coatzacoalcos	234,174
Colima	123,597
Córdoba	136,237
Cuautitlan Izcalli	477,872
Cuautla Morelos	145,482
Cuernavaca	332,197
Culiacán	605,304
Durango	463,830
Ecatepec (de Morelos)	1,687,549
Ensenada	260,075
Fresnillo	110,892
General Escobedo	295,131
Gómez Palacio	239,842
Guadalajara	1,600,894
Guadalupe	691,434
Hermosillo	641,791
Heroica Nogales	189,579
Huixquilucan	118,181
Iguala	110,390
Irapuato	342,561
Ixtapaluca	290,076
Jiutepec	153,704
Juárez (Ciudad Juarez)	1,301,452
La Paz	189,176
León	1,137,465
Los Mochis	231,977
Los Reyes la Paz	232,211
Manzanillo	110,728
Matamoros	422,711
Mazatlán	352,471
Mérida	734,153
Metepec	164,182
Mexicali	653,046
★ Mexico City	8,463,906
Minatitlan	109,791
Monclova	198,819
Monterrey	1,133,070
Morelia	608,049
Naucalpan	792,226
Nezahualcoyotl	1,136,300
Nicolas Romero	242,798
Nuevo Laredo	348,387
Oaxaca	258,008
Orizaba	117,273
Pachuca	267,751
Piedras Negras	142,011
Playa del Carmen	100,383
Poza Rica de Hidalgo	181,438
Puebla	1,399,519
Puerta Vallarta	177,830
Queretaro	596,450
Reynosa	507,998
Salamanca	143,838
Saltillo	633,667
San Cristóbal de las Casas	142,364
San Francisco Coacalco	285,822
San Juan del Rio	120,984
San Luis Potosí	685,934
San Luis Rio Colorado	138,796
San Nicolás de los Garzas	476,751
San Pablo de las Salinas	160,432
San Pedro Garza Garcia	121,977
Soledad de Graciano Sanchez	215,958
Tampico	303,635
Tapachula	189,991
Tehuacán	238,229
Tepic	295,204
Tijuana	1,286,187
Tlalnepantla	674,417
Tlaquepaque	542,051
Toluca	467,712
Tonala	374,258
Torreón	548,723
Tuxtla Gutiérrez	490,455
Uruapan	238,975
Veracruz	444,438
Villahermosa	335,778
Xalapa (Jalapa Enriquez)	387,879
Xico (Valle de Chalco)	331,321
Zacatecas	122,889
Zamora de Hidalgo	127,606
Zapopan	1,026,492
Micronesia, Federated States of (2005 est., MU)	
★ Palikir	7,000
Moldova (2008 est.)	
Bălți (Beltsy)	122,200
★ Chișinău (Kishinyov)	630,300
Tiraspol	155,000
Monaco (2006 est.)	
★ Monaco	32,543
Mongolia (2008 est.)	
★ Ulaanbaatar (Ulan Bator)	1,031,200
Montenegro (2006 est.)	
★ Cetinje (capital)	18,482[5]
★ Podgorica (administrative centre)	173,000
Morocco (2004)	
Agadir	678,596
Beni-Mellal	163,286
Casablanca	2,933,684
El-Jadida	144,440
Fès	946,815
Kenitra	359,142
Khemisset	105,088
Khouribga	166,397
Ksar el-Kebir	107,380
Larache	107,371
Marrakech	823,154
Meknès	536,232
Mohammedia	188,619
Nador	126,207
Oujda	400,738
★ Rabat	1,622,860[21]
Safi	284,750
Tangier	669,685
Taza	139,686
Tetouan	320,539
Mozambique (2007)	
Beira	436,240
Chimoio	238,976
Lichinga	142,253
★ Maputo	1,099,102
Matola	675,422
Maxixe	105,895
Nacala	207,894
Nampula	477,900
Pemba	141,316
Quelimane	192,876
Tete	152,909
Xai-Xai	116,343
Myanmar (Burma) (2004 est.)	
Bassein (Pathein)	215,600
Henzada	122,700
Lashio	133,600
Mandalay	924,000[6]
Maymyo	113,900
Meiktila	161,000
Mergui	148,200
Monywa	163,400
Moulmein (Mawlamyine)	405,800
Myingyan	128,600
★ Naypyidaw (officially proclaimed capital March 27, 2006)	.
Pakokku	112,500
Pegu (Bago)	200,900
Pyay (Prome, Pye)	131,200
Sittwe (Akyab)	161,400
Taunggyi	151,400
Tavoy (Dawei)	139,900
Thaton	104,800
Yangôn (Rangoon)	4,107,000[6]
Namibia (2005 est.)	
★ Windhoek	289,000
Nauru (2002)	
★ Yaren	632
Nepal (2001, MU)	
Biratnagar	166,674
Birganj	112,484
★ Kathmandu	671,846
Lalitpur (Patan)	162,991
Pokhara	156,312
Netherlands, The (2008 est.)	
Almere	183,299
Amersfoort	141,202
★ Amsterdam (capital)	747,584
Apeldoorn	155,065
Arnhem	143,495
Breda	170,985
Dordrecht	118,250
Ede	107,722
Eindhoven	210,456
Emmen	109,196
Enschede	154,760
Groningen	182,954
Haarlem	147,595
Haarlemmermeer	140,698
Leiden	116,957
Maastricht	118,022
Nijmegen	161,226
Rotterdam	580,952
's-Hertogenbosch	136,407
★ The Hague (seat of government)	475,932
Tilburg	201,931
Utrecht	294,810
Zaanstad	142,759
Zoetermeer	119,584
Zwolle	116,265
Netherlands Antilles (2007 est.)	
★ Willemstad	120,000
New Caledonia (2004, MU)	
★ Nouméa	91,386
New Zealand (2007)[7]	
Auckland	1,294,000
Christchurch	378,700
Dunedin	118,683
Hamilton	194,800
Manukau	354,800
Napier	122,500
North Shore	220,200
Tauranga	114,500
Waitakere	198,400
★ Wellington	379,100
Nicaragua (2005)	
Chinandega	121,793
Esteli	112,084
León	174,051
★ Managua	937,489
Masaya	139,582
Matagalpa	133,416
Niger (2001)	
Maradi	148,017
★ Niamey	915,000[4]
Zinder	170,575
Nigeria (2005 est.)	
Aba	691,376
Abeokuta	487,567
★ Abuja	1,576,000[4]
Ado-Ekiti	215,799
Akure	330,526
Awka	144,696
Bauchi	285,485
Benin City	1,190,000[4]
Bida	153,768
Calabar	429,656
Damaturu	196,137
Ede	196,781
Effon-Alaiye	219,745
Enugu	563,619
Gboko	139,995
Gombe	226,141
Gusau	183,000
Ibadan	2,628,000[4]
Ife	258,281
Ijebu-Ode	171,831
Ikare	143,537
Ikire	154,031
Ikorodu	255,265
Ikot Ekpene	165,043
Ilawe-Ekiti	143,821
Ilesha	192,747
Ilorin	735,478
Ise	149,471
Iseyin	236,276
Iwo	173,672
Jimela	195,897
Jos	705,360
Kaduna	1,442,000[4]
Kano	3,140,000[4]
Katsina	358,437
Lagos	9,466,000[4]
agglomeration	11,100,000[4]
Maiduguri	854,613
Makurdi	209,431
Minna	261,509
Mubi	178,172
Nnewi	167,342
Ogbomosho	904,000
Okene	432,332
Okpogho	145,311
Ondo	201,878
Onitsha	484,173
Oshogbo	346,876
Owerri	165,470
Owo	217,263
Oyo	511,285
Port Harcourt	972,301
Sagamu	176,254
Sango Otta	142,830
Sapele	151,461
Sokoto	455,642
Suleja	145,240
Ugep	186,289
Umuahia	203,421
Warri	502,283
Zaria	846,290
Northern Mariana Is. (2000)	
★ Capital Hill (executive; legislative)	1,498
★ Saipan	62,392
★ Susupe (judicial)	2,083
Norway (2008 est.; MU)	
Bærum	108,144
Bergen	247,746
★ Oslo	560,484
Stavanger	117,586
Trondheim	165,191
Oman (2006 est.)	
Bawshar	174,023
'Ibri	105,996
Matrah	179,926
★ Muscat agglomeration	27,477 718,917
Salālah	171,333
As-Sīb	250,100
Şuhār	113,629
As-Suwayq	109,149
Pakistan (1998)	
Abbottabad	106,101[22]
Bahawalnagar	111,313
Bahawalpur	408,395[22]
Burewala	149,857
Chiniot	169,282
Dera Ghazi Khan	188,149
Faisalabad (Lyallpur)	2,617,000[4, 22]
Gojra	114,967
Gujranwala	1,513,000[4, 22]
Gujrat	251,792
Hafizabad	130,216
Hyderabad	1,459,000[4, 22]
★ Islamabad	780,000[4]
Jacobabad	137,773
Jhang Sadar	293,366
Jhelum	145,847
Kamoke	150,984
Karachi	12,130,000[4, 22]
Kasur	245,321
Khanewal	132,962
Khanpur	117,764
Kohat	125,271[24]
Lahore	6,577,000[4, 22]
Larkana	270,283
Mardan	245,926[24]
Mingaora	174,469
Mirpur Khas	184,465
Multan	1,522,000[4, 22]
Muridke	108,578
Muzaffargarh	121,641
Nawabshah	183,110
Okara	201,815
Pakpattan	107,791
Peshawar	1,303,000[4, 22]
Quetta	725,000[6]
Rahimyar Khan	233,537
Rawalpindi	1,858,000[4, 22]
Sadiqabad	141,509
Sahiwal	208,778
Sargodha	458,440[22]
Shekhupura	280,263
Shikarpur	133,259
Sialkot	421,502[22]
Sukkur	335,551
Tando Adam	103,363
Wah	198,431[22]
Palau (2005)	
★ Koror (de facto)	10,743
★ Melekeok (complex under construction)	391

country city	population
Panama (2000)	
★ Panama City	415,964
San Miguelito	293,745[23]
Papua New Guinea (2004 est.)	
Lae	109,800
★ Port Moresby (National Capital District)	299,000[4]
Paraguay (2002)	
★ Asunción	519,661[6]
Capiatá	154,274
Ciudad del Este	222,274
Fernando de la Mora	113,560
Lambaré	119,795
Luque	170,986
San Lorenzo	204,356
Peru (2007)	
Arequipa	749,291
Ayacucho	151,019
Cajamarca	162,326
Chiclayo	524,442
Chimbote	334,568
Chincha Alta	153,599
Cusco	348,935
Huancayo	323,054
Huánuco	149,210
Huaráz	100,931
Ica	219,856
Iquitos	370,962
Juliaca	216,716
Lima agglomeration	8,472,935
Ate	419,663[6]
Callao	389,579[6]
Carabayllo	180,293[6]
Chorrillos	262,595[6]
Comas	464,745[6]
El Agustino	165,425[6]
Independencia	197,308[6]
La Victoria	190,218[6]
★ Lima	289,855[6]
Los Olivos	286,549[6]
Puente Piedra	203,473[6]
Rimac	175,793[6]
San Borja	102,762[6]
San Juan de Lurigancho	812,656[6]
San Juan de Miraflores	335,237[6]
San Martin de Porras	525,155[6]
San Miguel	124,904[6]
Santa Anita	160,777[6]
Santiago de Surco	272,690[6]
Ventanilla	243,526[6]
Villa el Salvador	367,436[6]
Villa Maria del Triunfo	355,761[6]
Piura	377,496
Pucallpa	204,772
Puno	120,229
Sullana	181,954
Tacna	242,451
Tarapoto	117,184
Trujillo	682,834
Philippines (2007; MU)	
Angeles	314,493
Antipolo	633,971
Bacolod	499,497
Bacoor	441,197
Bago	159,933
Baguio	301,926
Baliuag	136,982
Batangas	187,225
Biñan	262,735
Binangonan	238,931
Cabanatuan	243,934
Cabuyao	205,376
Cagayan de Oro	553,966
Cainta	289,833
Calamba	360,281
Calbayog	130,321
Cebu	798,809
Cotabato	259,153
Dagupan	149,554
Dasmariñas	556,330
Davao	785,668
Dumaguete	116,392
General Mariano Alvarez	136,613
General Santos	443,449
General Trias	218,387
Guagua	104,284
Iligan	113,268
Iloilo	418,710
Imus	253,158
Jolo	140,307
Kabankalan	165,294
Kalookan (Caloocan)	1,378,858
Lapu-Lapu	292,530
Las Piñas	532,330
Legazpi	179,481
Lipa	260,568
Lucena	236,390
Mabalacat	203,307
Makati	510,383
Malabon	363,681
Malolos	223,069
Mandaluyong	305,576
Mandaue	318,575
★ Manila	1,660,714
Metro Manila	11,100,000
Marawi	177,391
Marikina	424,610
Marilao	160,452
Meycauayan	196,569
Minglanilla	101,585
Montalban	187,750
Muntinglupa	452,543
Naga	160,516
Navotas	245,344
Olongapo	227,270
Ormoc	177,524
Ozamis	112,150
Parañaque	552,660
Pasay	403,064
Pasig	617,301
Puerto Princesa	210,508
★ Quezon City	2,679,450
Roxas	147,738
Sagay	140,511
San Carlos	129,829
San Fernando	269,365
San Juan del Monte	125,338
San Mateo	184,860
San Pablo	237,259
San Pedro	281,808
Santa Cruz	101,914
Santa Maria	205,258
Santa Rosa	266,943
Tacloban	217,199
Tagig	613,343
Tagum	118,942
Talisay	179,359
Tanauan	142,537
Tanza	171,795
Tarlac	203,606
Taytay	262,485
Urdaneta	120,785
Valenzuela	568,928
Zamboanga	392,362
Poland (2008 est.)	
Białystok	294,143
Bielsko-Biała	175,690
Bydgoszcz	361,232
Bytom	184,765
Chorzów	113,678
Częstochowa	242,300
Dąbrowa Górnicza	128,795
Elbląg	126,710
Gdańsk	455,717
Gdynia	250,242
Gliwice	197,393
Gorzów Wielkopolski	125,411
Kalisz	108,031
Katowice	312,201
Kielce	205,902
Koszalin	107,376
Kraków	756,783
Legnica	104,754
Łódź	753,192
Lublin	351,806
Olsztyn	175,710
Opole	126,748
Płock	126,968
Poznań	560,932
Radom	224,857
Ruda Śląska	144,584
Rybnik	141,080
Rzeszów	166,454
Sosnowiec	222,586
Szczecin	407,811
Tarnów	116,118
Toruń	206,619
Tychy	129,776
Wałbrzych	125,773
★ Warsaw (Warszawa)	1,706,624
Włocławek	118,432
Wrocław	632,930
Zabrze	189,062
Zielona Góra	117,523
Portugal (2001)	
Amadora	151,486
Braga	112,039
Coimbra	104,489
Funchal	103,961
★ Lisbon agglomeration	564,657 2,812,000[4]
Porto	263,131
Puerto Rico (2006 est., MU)	
Arecibo	102,216
Bayamón	221,546
Caguas	142,769
Carolina	187,578
Ponce	181,267
★ San Juan agglomeration	426,618 2,590,824
Qatar (2006 est.)	
★ Doha	370,700
Ar-Rayyān	317,200
Réunion (2007 est.)	
★ Saint-Denis	143,000
Romania (2007 est.)	
Arad	167,238
Bacău	178,203
Baia Mare	139,870
Botoşani	115,739
Brăila	215,316
Braşov	277,945
★ Bucharest	1,931,838
Buzău	134,619
Cluj-Napoca	310,243
Constanţa	304,279
Craiova	299,429
Drobeta-Turnu Severin	107,882
Galaţi	293,523
Iaşi	315,214
Oradea	205,007
Piatra Neamţ	108,085
Piteşti	168,958
Ploieşti	230,240
Râmnicu Vâlcea	111,342
Satu Mare	113,688
Sibiu	154,458
Suceava	106,397
Târgu Mureş	145,943
Timişoara	307,347
Russia (2006)	
Abakan	163,980
Achinsk	112,729
Almetyevsk	141,675
Angarsk	245,699
Arkhangelsk	349,772
Armavir	190,703
Arzamas	106,824
Astrakhan	498,953
Balakovo	199,187
Balashikha	182,772
Barnaul	604,187
Bataisk	104,045
Belgorod	344,242
Berezniki	168,279
Biysk	225,350
Blagoveshchensk	212,183
Bratsk	254,878
Bryansk	419,967
Cheboksary	442,387
Chelyabinsk	1,092,958
Cherepovets	308,455
Cherkessk	116,947
Chita	306,239
Derbent	106,236
Dimitrovgrad	128,009
Dzerzhinsk	252,532
Elektrostal	146,189
Elista	103,034
Engels	194,824
Glazov	100,440
Grozny (Dzhokhar)	218,193
Irkutsk	578,073
Ivanovo	413,068
Izhevsk	619,468
Kaliningrad	423,651
Kaluga	329,064
Kamensk-Uralsky	182,466
Kamyshin	121,829
Kazan	1,112,673
Kemerovo	520,138
Khabarovsk	578,060
Khasavyurt	125,018
Khimki	180,075
Kirov	468,459
Kiselyovsk	103,656
Kislovodsk	128,701
Kolomna	148,020
Komsomolsk-na-Amure	273,293
Kopeisk	137,813
Korolyov (Kaliningrad)	172,781
Kostroma	274,495
Kovrov	151,610
Krasnodar	710,413
Krasnoyarsk	920,926
Kurgan	329,981
Kursk	405,499
Kyzyl	109,129
Leninsk-Kuznetsky	107,858
Lipetsk	502,821
Lyubertsy	158,725
Magadan	100,020
Magnitogorsk	413,208
Makhachkala	466,331
Maykop	156,768
Mezhdurechensk	103,672
Miass	154,519
★ Moscow	10,425,075
Murmansk	320,962
Murom	122,123
Mytishchi	161,811
Naberezhnye Chelny (Brezhnev)	507,180
Nakhodka	171,666
Nalchik	271,447
Nazran	130,241
Nefteyugansk	112,975
Nevinnomyssk	129,959
Nikolo-Beryozovka (Neftekamsk)	118,285
Nizhnekamsk	226,928
Nizhnevartovsk	240,834
Nizhny Novgorod (Gorky)	1,283,553
Nizhny Tagil	379,724
Noginsk	116,277
Norilsk	213,153
Novgorod	217,706
Novocheboksarsk	125,472
Novocherkassk	179,461
Novokuybyshevsk	111,822
Novokuznetsk	562,402
Novomoskovsk	127,770
Novorossiysk	230,702
Novoshakhtinsk	115,266
Novosibirsk	1,397,015
Novotroitsk	103,927
Novy Urengoy	112,505
Obninsk	105,353
Odintsovo	131,762
Oktyabrsky	107,801
Omsk	1,138,822
Orekhovo-Zuyevo	122,117
Orenburg	533,872
Orsk	247,002
Oryol	325,945
Penza	509,997
Perm	993,319
Pervouralsk	132,881
Petropavlovsk-Kamchatsky	195,216
Petrozavodsk	265,072
Podolsk	179,525
Prokopyevsk	216,675
Pskov	197,047
Pyatigorsk	139,538
Rostov-na-Donu	1,054,865
Rubtsovsk	158,584
Ryazan	513,261
Rybinsk (Andropov)	214,945
Saint Petersburg (Leningrad)	4,580,620
Salavat	156,964
Samara (Kuybyshev)	1,143,346
Saransk	297,077
Saratov	850,086
Sergiev Posad (Zagorsk)	112,700
Serpukhov	125,010
Severodvinsk	195,231
Seversk	107,552
Shakhty	247,736
Shchyolkovo	112,860
Simbirsk (Ulyanovsk)	617,200
Smolensk	317,915
Sochi	329,481
Stary Oskol	218,189
Stavropol	358,399
Sterlitamak	265,488
Surgut	290,598
Syktyvkar	229,305
Syzran	181,476
Taganrog	268,615
Tambov	284,502
Tobolsk	100,583
Tolyatti	704,875
Tomsk	489,879
Tula	509,010
Tver (Kalinin)	405,618
Tyumen	542,463
Ufa	1,029,616
Ukhta	103,261
Ulan-Ude	347,819
Ussuriysk	154,755
Vladikavkaz (Ordzhonikidze)	314,073
Vladimir	340,669
Vladivostok	583,673
Volgodonsk	170,832
Volgograd	991,643
Vologda	287,001
Volzhsky	308,490
Voronezh	846,349
Yakutsk	239,225
Yaroslavl	603,735
Yekaterinburg (Sverdlovsk)	1,308,441
Yelets	118,200
Yoshkar-Ola	251,416
Yuzhno-Sakhalinsk	173,364
Zelenograd	220,300
Zheleznodorozhny	116,456
Zlatoust	190,340
Rwanda (2007 est.)	
★ Kigali	860,000
St. Kitts and Nevis (2006)	
★ Basseterre	12,900
St. Lucia (2001)	
★ Castries	13,191
agglomeration	37,963
St. Vincent and the Grenadines (2007 est.)	
★ Kingstown	26,000
Samoa (2006)	
★ Apia	37,237
San Marino (2008 est.)	
★ San Marino	4,376
São Tomé and Príncipe (2001)	
★ São Tomé	3,666
agglomeration	58,000[4]
Saudi Arabia (2004)	
Abhā	201,912
'Ar'ar	145,237
Buraydah	378,422
Ad-Dammām	744,321
Hafar al-Bāṭin	231,978
Hā'il	267,005
Al-Hawīyah	132,078
Al-Hufūf	287,841
Jiddah	2,801,481
Jīzān	100,694
Al-Jubayl	222,544
Khamīs Mushayt	372,695
Al-Kharj	200,958
Al-Khubar	165,799
Mecca (Makkah)	1,294,168
Medina (Al-Madīnah)	918,889
Al-Mubarraz	285,067
Najrān	246,880
Al-Ourayyāt	100,436
★ Riyadh (Ar-Riyāḍ)	4,087,152
Sakākā	122,686
Tabūk	441,351
At-Tā'if	521,273
Ath-Thuqbah	191,826
'Unayzah	128,930
Yanbu' al-Bahr	188,430
Senegal (2007 est., MU)	
★ Dakar	2,243,400
Kaolack	186,000
Mbour	181,800
Rufisque	162,100
Saint-Louis	171,300
Thies	263,500
Touba	529,200
Ziguinchor	158,400
Serbia (2008)	
★ Belgrade	1,119,020
Kragujevac	145,360
Niš	172,944
Novi Sad	197,694
Seychelles (2004 est.)	
★ Victoria[7]	25,500
Sierra Leone (2004)	
Bo	167,144
★ Freetown	786,900
Kenema	137,696
Singapore (2007 est.)	
★ Singapore	4,436,000
Slovakia (2006 est.)	
★ Bratislava	417,653
Košice	222,492

Major cities and national capitals (continued)

country city	population
Slovenia (2008 est.)	
★ Ljubljana	141,547
Solomon Islands (2007 est.)	
★ Honiara	66,000
Somalia (2007)	
★ Mogadishu agglomeration	1,100,000
South Africa (2005 est.)[24]	
Alberton	145,529
Benoni	359,491
Boksburg	256,639
Botshabelo	175,061
Brakpan	168,557
★ Cape Town (de facto legislative)	3,103,000
Carletonville	161,679
Durban	2,643,000
East London	258,000
Ekurhuleni	3,043,000
George	152,000
Johannesburg	3,288,000
Kimberley	185,000
Klerksdorp	192,000
Krugersdorp	289,717
Ladysmith	168,000
Mabopane	324,000
★ Mangaung (Bloemfontein, de facto judicial)	397,000
Mdantsane	180,006
Midrand	124,333
Newcastle	170,000
Nigel	172,000
Paarl	149,000
Pietermaritzburg	436,000
Pietersburg	178,000
Port Elizabeth	998,000
Potchefstroom	122,000
Rustenburg	170,000
Soshanguve	363,000
Soweto	1,080,317
Springs	158,166
Tembisa	277,656
★ Tshwane (Pretoria, de facto executive)	1,282,000
Uitenhage	188,978
Vanderbijlpark	249,192
Vereeniging	1,033,000
Verwoerdburg	112,701
Welkom	190,000
West Rand	549,000
Westonaria	112,069
Witbank	210,000
Spain (2007 est.)	
Albacete	164,771
Alcalá de Henares	198,723
Alcorcón	166,553
Algeciras	114,012
Alicante (Alacant)	322,673
Almería	186,651
Badajoz	145,257
Badalona	216,201
Barcelona	1,595,110
Bilbao	353,168
Burgos	174,075
Cádiz	128,554
Cartagena	207,286
Castellón de la Plana (Castelló de la Plana)	172,624
Córdoba	323,600
Coruña, A (Coruña, La)	244,388
Donostia–San Sebastián	183,090
Dos Hermanas	117,554
Elche (Elx)	222,422
Fuenlabrada	194,142
Getafe	159,300
Gijón	274,037
Granada	236,207
Hospitalet (de Llobregat)	251,848
Huelva	146,173
Jaén	115,393
Jerez de la Frontera	202,587
Laguna, La	144,347
Leganés	182,431
León	135,059
Lleida (Lerida)	127,314
Logroño	145,866
★ Madrid	3,132,463
Málaga	561,250
Marbella	126,422
Mataró	119,035
Móstoles	204,535
Murcia	422,861
Ourense (Orense)	107,186
Oviedo	216,607
Palma (de Mallorca)	383,107
Palmas de Gran Canaria, Las	377,203
Pamplona (Iruña)	194,894
Reus	104,835
Sabadell	201,712
Salamanca	155,921
Santa Coloma de Gramanet	116,765
Santa Cruz de Tenerife	220,902
Santander	181,802
Sevilla (Seville)	699,145
Tarragona	134,163
Terrassa (Tarrasa)	202,136
Torrejón de Ardoz	113,176
Valencia (Valencia)	797,654
Valladolid	316,564
Vigo	294,772
Vitoria-Gasteiz	229,484
Zaragoza (Saragossa)	654,390
Sri Lanka (2001)[25]	
★ Colombo (executive, judicial)	647,100
Dehiwala–Mount Lavinia	210,546
Jaffna	145,600
Kandy	109,343
Moratuwa	177,563
Negombo	121,701
★ Sri Jayawardenepura Kotte (legislative)	116,366
Sudan, The (2000 est.)[7]	
Al-Fāshir	205,000
Al-Ginaina	134,000
Juba	143,000
Kassalā	336,000
★ Khartoum (executive)	4,754,000[4]
Kūstī	252,000
Nyala	375,000
★ Omdurman (legislative)	1,271,403[19]
Port Sudan	410,000
Al-Oadārif	271,000
Sinnar Al-Madina	104,000
Al-Ubayyid	329,000
Wad Madanī	276,000
Waw	109,000
Suriname (2005 est.)	
★ Paramaribo	268,000
Swaziland (2007 est.)	
★ Lobamba (legislative)	
★ Lozitha (royal)	
★ Ludzidzini (royal)	
★ Mbabane (administrative)	78,000
Sweden (2007, MU)	
Borås	100,221
Goteborg	489,757
Helsingborg	123,389
Jonköping	122,194
Linköping	138,580
Lund	103,286
Malmö	276,244
Norrköping	125,463
Örebro	128,977
★ Stockholm	782,885
Umeå	111,235
Uppsala	185,187
Vasterås	132,920
Switzerland (2007 est.)	
Basel (Bâle)	163,081
★ Bern (Berne) (administrative)	122,422
Geneva (Geneve)	178,603
★ Lausanne (judicial)	118,049
Zurich	350,125
Syria (2004 est.)	
Aleppo (Halab)	1,975,200
★ Damascus (Dimashq)	1,614,500
Dar'ā	103,300
Dayr az-Zawr	239,800
Dūmā	104,600
Hamāh	366,800
Al-Hasakah	211,300
Homs (Hims)	800,400
Jaramānah	192,800
Latakia (al-Ladhiqiyah)	468,700
Al-Qāmishlī	210,300
Ar-Raqqah	229,100
Tartūs	162,300
At-Tawrah	102,100
Taiwan (2008 est.)	
Chang-hua	235,998
Chi-lung (Keelung)	390,397
Chia-i	273,075
Chu-pei	126,255
Chung-ho	410,183
Chung-li	358,656
Feng-shan	338,900
Feng-yuan	164,619
Hsi-chih	180,993
Hsin-chu	399,035
Hsin-chuang	396,337
Hsin-tien	290,590
Hua-lien	109,847
Kao-hsiung	1,520,555
Kuei-shan	131,691
Lu-chou	192,066
Lu-chu	131,942
Lung-t'an	112,758
Nan-t'ou	105,671
Pa-te	172,125
Pan-ch'iao	547,625
P'ing-chen	202,680
P'ing-tung	215,962
San-chu'ung	383,621
Shu-lin	184,723
Ta-li	192,437
Ta-liao	109,313
T'ai-chung	1,055,898
T'ai-nan	764,658
T'ai-p'ing	171,628
T'ai-tung	110,204
★ Taipei (T'ai-pei)	2,629,269
Tan-shui	132,101
T'ao-yuan	391,822
Tou-liu	105,574
T'u-ch'eng	237,443
Yang-mei	142,895
Yüan-lin	126,189
Yung-ho	236,413
Yung-k'ang	210,585
Tajikistan (2007 est.)	
★ Dushanbe	660,900
Khujand (Khudzhand, Leninabad)	154,700
Tanzania (2002)[27]	
Arusha	270,485
★ Dar es Salaam (executive; judicial)	2,339,910
Dodoma (legislative)	150,604
Iringa	102,208
Kigoma	131,792
Mbeya	232,596
Morogoro	209,058
Moshi	143,799
Musoma	104,851
Mwanza	209,806
Tabora	127,887
Tanga	180,237
Zanzibar	205,870
Thailand (2000)	
★ Bangkok (Krung Thep)	6,355,144
Chiang Mai	174,438
Chon Buri	183,317
Hat Yai	187,920
Khlong Luang	106,326
Khon Kaen	141,202
Lampang	148,199
Nakhon Pathom	120,818
Nakhon Ratchasima	204,641
Nakhon Si Thammarat	118,729
Nonthaburi	291,555
Pak Kret	142,225
Phra Pradaeng	171,544
Rayong	106,737
Samut Prakan	378,741
Si Racha	141,410
Surat Thani	111,340
Thanya Buri	113,825
Ubon Ratchathani	106,602
Udon Thani	222,425
Togo (2005 est.)	
★ Lomé	921,000
Tonga (2006)	
★ Nuku'alofa	23,438
Trinidad and Tobago (2007 est.)	
★ Port of Spain	54,000
Tunisia (2004)	
Aryānah	240,749
Bizerte (Banzart)	114,371
Ettadhamen	118,487
Oābis	116,323
Al-Qayrawān (Kairouan)	117,903
Safāqis (Sfax)	265,131
Sūsah	173,047
★ Tūnis	728,453
Turkey (2007)	
Adana	1,366,027
Adıyaman	191,627
Afyon	159,967
Aksaray	151,164
★ Ankara	3,763,591
Antakya (Hatay)	186,243
Antalya	755,157
Aydın	168,216
Balıkesır	241,404
Bandırma	110,248
Batman	293,024
Bolu	107,857
Bursa	1,431,172
Ceyhan	103,800
Çorlu	190,792
Çorum	202,322
Denızlı	323,151
Derince	113,991
Diyarbakır	592,557
Edirne	136,070
Elazığ	319,381
Erzurum	338,073
Eskişehir	570,825
Gaziantep	1,175,042
Gebze	310,815
İçel (Mersın)	623,861
İnegöl	130,448
Iskenderun	177,294
Isparta	184,735
Istanbul	10,757,327
İzmir	2,606,294
Kahramanmaraş (Maraş)	371,463
Karabük	105,159
Karaman	122,809
Kayseri	696,833
Kırıkkale	192,257
Kızıltepe	127,148
Kocaelı (İzmıt)	248,424
Konya	967,055
Kutahya	212,934
Malatya	383,185
Manısa	281,890
Nazilli	103,759
Ordu	134,005
Osmanıye	180,477
Sakarya (Adapazarı)	377,683
Samsun	423,859
Siırt	117,599
Sivas	294,402
Siverek	108,094
Sultanbeylı	272,758
Tarsus	229,921
Tekırdağ	133,322
Tokat	127,988
Trabzon	228,826
Turgutlu	111,166
Urfa (Şanlıurfa)	472,238
Uşak	172,709
Van	331,986
Viranşehır	100,929
Zonguldak	107,354
Turkmenistan (2004 est.)	
★ Ashgabat	773,400
Balkanabat (Nebitdag)	101,600
Daşoguz	163,100
Mary	129,200
Turkmenabat (Charjew)	242,000
Tuvalu (2002)	
★ Funafuti	4,492
Uganda (2008)	
Gulu	141,500
★ Kampala	1,480,200
Kira	158,300
Ukraine (2005 est.)	
Alchevsk	116,954
Berdyansk	119,290
Bila Tserkva	204,794
Cherkasy	293,271
Chernihiv	300,497
Chernivtsi	242,250
Dniprodzerzhynsk	249,530
Dnipropetrovsk	1,056,497
Donetsk	999,975
Horlivka	279,061
Ivano-Frankivsk	219,479
Kerch	152,564
Kharkiv	1,464,740
Kherson	319,278
Khmelnytskyy	255,902
★ Kyiv (Kiev)	2,660,401
Kirovohrad	248,367
Kramatorsk	174,892
Kremenchuk	231,202
Kryvyy Rih	696,667
Luhansk	452,789
Lutsk	202,915
Lviv	733,728
Lysychansk	111,451
Makiyivka	375,992
Mariupol	482,440
Melitopol	159,288
Mykolayiv	509,011
Nikopol	131,774
Odesa (Odessa)	1,007,131
Pavlohrad	113,748
Poltava	309,960
Rivne	247,870
Sevastopol	340,353
Simferopol	341,599
Slov'yansk	122,049
Sumy	282,198
Syeverodonetsk	116,354
Ternopil	220,720
Uzhhorod	117,028
Vinnytsya	360,241
Yevpatoriya	106,250
Zaporizhzhya	799,348
Zhytomyr	277,875
United Arab Emirates (2007 est.)	
★ Abu Dhabi	633,136
'Ajmān	250,808
Al-'Ayn	444,331
Dubai	1,321,453
Ra's al-Khaymah	121,626
Sharjah	584,286
United Kingdom (2006 est.)	
England	
Barnsley	223,500
Birmingham	994,900
Blackburn with Darwen	141,200
Blackpool	142,700
Bolton	262,400
Bournemouth	161,200
Bracknell Forest	112,200
Bradford	493,100
Brighton and Hove	251,400
Bristol	410,500
Bury	182,900
Calderdale	198,500
Cambridge	117,900
Canterbury	146,200
Carlisle	103,300
Chester	119,700
Chichester	108,900
Coventry	306,600
Derby	236,300
Doncaster	290,300
Dudley	305,300
Exeter	119,600
Gateshead	190,500
Gloucester	113,200
Halton	119,500
Kingston upon Hull	256,200
Kirklees	398,200
Knowsley	151,300
Lancaster	143,000
Leeds	750,200
Leicester	289,700
Liverpool	436,100
★ London (Greater London)	7,517,700[28]
Luton	186,800
Manchester	452,000
Milton Keynes	224,800
Newcastle upon Tyne	270,500
North Tyneside	195,000
Norwich	129,500

[1]1993 estimate [2]Eight villages, including Fagatogo and Utulei, are collectively known as Pago Pago (2001 agglomeration pop. 15,000) [3]Urban centre ("urban agglomeration") as defined by 2001 census [4]2007 estimate [5]2004 estimate. [6]2005 estimate [7]Urban agglomeration. [8]San José canton. [9]Excludes Lefkoşa (Turkish Nicosia), whose population per 2006 estimate was 49,237 [10]Within San Salvador metropolitan area [11]2003 census [12]Within Athens urban agglomeration [13]Urban population (may or may not be city proper; not urban agglomeration). [14]1990 census. [15]2003 estimate [16]County borough population. [17]2001 census. [18]1987 census [19]1993 census. [20]1998 census. [21]Includes Salé and Temera. [22]Includes cantonment(s). [23]Urban district

country city	population
Nottingham	286,400
Oldham	219,600
Oxford	149,100
Peterborough	163,300
Plymouth	248,100
Poole	136,900
Portsmouth	196,400
Preston	132,000
Reading	142,800
Rochdale	206,500
Rotherham	253,300
St. Albans	131,300
St. Helens	177,600
Salford	218,000
Sandwell	287,600
Sefton	277,400
Sheffield	525,000
Slough	119,500
Solihull	203,000
South Tyneside	151,000
Southampton	228,600
Southend	159,900
Stockport	280,600
Stockton-on-Tees	189,100
Stoke-on-Trent	239,700
Sunderland	280,600
Swindon	186,600
Tameside	214,400
Thurrock	148,900
Torbay	133,200
Trafford	211,800
Wakefield	321,200
Walsall	254,500
Warrington	194,000
Wigan	305,500
Winchester	110,000
Windsor and Maidenhead	138,800
Wirral	311,200
Wolverhampton	236,600
York	191,800
Northern Ireland[29]	
Belfast	268,100
Derry (Londonderry)	107,300
Lisburn	111,500
Scotland	
Aberdeen	206,880
Dundee	142,170
Edinburgh	463,510
Glasgow	580,690
Wales	
Cardiff	317,500
Conwy	111,300
Neath Port Talbot	137,100
Newport	140,100
Rhondda, Cynon, Taff	233,900
Swansea	227,100
Wrexham	131,000
United States (2007 est.)	
Abilene (*Texas*)	116,219
Akron (*Ohio*)	207,934
Albuquerque (*N.M.*)	518,271
Alexandria (*Va.*)	140,024
Allentown (*Pa.*)	107,117
Amarillo (*Texas*)	186,106
Anaheim (*Calif.*)	333,249
Anchorage (*Alaska*)	279,671
Ann Arbor (*Mich.*)	115,092
Antioch (*Calif.*)	204,568
Arlington (*Texas*)	371,038
Arlington (*Va.*)[30]	204,568
Arvada (*Colo.*)	106,328
Athens (*Ga.*)	112,760
Atlanta (*Ga.*)	519,145
Augusta (*Ga.*)	192,142
Aurora (*Colo.*)	311,794
Aurora (*Ill.*)	170,855
Austin (*Texas*)	743,074
Bakersfield (*Calif.*)	315,837
Baltimore (*Md.*)	637,455
Baton Rouge (*La.*)	227,071
Beaumont (*Texas*)	109,579
Bellevue (*Wash.*)	121,347
Berkeley (*Calif.*)	101,377
Billings (*Mo.*)	101,876
Birmingham (*Ala.*)	229,800
Boise (*Idaho*)	202,832
Boston (*Mass.*)	599,351
Bridgeport (*Conn.*)	136,695
Brownsville (*Texas*)	172,806
Buffalo (*N.Y.*)	272,632
Burbank (*Calif.*)	103,286
Cambridge (*Mass.*)	101,388
Cape Coral (*Fla.*)	156,981
Carrollton (*Texas*)	123,799
Cary (*N.C.*)	121,796
Cedar Rapids (*Iowa*)	126,396
Chandler (*Ariz.*)	246,399
Charleston (*S.C.*)	110,015
Charlotte (*N.C.*)	671,588
Chattanooga (*Tenn.*)	169,884
Chesapeake (*Va.*)	219,154
Chicago (*Ill.*)	2,836,658
Chula Vista (*Calif.*)	217,478
Cincinnati (*Ohio*)	332,458
Clarksville (*Tenn.*)	119,284
Clearwater (*Fla.*)	106,642
Cleveland (*Ohio*)	438,042
Colorado Springs (*Colo.*)	375,427
Columbia (*S.C.*)	124,818
Columbus (*Ga.*)	187,046
Columbus (*Ohio*)	747,755
Concord (*Calif.*)	120,844
Coral Springs (*Fla.*)	126,875
Corona (*Calif.*)	150,308
Corpus Christi (*Texas*)	285,507
Costa Mesa (*Calif.*)	108,978
Dallas (*Texas*)	1,240,499
Daly City (*Calif.*)	100,882
Dayton (*Ohio*)	155,461
Denton (*Texas*)	115,506
Denver (*Colo.*)	588,349
Des Moines (*Iowa*)	196,998
Detroit (*Mich.*)	916,952
Downey (*Calif.*)	108,109
Durham (*N.C.*)	217,847
East Los Angeles (*Calif.*)[30]	128,500
El Monte (*Calif.*)	122,272
El Paso (*Texas*)	606,913
Elgin (*Ill.*)	104,288
Elizabeth (*N.J.*)	124,862
Elk Grove (*Calif.*)	121,212
Erie (*Pa.*)	103,650
Escondido (*Calif.*)	135,246
Eugene (*Ore.*)	149,004
Evansville (*Ind.*)	116,253
Fairfield (*Calif.*)	103,992
Fayetteville (*N.C.*)	171,853
Flint (*Mich.*)	114,662
Fontana (*Calif.*)	183,502
Fort Collins (*Colo.*)	133,899
Fort Lauderdale (*Fla.*)	183,606
Fort Wayne (*Ind.*)	251,247
Fort Worth (*Texas*)	681,818
Fremont (*Calif.*)	201,334
Fresno (*Calif.*)	470,508
Fullerton (*Calif.*)	132,066
Gainesville (*Fla.*)	114,375
Garden Grove (*Calif.*)	165,510
Garland (*Texas*)	218,792
Gilbert (*Ariz.*)	207,550
Glendale (*Ariz.*)	253,152
Glendale (*Calif.*)	196,979
Grand Prairie (*Texas*)	158,422
Grand Rapids (*Mich.*)	193,627
Green Bay (*Wis.*)	100,781
Greensboro (*N.C.*)	247,183
Hampton (*Va.*)	145,439
Hartford (*Conn.*)	124,563
Hayward (*Calif.*)	140,943
Henderson (*Nev.*)	249,386
Hialeah (*Fla.*)	212,217
High Point (*N.C.*)	100,342
Hollywood (*Fla.*)	142,473
Honolulu (*Hawaii*)	375,571
Houston (*Texas*)	2,208,180
Huntington Beach (*Calif.*)	192,885
Huntsville (*Ala.*)	171,327
Independence (*Mo.*)	110,704
Indianapolis (*Ind.*)	795,458
Inglewood (*Calif.*)	113,376
Irvine (*Calif.*)	201,160
Irving (*Texas*)	199,505
Jackson (*Miss.*)	175,710
Jacksonville (*Fla.*)	805,605
Jersey City (*N.J.*)	242,389
Joliet (*Ill.*)	144,316
Kansas City (*Kan.*)	142,320
Kansas City (*Mo.*)	450,375
Killeen (*Texas*)	112,434
Knoxville (*Tenn.*)	183,546
Lafayette (*La.*)	113,544
Lakewood (*Colo.*)	140,305
Lancaster (*Calif.*)	143,616
Lansing (*Mich.*)	114,947
Laredo (*Texas*)	217,506
Las Vegas (*Nev.*)	558,880
Lexington (*Ky.*)	279,044
Lincoln (*Neb.*)	248,744
Little Rock (*Ark.*)	187,452
Long Beach (*Calif.*)	466,520
Los Angeles (*Calif.*)	3,834,340
Louisville (*Ky.*)	557,789
Lowell (*Mass.*)	103,512
Lubbock (*Texas*)	217,325
McAllen (*Texas*)	127,245
McKinney (Texas)	115,260
Madison (*Wis.*)	228,775
Manchester (*N.H.*)	108,874
Memphis (*Tenn.*)	674,028
Mesa (*Ariz.*)	452,933
Mesquite (*Texas*)	131,738
Metairie (*La.*)[30]	130,000
Miami (*Fla.*)	409,719
Midland (*Texas*)	103,880
Milwaukee (*Wis.*)	602,191
Minneapolis (*Minn.*)	377,392
Miramar (*Fla.*)	108,240
Mobile (*Ala.*)	191,411
Modesto (*Calif.*)	203,955
Montgomery (*Ala.*)	204,086
Moreno Valley (*Calif.*)	188,935
Naperville (*Ill.*)	142,479
Nashville (*Tenn.*)	590,807
New Haven (*Conn.*)	123,932
New Orleans (*La.*)	239,124
New York City (*N.Y.*)	8,274,527
Newark (*N.J.*)	280,135
Newport News (*Va.*)	179,153
Norfolk (*Va.*)	235,747
Norman (*Okla.*)	106,707
North Las Vegas (*Nev.*)	212,114
Norwalk (*Calif.*)	103,720
Oakland (*Calif.*)	401,489
Oceanside (*Calif.*)	168,602
Oklahoma City (*Okla.*)	547,274
Olathe (*Kan.*)	118,034
Omaha (*Neb.*)	424,482
Ontario (*Calif.*)	170,936
Orange (*Calif.*)	134,299
Orlando (*Fla.*)	227,907
Overland Park (*Kan.*)	169,403
Oxnard (*Calif.*)	184,725
Palm Bay (*Fla.*)	100,116
Palmdale (*Calif.*)	140,882
Paradise (*Nev.*)[30]	185,935
Pasadena (*Calif.*)	143,400
Pasadena (*Texas*)	146,518
Paterson (*N.J.*)	146,545
Pembroke Pines (*Fla.*)	146,828
Peoria (*Ariz.*)	146,743
Peoria (*Ill.*)	113,546
Philadelphia (*Pa.*)	1,449,634
Phoenix (*Ariz.*)	1,552,259
Pittsburgh (*Pa.*)	311,218
Plano (*Texas*)	260,796
Pomona (*Calif.*)	152,631
Pompano Beach (*Fla.*)	102,745
Port St. Lucie (*Fla.*)	151,391
Portland (*Ore.*)	550,396
Portsmouth (*Va.*)	101,967
Providence (*R.I.*)	172,459
Provo (*Utah*)	117,592
Pueblo (*Colo.*)	103,805
Raleigh (*N.C.*)	375,806
Rancho Cucamonga (*Calif.*)	170,266
Reno (*Nev.*)	214,853
Richmond (*Calif.*)	101,454
Richmond (*Va.*)	200,123
Riverside (*Calif.*)	294,437
Rochester (*N.Y.*)	206,759
Rockford (*Ill.*)	156,596
Roseville (*Calif.*)	108,759
Sacramento (*Calif.*)	450,242
St. Louis (*Mo.*)	350,759
St. Paul (*Minn.*)	277,251
St. Petersburg (*Fla.*)	246,407
Salem (*Ore.*)	151,913
Salinas (*Calif.*)	143,517
Salt Lake City (*Utah*)	180,651
San Antonio (*Texas*)	1,328,984
San Bernardino (*Calif.*)	199,285
San Buenaventura (Ventura) (*Calif.*)	103,219
San Diego (*Calif.*)	1,266,731
San Francisco (*Calif.*)	764,976
San Jose (*Calif.*)	939,899
Santa Ana (*Calif.*)	339,555
Santa Clara (*Calif.*)	109,756
Santa Clarita (*Calif.*)	169,951
Santa Rosa (*Calif.*)	154,241
Savannah (*Ga.*)	130,331
Scottsdale (*Ariz.*)	235,677
Seattle (*Wash.*)	594,210
Shreveport (*La.*)	199,569
Simi Valley (*Calif.*)	120,464
Sioux Falls (*S.D.*)	151,505
South Bend (*Ind.*)	104,069
Spokane (*Wash.*)	200,975
Spring Valley (*Nev.*)[30]	176,815
Springfield (*Ill.*)	117,090
Springfield (*Mass.*)	149,938
Springfield (*Mo.*)	154,777
Stamford (*Conn.*)	118,475
Sterling Heights (*Mich.*)	127,349
Stockton (*Calif.*)	287,245
Sunnyvale (*Calif.*)	131,140
Sunrise Manor (*Nev.*)[30]	191,966
Syracuse (*N.Y.*)	139,079
Tacoma (*Wash.*)	196,520
Tallahassee (*Fla.*)	168,979
Tampa (*Fla.*)	336,823
Tempe (*Ariz.*)	174,091
Thornton (*Colo.*)	110,880
Thousand Oaks (*Calif.*)	123,349
Toledo (*Ohio*)	295,029
Topeka (*Kan.*)	122,642
Torrance (*Calif.*)	141,420
Tucson (*Ariz.*)	525,529
Tulsa (*Okla.*)	384,037
Vallejo (*Calif.*)	115,552
Vancouver (*Wash.*)	161,436
Victorville (*Calif.*)	107,221
Virginia Beach (*Va.*)	434,743
Visalia (*Calif.*)	118,603
Waco (*Texas*)	122,222
Warren (*Mich.*)	134,223
★ Washington, D.C.	588,292
Waterbury (*Conn.*)	107,174
West Covina (*Calif.*)	106,388
West Jordan (*Utah*)	102,445
West Valley City (*Utah*)	122,374
Westminster (*Colo.*)	106,195
Wichita (*Kan.*)	361,420
Wichita Falls (*Texas*)	101,590
Winston-Salem (*N.C.*)	215,348
Worcester (*Mass.*)	173,966
Yonkers (*N.Y.*)	199,244
Uruguay (2007 est.)	
★ Montevideo	1,513,000
Uzbekistan (2001 est.)	
Andijon (Andizhan)	338,366
Angren	131,900
Buxoro (Bukhara)	237,361
Chirchiq (Chirchik)	141,742
Farghona (Fergana)	183,037
Jizzakh (Dzhizak)	131,512
Margilon (Margilan)	149,646
Namangan	391,297
Navoiy (Navoi)	138,082
Nuqus (Nukus)	212,012
Olmaliq (Almalyk)	113,114
Qarshi (Karshi)	204,690
Qoqon (Kokand)	197,450
Samarqand (Samarkand)	361,339
★ Tashkent (Toshkent)	2,184,000[4]
Termiz	116,467
Urganch (Urgench)	138,609
Vanuatu (2007 est.)	
★ Vila	40,000
Venezuela (2001)	
Acarigua	137,000
Barcelona	328,000
Barinas	229,000
Barquisimeto	811,000
Baruta	192,000
Cabimas	210,000
Calabozo	102,000
★ Caracas	1,836,000
Carúpano	112,000
Catia la Mar	112,000
Ciudad Bolivar	287,000
Ciudad Guayana	629,000
Ciudad Ojeda	114,000
Coro	159,000
Cumaná	263,000
El Tigre	146,000
Guacara	142,000
Guanare	111,000
Guarenas	186,000
Guatire	129,000
La Victoria	104,000
Los Teques	175,000
Maracaibo	1,609,000
Maracay	394,000
Maturín	325,000
Mérida	196,000
Ocumare del Tuy	104,000
Petare	369,000
Puerto Cabello	154,000
Puerto La Cruz	199,000
Punto Fijo	117,000
San Cristobal	234,000
Santa Teresa	125,000
Turmero	306,000
Valencia	1,196,000
Valera	113,000
Vietnam (2004 est.)	
Bac Lieu	104,400
Bien Hoa	384,400
Buon Me Thuot	139,900
Ca Mau	107,400
Cam Pha	146,600
Cam Ranh	145,700
Can Tho	255,100
Da Lat	128,900
Da Nang	679,800[31]
Haiphong	825,700[31]
★ Hanoi	2,101,500[31]
Ho Chi Minh City (Saigon)	5,315,000[31]
Hoa Binh	100,100
Hong Gai	145,900
Hue	277,100
Long Xuyen	157,200
My Tho	121,200
Nam Dinh	192,200
Nha Trang	274,800
Phan Thiet	146,000
Pleiku (Play Cu)	109,100
Qui Nhon	203,300
Rach Gia	207,600
Soc Trang	111,500
Thai Nguyen	132,600
Thanh Hoa	107,900
Vinh Long	101,100
Vung Tau	195,400
Virgin Islands (U.S.) (2000)	
★ Charlotte Amalie	11,004
West Bank (2007 est.)	
Hebron (Al-Khalil)	163,146
Nābulus	126,132
★ Rām Allāh (Ramallah) (administrative centre)	27,460
Western Sahara (2007 est., MU)	
Laayoune (El Aaiun)	200,000
Yemen (2004)	
Aden	588,938
Dhamār	146,346
Al-Hudaydah	409,994
Ibb	212,992
Al-Mukallā	182,478
★ San'ā'	1,707,531
Ta'izz	466,968
Zambia (2000)	
Chingola	147,400
Kabwe	176,758
Kitwe	363,700
Luanshya	115,600
★ Lusaka	1,328,000[4]
Mufulira	122,300
Ndola	374,757
Zimbabwe (2002)	
Bulawayo	676,787
Chitungwiza	321,782
Epworth	113,884
Gweru	137,000
★ Harare	1,572,000[4]
Mutare	170,106

adjacent to Panama City [24]A new municipal system was created in 2005. [25]Urban population. [26]1997 estimate, 2001 census enumeration was not conducted because of the civil war. [27]Urban localities. [28]Borough counties, not listed separately, constitute Greater London. [29]Cities and borough councils of Northern Ireland with more than 100,000 population. [30]Unincorporated place. [31]2006 estimate.

Language

This table presents estimated data on the principal language communities of the countries of the world. The countries, and the principal languages (occasionally, language families) represented in each, are listed alphabetically. A bullet (●) indicates those languages that are official in each country. The sum of the estimates equals the 2003 population of the country given in the "Area and population" table.

The estimates represent, so far as national data collection systems permit, the distribution of mother tongues (a mother tongue being the language spoken first and, usually, most fluently by an individual). Many countries do not collect any official data whatever on language use, and published estimates not based on census or survey data usually span a substantial range of uncertainty. The editors have adopted the best-founded distribution in the published literature (indicating uncertainty by the degree of rounding shown) but have also adjusted or interpolated using data not part of the base estimate(s). Such adjustments have not been made to account for large-scale refugee movements, as these are of a temporary nature.

A variety of approaches have been used to approximate mother-tongue distribution when census data were unavailable. Some countries collect data on ethnic or "national" groups only; for such countries ethnic distribution often had to be assumed to conform roughly to the distribution of language communities. This approach, however, should be viewed with caution, because a minority population is not always free to educate its children in its own language and because better economic opportunities often draw minority group members into the majority-language community. For some countries, a given individual may be visible in national statistics only as a passport-holder of a foreign country, however long he may remain resident. Such persons, often guest workers, have sometimes had to be assumed to be speakers of the principal language of their home country. For other countries, the language mosaic may be so complex, the language communities so minute in size, scholarly study so inadequate, or the census base so obsolete that it was possible only to assign percentages to entire groups, or families, of related languages, despite their mutual unintelligibility (Papuan and Melanesian languages in Papua New Guinea, for instance). For some countries in the Americas, so few speakers of any single indigenous language remain that it was necessary to combine these groups as *Amerindian* so as to give a fair impression of their aggregate size within their respective countries.

No systematic attempt has been made to account for populations that may legitimately be described as bilingual, unless the country itself collects data on that basis, as does Bolivia or the Comoros, for example. Where a nonindigenous official or excolonial language constitutes a lingua franca of the country, however, speakers of the language as a second tongue are shown in italics, even though very few may speak it as a mother tongue. Lingua franca figures that are both italicized and indented are not included in population totals. No comprehensive effort has been made to distinguish between dialect communities *usually* classified as belonging to the same language, though such distinctions were possible for some countries—*e.g.*, between French and Occitan (the dialect of southern France) or among the various dialects of Chinese.

In giving the names of Bantu languages, grammatical particles specific to a language's autonym (name for itself) have been omitted (the form *Rwanda* is used here, for example, rather than *kinyaRwanda* and *Tswana* instead of *seTswana*). Parenthetical alternatives are given for a number of languages that differ markedly from the name of the people speaking them (such as Kurukh, spoken by the Oraon tribes of India) or that may be combined with other groups sometimes distinguishable in national data but appearing here under the name of the largest member—*e.g.*, "Tamil (and other Indian languages)" combining data on South Asian Indian populations in Singapore. The term *creole* as used here refers to distinguishable dialectal communities related to a national, official, or former colonial language (such as the French creole that survives in Mauritius from the end of French rule in 1810).

Internet resources for further information:

- *Ethnologue* (14th ed.; Summer Institute of Linguistics) http://www.ethnologue.com
- Joshua Project 2000—People's List (Christian interfaith missionary database identifying some 2,000 ethnolinguistic groups) http://www.ad2000.org/peoples/index.htm
- U.S. Census Bureau: http://www.census.gov/ftp/pub/ipc/www/idbconf.html (especially tables 57 and 59)

Language

Major languages by country	Number of speakers
Afghanistan[1]	
Indo-Aryan languages	
Pashai	178,000
Iranian languages	
Balochi	266,000
● Dari (Persian)	
Chahar Aimak	810,000
Hazara	2,530,000
Tajik	5,859,000
Nuristani group	222,000
Pamir group	178,000
● Pashto	15,046,000
Turkic languages	
Turkmen	555,000
Uzbek	2,530,000
Other	544,000
Albania[1]	
● Albanian	3,102,000
Greek	59,000
Macedonian	4,600
Other	900
Algeria	
● Arabic	27,346,000
Berber	4,454,000
English	.
French	*6,243,000*
American Samoa	
● English	1,900
English (lingua franca)	*60,000*
● Samoan	56,000
Tongan	1,900
Other	1,900
Andorra[2]	
● Catalan (Andorran)	22,000
French	5,000
Portuguese	7,000
Spanish	29,000
Other	4,000
Angola[1]	
Ambo (Ovambo)	255,000
Chokwe	457,000
Herero	74,000
Kongo	1,423,000
Luchazi	255,000
Luimbe-Nkangala	584,000
Lunda	127,000
Luvale (Lwena)	382,000
Mbunda	127,000
Mbundu	2,325,000
Nyaneka-Nkhumbi	584,000
Ovimbundu (Umbundu)	4,003,000
● Portuguese	*3,822,000*
Other	170,000
Antigua and Barbuda	
● English	*76,800*
English/English Creole	72,000
Other	4,200
Argentina	
Amerindian languages	109,000
Italian	647,000
● Spanish	35,682,000
Other	408,000
Armenia	
● Armenian	2,853,000
Azerbaijani (Azeri)	80,000
Other	128,000
Aruba	
● Dutch	4,800
English	8,700
Papiamento	71,500
Spanish	6,800
Other	1,000
Australia	
Aboriginal languages	53,000
Arabic	194,000
Cantonese	227,000
Dutch	48,000
● English	16,141,000
English (lingua franca)	*19,189,000*
French	47,000
German	115,000
Greek	310,000
Hungarian	31,000
Indonesian Malay	31,000
Italian	439,000
Macedonian	82,000
Maltese	53,000
Mandarin	105,000
Pilipino (Filipino)	81,000
Polish	73,000
Portuguese	28,000
Russian	36,000
Serbo-Croatian	122,000
Spanish	104,000
Turkish	51,000
Vietnamese	160,000
Other/not stated	1,352,000
Austria	
Czech	19,000
● German	7,409,000
Hungarian	34,000
Polish	19,000
Romanian	17,000
Serbo-Croatian	175,000
Slovene	30,000
Turkish	122,000
Other	229,000
Azerbaijan	
Armenian	163,000
● Azerbaijani (Azeri)	7,326,000
Lezgi (Lezgian)	184,000
Russian	249,000
Other	317,000
Bahamas, The	
● English	.
English/English Creole	282,000
French (Haitian) Creole	32,000
Bahrain[2]	
● Arabic	459,000
English	.
Other	215,000
Bangladesh[1]	
● Bengali	130,078,000
Chakma	496,000
English	*3,503,000*
Garo	124,000
Khasi	103,000
Marma (Magh)	258,000
Mro	41,000
Santhali	93,000
Tripuri	93,000
Other	1,824,000
Barbados	
Bajan (English Creole)	259,000
● English	..
Other	13,000
Belarus	
● Belarusian	6,488,000
Polish	49,000
● Russian	3,155,000
Ukrainian	129,000
Other	59,000
Belgium[2, 3]	
Arabic	161,000
● Dutch (Flemish, Netherlandic)	6,128,000
● French (Walloon)	3,376,000
● German	101,000
Italian	252,000
Spanish	50,000
Turkish	91,000
Other	181,000
Belize	
● English	136,000
English Creole (lingua franca)	*202,000*
Garifuna (Black Carib)	18,000
German	4,300
Mayan languages	26,000
Spanish	85,000
Spanish (lingua franca)	*149,000*
Benin[1]	
Adja	782,000
Aizo (Ouidah)	606,000
Bariba	606,000
Dendi	154,000
Djougou	209,000
Fon	2,799,000
● French	*661,000*
Fula (Fulani)	397,000
Somba (Ditamari)	463,000
Yoruba (Nago)	859,000
Other	165,000
Bermuda	
● English	64,000
Portuguese	*6,100*
Bhutan[1]	
Assamese	104,000
● Dzongkha (Bhutia)	343,000
Nepali (Hindi)	239,000
Bolivia	
● Aymara	278,000
Guarani	10,000
● Quechua	700,000
● Spanish	3,583,000
Spanish-Amerindian (multilingual), of which	3,943,000
Spanish-Aymara	*1,699,000*
Spanish-Guarani	*31,000*
Spanish-Quechua	*2,224,000*
Other	72,000
Bosnia and Herzegovina[1]	
● Bosnian	1,637,000
● Croatian	630,000
● Serbian	1,153,000
Other	300,000
Botswana[1]	
● English (lingua franca)	*665,000*
Khoekhoe (Hottentot)	41,000
Ndebele	21,000
San (Bushman)	58,000
Shona	207,000
Tswana	1,255,000
Tswana (lingua franca)	*1,330,000*
Other	81,000
Brazil[1]	
Amerindian languages	183,000
German	978,000
Italian	752,000
Japanese	677,000
● Portuguese	174,226,000
Other	1,655,000
Brunei	
Chinese	32,000
English	10,400
English-Chinese	7,300
● Malay	159,000
Malay-Chinese	3,100
Malay-Chinese-English	13,500
Malay-English	101,000
Other	18,700
Bulgaria[1]	
● Bulgarian	6,480,000
Macedonian	191,000
Romany	286,000
Turkish	734,000
Other	95,000
Burkina Faso[4]	
Dogon	44,000
French	44,000
● French (lingua franca)	*5,419,000*
Fula (Fulani)	1,272,000
Gur (Voltaic) languages	
Bwamu	288,000
Gouin (Cerma)	77,000
Grusi (Gurunsi) group	
Ko	22,000
Lyele	321,000
Nuni	155,000
Sissala	11,000
Lobi	254,000
Moore (Mossi) group	
Dagara	409,100
Gurma	752,000
Kusaal	22,000
Moore (Mossi)	6,636,000
Senufo group	
Minianka	—
Senufo	188,000
Kru languages	
Seme (Siamou)	22,000
Mande languages	
Bobo	299,000
Busansi (Bisa)	476,000
Dyula (Jula)	343,000
Marka	221,000
Samo	310,000
Tamashek (Tuareg)	122,000
Other	940,000
Burundi[1]	
● French	*285,000*
● Rundi	3,015,000
Hutu	2,542,000

Major languages by country	Number of speakers
Tutsi	447,000
Twa	31,000
Other[5]	61,000
Cambodia[1]	
Cham	308,000
Chinese	403,000
● Khmer	11,629,000
Vietnamese	722,000
Other[6]	64,000
Cameroon[1]	
Chadic languages	
Buwal	307,000
Hausa	194,000
Kotoko	174,000
Mandara (Wandala)	889,000
Masana (Masa)	623,000
● English	*7,868,000*
● French	*4,700,000*
Niger-Congo languages	
Adamawa-Ubangi languages	
Chamba	378,000
Gbaya (Baya)	194,000
Mbum	204,000
Atlantic languages	
Fula (Fulani)	1,512,000
Benue-Congo languages	
Bamileke (Medumba)-Widikum (Mogha-mo)-Bamum (Mum)	2,922,000
Basa (Bassa)	174,000
Duala	1,717,000
Fang (Pangwe)-Beti-Bulu	3,096,000
Ibibio (Efik)	20,000
Igbo	82,000
Jukun	102,000
Lundu	429,000
Maka	777,000
Tikar	1,165,000
Tiv	409,000
Wute	51,000
Saharan languages	
Kanuri	51,000
Semitic languages	
Arabic	153,000
Other	123,000
Canada	
● English	18,703,000
● French	7,349,000
English-French	119,000
English-other	276,000
French-other	40,000
English-French-other	10,000
Arabic	164,000
Chinese	793,000
Cree	85,000
Dutch	148,000
Eskimo (Inuktitut) languages	30,000
German	499,000
Greek	135,000
Italian	537,000
Pilipino (Filipino)	149,000
Polish	236,000
Portuguese	234,000
Punjabi	224,000
Spanish	236,000
Ukrainian	180,000
Vietnamese	118,000
Other	1,327,000
Cape Verde	
Crioulo (Portuguese Creole)	438,000
● Portuguese	
Central African Republic	
Banda	858,000
● French	*942,000*
Gbaya (Baya)	869,000
Mandjia	544,000
Mbum	230,000
Ngbaka	283,000
Nzakara	63,000
● Sango (lingua franca)	*3,244,000*
Sara	241,000
Zande (Azande)	73,000
Other	523,000
Chad[1]	
● Arabic	1,140,000
Bagirmi	143,000
Fitri-Batha	428,000
● French	*2,774,000*
Fula (Fulani)	230,000
Gorane	581,000
Hadjarai	614,000
Kanem-Bornu	833,000
Lac-Iro	55,000
Mayo-Kebbi	1,063,000
Ouaddai	811,000
Sara	2,554,000
Tandjile	603,000
Other	197,000

Major languages by country	Number of speakers
Chile[1]	
Araucanian (Mapuche)	1,421,000
Aymara	81,000
Rapa Nui	35,000
● Spanish	13,740,000
China[1]	
Achang	31,000
Bulang (Blang)	92,000
Ch'iang (Qiang)	225,000
Chinese (Han)	1,185,204,000
Cantonese (Yüeh [Yue])	*51,093,000*
Hakka	*28,612,000*
Hsiang (Xiang)	*39,853,000*
Kan (Gan)	*22,481,000*
● Mandarin	*918,652,000*
Min	*39,853,000*
Wu	*84,814,000*
Ching-p'o (Jingpo)	133,000
Chuang (Zhuang)	17,607,000
Daghur (Daur)	133,000
Evenk (Ewenki)	31,000
Gelo	501,000
Hani (Woni)	1,431,000
Hui	9,772,000
Kazak	1,267,000
Korean	2,187,000
Kyrgyz	164,000
Lahu	470,000
Li	1,267,000
Lisu	654,000
Manchu	11,169,000
Maonan	82,000
Miao	8,410,000
Mongol	5,467,000
Mulam	184,000
Na-hsi (Naxi)	317,000
Nu	31,000
Pai (Bai)	1,809,000
Pumi	31,000
Puyi (Chung-chia)	2,892,000
Salar	102,000
She	715,000
Shui	388,000
Sibo (Xibe)	194,000
Tai (Dai)	1,165,000
Tajik	41,000
Tibetan	5,222,000
Tu (Monguor)	215,000
T'u-chia (Tujia)	6,489,000
Tung (Dong)	2,861,000
Tung-hsiang (Dongxiang)	429,000
Uighur	8,206,000
Wa (Va)	399,000
Yao	2,422,000
Yi	7,470,000
Other	1,012,000
Colombia[1]	
Amerindian languages	352,000
Arawakan	39,000
Cariban	29,000
Chibchan	176,000
Other	107,000
English Creole	49,000
● Spanish	40,910,000
Comoros	
● Arabic	.
● Comorian	374,000
Comorian-French	65,000
Comorian-Malagasy	28,000
Comorian-Arabic	8,600
Comorian-Swahili	2,600
Comorian-French-other	20,000
● French	*104,000*
Other	2,600
Congo, Dem. Rep. of the[1]	
Boa	1,239,000
Chokwe	965,000
English	.
● French	*4,062,000*
Kongo	8,470,000
Kongo (lingua franca)	*16,250,000*
Lingala (lingua franca)	*36,562,000*
Luba	9,486,000
Lugbara	853,000
Mongo	7,109,000
Ngala and Bangi	3,047,000
Rundi	2,031,000
Rwanda	5,423,000
Swahili (lingua franca)	*25,390,000*
Teke	1,442,000
Zande (Azande)	3,219,000
Other	9,486,000
Congo, Rep. of the[1]	
Bobangi	39,000
● French	*1,960,000*
Kongo	1,908,000
Kota	39,000
Lingala (lingua franca)	.
Maka	65,000
Mbete	183,000

Major languages by country	Number of speakers
Mboshi	431,000
Monokutuba (lingua franca)	*2,221,000*
Punu	118,000
Sango	105,000
Teke	640,000
Other	196,000
Costa Rica	
Chibchan languages	12,500
Bribri	8,000
Cabécar	4,600
Chinese	8,000
English Creole	83,000
● Spanish	4,044,000
Other	11,000
Côte d'Ivoire[1]	
Akan (including Baule and Anyi)	4,996,000
● French	*8,326,000*
Gur ([Voltaic] including Senufo and Lobi)	1,946,000
Kru (including Bete)	1,748,000
Malinke (including Dyula and Bambara)	1,905,000
Southern Mande (including Dan and Guro)	1,280,000
Other (non-Ivoirian population)	4,756,000
Croatia	
● Croatian	4,252,000
Other	176,000
Cuba	
● Spanish	11,295,000
Cyprus (island)[1]	
● Greek	685,000
● Turkish	203,000
Other	32,000
Czech Republic[1]	
Bulgarian	3,000
● Czech	8,282,000
German	48,000
Greek	3,000
Hungarian	20,000
Moravian	1,313,000
Polish	60,000
Romanian	1,000
Romany	33,000
Russian	5,000
Ruthenian	2,000
Silesian	44,000
Slovak	312,000
Ukrainian	8,000
Other	70,000
Denmark[1]	
Arabic	39,000
● Danish	5,102,000
English	20,000
German	26,000
South Slavic languages	39,000
Turkish	47,000
Other	120,000
Djibouti[1]	
Afar	162,000
● Arabic	51,000
● French	*71,000*
Somali	203,000
Gadabursi	.
Issa	.
Issaq	.
Other	41,000
Dominica	
● English	.
English Creole	69,700
French Creole	*63,000*
Dominican Republic	
French (Haitian) Creole	176,000
● Spanish	8,540,000
East Timor	
Portuguese	80,000
Tetum (Tetun)	608,000
Other	310,000
Ecuador	
Quechuan (and other Amerindian languages)	915,000
● Spanish	12,088,000
Egypt[1]	
● Arabic	67,367,000
Other	818,000
El Salvador	
● Spanish	6,515,000
Equatorial Guinea[1]	
Bubi	51,000
Fang	401,000
● French	.
Krio (English Creole)	.
● Spanish	.
Other	41,000

Major languages by country	Number of speakers
Eritrea	
Cushitic languages	
Afar	180,000
Bilin	130,000
Hadareb (Beja)	160,000
Saho	120,000
Nilotic languages	
Kunama	110,000
Nara	90,000
Semitic languages	
Arabic (Rashaida)	10,000
Tigre	1,310,000
Tigrinya	2,031,000
Estonia[1]	
Belarusian	20,000
● Estonian	883,000
Finnish	12,000
Russian	380,000
Ukrainian	34,000
Other	25,000
Ethiopia[1]	
Afar	1,205,000
Agew (Awngi)	607,000
Amharic	18,668,000
Berta	149,000
Gedeo	548,000
Gumuz	129,000
Gurage	2,708,000
Hadya–Libida	1,085,000
Kaffa	717,000
Kambata	797,000
Kimant	199,000
Oromo (Oromita)	20,291,000
Sidamo	2,161,000
Somali	3,973,000
Tigrinya	3,764,000
Walaita	3,883,000
Other	5,705,000
Faroe Islands	
● Danish	.
● Faroese	48,000
Fiji[1]	
● English	*172,000*
Fijian	420,000
Hindi	361,000
Other	45,000
Finland	
Finnish	4,820,000
Russian	26,000
Sami (Lapp)	2,000
Swedish	295,000
Other	68,000
France	
Arabic[7]	1,514,000
English[7]	81,000
● French[7, 8, 9]	55,974,000
Basque	*102,000*
Breton	*813,000*
Catalan (Rousillonais)	*264,000*
Corsican	*81,000*
Dutch (Flemish)	*91,000*
German (Alsatian)	*1,016,000*
Occitan	*711,000*
Italian[7]	264,000
Polish[7]	51,000
Portuguese[7]	691,000
Spanish[7]	224,000
Turkish[7]	213,000
Other[7]	762,000
French Guiana	
Amerindian languages	3,200
● French	.
French/French Creoles	167,000
Other	7,600
French Polynesia[10]	
Chinese	13,600
● French	197,000
Polynesian languages	271,000
Tahitian	.
Other	48,000
Gabon[1]	
Fang	476,000
● French	*1,108,000*
Kota	44,000
Mbete	188,000
Mpongwe (Myene)	199,000
Punu, Sira, Nzebi	222,000
Teke	22,000
Other	177,000
Gambia, The[1]	
● English	.
Gambians	.
Aku (Krio)	8,300
Atlantic languages	.
Diola (Jola)	131,000
Fula (Fulani)	230,000
Manjak	23,000
Serer	34,000
Wolof	179,000
Mande languages	.
Bambara	10,000
Malinke	486,000

Major languages by country	Number of speakers
Soninke	109,000
Other	18,000
non-Gambians	196,000
Gaza Strip	
Arabic	1,297,000
Hebrew	6,800
Georgia	
Abkhaz	88,000
Armenian	343,000
Azerbaijani (Azeri)	274,000
● Georgian (Kartuli)	3,514,000
Ossetian	118,000
Russian	441,000
Other	157,000
Germany[2]	
● German	75,429,000
Greek	362,000
Italian	613,000
Kurdish	*402,000*
Polish	281,000
South Slavic languages	1,196,000
Turkish	2,120,000
Other	2,603,000
Ghana[1]	
Akan	10,732,000
● English	*1,436,000*
Ewe	2,431,000
Ga-Adangme	1,593,000
Gurma	681,000
Hausa (lingua franca)	*12,262,000*
Mole-Dagbani (Moore)	3,238,000
Yoruba	272,000
Other	1,520,000
Greece	
● Greek	10,834,000
Turkish	104,000
Other	63,000
Greenland[2]	
● Danish	7,100
● Greenlandic	50,000
Grenada	
● English	.
English/English Creole	102,000
Guadeloupe	
● French	.
French/French Creole	414,000
Other	21,000
Guam	
Asian languages	10,800
● Chamorro	34,000
● English	59,000
English (lingua franca)	*153,000*
Philippine languages	34,000
Other Pacific Island languages	10,500
Guatemala	
Garifuna (Black Carib)	26,000
Mayan languages	3,416,000
Cakchiquel	873,000
Kekchi	471,000
Mam	265,000
Quiché	985,000
● Spanish	6,311,000
Guernsey	
● English	63,000
Norman French	.
Guinea[1]	
Atlantic languages	
Basari-Konyagi	102,000
Fula (Fulani)	3,269 000
Kissi	511,000
Other	261,000
● French	*795,000*
Mande languages	
Kpelle	397,000
Loma	193,000
Malinke	1,964,000
Susu	931,000
Yalunka	250,000
Other	590,000
Other	11,400
Guinea-Bissau[1]	
Balante	411,000
Crioulo (Portuguese Creole)	*601,000*
Ejamat	32,000
French	*137,000*
Fula (Fulani)	295,000
Malinke	179,000
Mandyako	148,000
Mankanya	53,000
Pepel	137,000
● Portuguese	*148,000*
Other	106,000
Guyana	
Amerindian languages	
Arawakan	11,000
Cariban	17,000
● English	.
English/English Creoles	750,000

Language (continued)

Major languages by country	Number of speakers
Haiti	
● French	*1,535,000*
● Haitian (French) Creole	7,528,000
Hondures	
English Creole	13,000
Garifuna (Black Carib)	86,000
Miskito	12,000
● Spanish	6,611,000
Other	82,000
Hong Kong	
Chinese	
● Cantonese	6,059,000
Cantonese (lingua franca)	*6,549,000*
Chiu Chau	98,000
Fukien (Min)	130,000
Hakka	114,000
Putonghua (Mandarin)	76,000
Putonghua (lingua franca)	*1,239,000*
Sze Yap	27,000
● English	151,000
English (lingua franca)	*2,156,000*
Japanese	14,000
Pilipino (Filipino)	7,000
Other	164,000
Hungary	
German	40,000
● Hungarian	9,984,000
Romanian	10,000
Romany	51,000
Serbo-Croatian	20,000
Slovak	10,000
Other	20,000
Iceland[2]	
● Icelandic	278,000
Other	12,000
India	
Afro-Asiatic languages	
Arabic	32,000
Austroasiatic languages	
Ho	1,198,000
Kharia	284,000
Khasi	1,146,000
Korku	589,000
Munda	526,000
Mundari	1,083,000
Santhali	6,568,000
Savara (Sora)	347,000
Other Austroasiatic	200,000
Dravidian languages	
Gondi	2,680,000
Kannada	41,239,000
Khond	273,000
Koya	336,000
Kui	809,000
Kurukh (Oraon)	1,797,000
Malayalam	38,254,000
Tamil	66,745,000
Telugu	83,129,000
Tulu	1,955,000
Other Dravidian	694,000
English	221,000
● English (lingua franca)	*202,831,000*
Indo-Iranian (Indo-Aryan) languages	
Assamese	16,468,000
Bengali	87,638,000
Bhili (Bhilodi)	7,020,000
Barel	*586,000*
Bhilali	*586,000*
Gujarati	51,212,000
Halabi	673,000
● Hindi	424,684,000
Awadhi	*610,000*
Baghelkhandi	*1,745,000*
Bagri	*746,000*
Banjari	*1,114,000*
Bhojpuri	*29,090,000*
Bundelkhandi	*2,091,000*
Chhattisgarhi	*13,336,000*
Dhundhari	*1,219,000*
Garhwali	*2,354,000*
Harauti	*1,555,000*
Haryanvi	*452,000*
Hindi	*293,936,000*
Kangri	*620,000*
Khortha (Khotta)	*1,324,000*
Kumauni	*2,165,000*
Lamani (Banjari)	*2,585,000*
Magahi (Magadhi)	*13,305,000*
Maithili	*9,784,000*
Malvi	*3,741,000*
Mandeali	*557,000*
Marwari	*5,885,000*
Mewari	*2,659,000*
Nagpuri	*977,000*
Nimadi	*1,787,000*
Pahari	*2,743,000*
Rajasthani	*16,784,000*
Sadani (Sadri)	*1,976,000*
Surgujia	*1,314,000*
Surjapuri	*462,000*
Other Hindi dialects	*7,766,000*
Hindi (lingua franca)	*703,078,000*
Kashmiri	4,960,000
Khandeshi	1,230,000
Konkani	2,218,000
Lahnda	32,000
Marathi	78,673,000
Nepali (Gorkhali)	2,617,000
Oriya	35,333,000
Punjabi	29,437,000
Sanskrit	63,000
Sindhi	2,669,000
Kachchhi	*715,000*
Urdu	54,659,000
Sino-Tibetan languages	
Adi	200,000
Angami	126,000
Ao	221,000
Bodo/Boro	1,534,000
Dimasa	116,000
Garo	851,000
Karbi/Makir	462,000
Konyak	179,000
Lotha	105,000
Lushai (Mizo)	683,000
Manipuri (Meithei)	1,597,000
Miri/Mishing	494,000
Nissi/Dafla	221,000
Rabha	179,000
Sema	210,000
Tangkhul	126,000
Thado	137,000
Tripuri	872,000
Kokbarak	*652,000*
Other Sino-Tibetan languages	1,902,000
Other	5,560,000
Indonesia	
Balinese	3,655,000
Banjarese	3,844,000
Batak	4,884,000
Buginese	4,842,000
● Indonesian (Malay)	26,627,000
Javanese	86,697,000
Madurese	9,516,000
Minangkabau	5,189,000
Sundanese	34,673,000
Other	39,956,000
Iran[1]	
Armenian	317,000
Iranian languages	
Bakhtyari (Luri)	1,110,000
Balochi	1,511,000
● Farsi (Persian)	30,232,000
Farsi (lingua franca)	*54,843,000*
Gilaki	3,498,000
Kurdish	6,044,000
Luri	2,864,000
Mazandarani	2,388,000
Other	1,437,000
Semitic languages	
Arabic	1,427,000
Other	159,000
Turkic languages	
Afshari	750,000
Azerbaijani (Azeri)	11,138,000
Qashqa'i	845,000
Shahsavani	402,000
Turkish (mostly Pishagchi, Bayat, and Qajar)	476,000
Turkmen	1,036,000
Other	137,000
Other	486,000
Iraq[1]	
● Arabic	19,026,000
Assyrian	207,000
Azerbaijani (Azeri)	424,000
Kurdish	4,678,000
Persian	207,000
Other	141,000
Ireland	
● English	3,751,000
● Irish[11]	62,000
Irish	*1,571,000*
Isle of Man	
● English	77,000
Israel[12]	
● Arabic	1,165,000
● Hebrew	4,079,000
Russian	583,000
Other	646,000
Italy[1]	
Albanian	117,000
Catalan	29,000
French	302,000
German	302,000
Greek	39,000
● Italian	52,956,000
Rhaetian	722,000
Friulian	702,000
Ladin	20,000
Romany	107,000
Sardinian	1,492,000
Slovene	117,000
Other	127,000
Jamaica	
● English	...
English/English Creoles	2,492,000
Hindi and other Indian languages	51,000
Other	101,000
Japan[2]	
Ainu[1]	15,000
Chinese	241,000
English	80,000
● Japanese	126,406,000
Korean	663,000
Philippine languages	90,000
Other	50,000
Jersey	
● English	82,200
French	...
Norman French	*5,500*
Jordan[1]	
● Arabic	5,287,000
Armenian	54,000
Kabardian (Circassian)	54,000
Kazakhstan[1]	
Azerbaijani (Azeri)	89,000
Belarusian	149,000
German	456,000
● Kazakh	6,800,000
Korean	89,000
Russian	5,135,000
Tatar	288,000
Uighur	169,000
Ukrainian	734,000
Uzbek	337,000
Other	545,000
Kenya[1]	
Arabic	83,000
Bantu languages	
Bajun (Rajun)	73,000
Basuba	125,000
Embu	375,000
Gusii (Kisii)	1,949,000
Kamba	3,565,000
Kikuyu	6,609,000
Kuria	188,000
Luhya	4,378,000
Mbere	125,000
Meru	1,731,000
Nyika (Mijikenda)	1,512,000
Pokomo	83,000
Swahili	10,000
● Swahili (lingua franca)	*20,849,000*
Taita	313,000
Cushitic languages	
Oromo languages	
Boran	146,000
Gabbra	63,000
Gurreh	167,000
Orma	63,000
Somali languages	
Degodia	198,000
Ogaden	52,000
Somali	323,000
● English (lingua franca)	*2,815,000*
Nilotic languages	
Kalenjin	3,409,000
Luo	4,034,000
Masai	500,000
Sambur	156,000
Teso	271,000
Turkana	427,000
Other	709,000
Kiribati[1]	
● English	*22,000*
Kiribati (Gilbertese)	87,000
Tuvaluan (Ellice)	500
Other	600
Korea, North[1]	
Chinese	31,000
● Korean	22,435,000
Korea, South[1]	
Chinese	51,000
● Korean	47,874,000
Kosovo[13]	
● Albanian	. .
● Serbian	.
Kuwait	
● Arabic	1,900,000
Other	539,000
Kyrgyzstan[1]	
Azerbaijani (Azeri)	21,000
German	31,000
Kazakh	52,000
● Kyrgyz	3,021,000
● Russian	817,000
Tajik	41,000
Tatar	62,000
Ukrainian	83,000
Uzbek	714,000
Other	217,000
Laos[1]	
● Lao-Lum (Lao)	3,004,000
Lao-Soung (Miao [Hmong] and Man [Yao])	569,000
Lao-Tai (Tai)	733,000
Lao-Theung (Mon-Khmer)	1,301,000
Other[14]	52,000
Latvia[1]	
Belarusian	87,000
● Latvian	1,298,000
Lithuanian	29,000
Polish	48,000
Russian	755,000
Ukrainian	69,000
Other	39,000
Lebanon[1]	
● Arabic	3,468,000
Armenian	219,000
French	*896,000*
Other	42,000
Lesotho[1]	
● English	*429,000*
● Sotho	1,533,000
Zulu	270,000
Liberia[1]	
Atlantic (Mel) languages	
Gola	137,000
Kissi	137,000
● English	*661,000*
Krio (English Creole)	*2,939,000*
Kru languages	
Bassa	462,000
Belle	21,000
De (Dewoin, Dey)	11,000
Grebo	294,000
Krahn	126,000
Kru (Krumen)	241,000
Mande (Northern) languages	
Gbandi	95,000
Kpelle	640,000
Loma	189,000
Malinke (Mandingo)	168,000
Mende	21,000
Vai	116,000
Mande (Southern) languages	
Gio (Dan)	262,000
Mano	231,000
Other	168,000
Libya	
● Arabic	5,334,000
Berber	54,000
Other[15]	163,000
Liechtenstein[2]	
● German	30,000
Italian	1,100
Other	3,200
Lithuania[1]	
Belarusian	43,000
● Lithuanian	2,907,000
Polish	235,000
Russian	220,000
Ukrainian	23,000
Other	24,000
Luxembourg[2]	
Belgian	11,000
Dutch	2,800
English	3,500
French	13,500
German	7,800
Italian	14,200
Luxemburgian	197,000
Portuguese	182,200
Other	21,300
Macau	
Chinese	
● Cantonese (Yueh [Yue])	381,000
Mandarin	5,000
Other Chinese languages	40,000
English	2,000
● Portuguese	10,000
Other	5,000
Macedonia[1]	
Albanian	470,000
● Macedonian	1,368,000
Romany	46,000
Serbian	41,000
Turkish	82,000
Vlach	9,000
Other	39,000
Madagascar[1]	
● French	*2,464,000*
Malagasy	16,435,000
● English	...
Other	171,000
Malawi[1]	
Chewa (Maravi)	6,802,000
● English	*606,000*
Lomwe	2,144,000
Ngoni	746,000
Yao	1,538,000
Other	393,000
Malaysia	
Bajau	163,000
Chinese	1,464,000
Chinese-others	824,000
Dusun	260,000
English	130,000
English-others	282,000
English (lingua franca)	*7,700,000*
Iban	597,000
Iban-others	98,000
● Malay	10,877,000
Malay-others	3,861,000
Tamil	976,000
Tamil-others	11,000
Other	5,683,000
Maldives	
● Divehi (Maldivian)	285,000
Mali[1]	
Afro-Asiatic languages	
Berber languages	
Tamashek (Tuareg)	848,000
Semitic languages	
Arabic (Mauri)	185,000
● French	*1,195,000*
Niger-Congo languages	
Atlantic languages	
Dogon	467,000
Fula (Fulani) and Tukulor	1,619,000
Gur (Voltaic) languages	
Bwa (Bobo)	283,000
Moore (Mossi)	44,000
Senufo and Minianka	1,391,000
Mande languages	
Bambara	3,705,000
Bambara (lingua franca)	*9,236,000*
Bobo Fing	11,000
Dyula (Jula)	337,000
Malinke, Khasonke, and Wasulunka	771,000
Samo (Duun)	76,000
Soninke	1,021,000
Nilo-Saharan languages	
Songhai	837,000
Other	33,000
Malta[1]	
● English	24,000
English (lingua franca)	*210,000*
● Maltese	354,000
Italian (lingua franca)	*89,000*
Other	15,000
Marshall Islands[2]	
● English	*56,000*
● Marshallese	55,000
Other	1,700
Martinique	
● French	...
French/French Creole	380,000
Other	13,300
Mauritania[1]	
● Arabic	...
French	*274,000*
Fula (Fulani)	30,000
Hassaniyah Arabic	2,199,000
Soninke	71,000
Tukulor	142,000
Wolof	182,000
Zenaga	30,000
Other	41,000
Mauritius	
Bhojpuri	233,000
Bhojpuri-other	26,000
Chinese	4,000
● English	2,000
French	42,000
French Creole	754,000
French Creole-other	108,000
Hindi	16,000
Marathi	8,000
Tamil	9,000
Telugu	7,000
Urdu	8,000
Other	3,000
Mayotte[16]	
● Arabic	...
● French	68,000
Mahorais (local dialect of Comorian Swahili)	140,000
Other Comorian Swahili dialects	62,000
Malagasy	54,000
Other	10,000
Mexico	
Amerindian languages	7,278,000
Amuzgo	50,000
Aztec (Nahuatl)	1,744,000

Major languages by country	Number of speakers
Chatino	49,000
Chinantec	159,000
Chocho	1,200
Chol	194,000
Chontal	53,000
Cora	20,000
Cuicatec	16,000
Huastec	180,000
Huave	17,000
Huichol	38,000
Kanjobal	11,000
Mame	11,000
Mayo	44,000
Mazahua	172,000
Mazatec	254,000
Mixe	139,000
Mixtec	538,000
Otomí	360,000
Popoluca	66,000
Purépecha (Tarasco)	143,000
Tarahumara	92,000
Tepehua	11,000
Tepehuan	31,000
Tlapanec	123,000
Tojolabal	46,000
Totonac	287,000
Triqui	25,000
Tzeltal	344,000
Tzotzil	362,000
Yaqui	16,000
Yucatec (Mayan)	948,000
Zapotec	533,000
Zoque	64,000
Other	496,000
● Spanish	85,871,000
Spanish-Amerindian languages	*5,987,000*
Micronesia	
Chuukese (Trukese)/ Mortlockese	56,000
English	1,500
Kosraean	7,700
Pohnpeian	28,000
Polynesian languages	1,600
Woleaian	4,700
Yapese	6,000
Other	1,400
Moldova	
Bulgarian	70,000
Gagauz	139,000
● Romanian (Moldovan)	2,646,000
Russian	985,000
Ukrainian	368,000
Other	60,000
Monaco[2]	
English	2,100
● French	13,600
Italian	5,200
Monegasque	5,200
Other	6,300
Mongolia[1]	
Bayad	49,000
Buryat	43,000
Darhat	18,000
Dariganga	35,000
Dörbet	68,000
Dzakhchin	27,000
Kazakh	147,000
● Khalkha (Mongolian)	1,962,000
Khalkha (lingua franca)	*2,232,000*
Ould	10,000
Torgut	13,000
Tuvan (Uryankhai)	25,000
Other	98,000
Montenegro[17]	
● Montenegrin	
Morocco	
● Arabic	19,390,000
Berber	9,845,000
French	*11,905,000*
Other	600,000
Mozambique	
Bantu languages	
Chuabo	1,167,000
Lomwe	1,410,000
Makua	4,883,000
Sena	1,303,000
Tsonga (Changana)	2,120,000
Other Bantu languages	6,128,000
● Portuguese	1,206,000
Portuguese (lingua franca)	*7,363,000*
Other	350,000
Myanmar (Burma)[1]	
● Burmese	29,312,000
Burmese (lingua franca)	*34,017,000*
Chin	927,000
Kachin (Ching-p'o)	581,000
Karen	2,648,000
Kayah	173,000
Mon	1,029,000
Rakhine (Arakanese)	1,915,000
Shan	3,595,000
Other	2,332,000
Namibia	
Afrikaans	183,000
Caprivi	90,000
● English	15,000
English (lingua franca)	*370,000*
German	17,000
Herero	154,000
Kavango (Okavango)	187,000
Nama	240,000
Ovambo (Ambo [Kwanyama])	976,000
San (Bushman)	37,000
Tswana	8,700
Other	18,500
Nauru	
Chinese	1,100
English	1,000
English (lingua franca)	*11,000*
Kiribati (Gilbertese)	2,200
Nauruan	7,300
Tuvaluan (Ellice)	1,100
Nepal	
Austroasiatic (Munda) languages	
Santhali	39,000
English	*7,147,000*
Indo-Aryan languages	
Bengali	39,000
Bhojpuri	1,801,000
Dhanwar	29,000
Hindi	225,000
Hindi (Awadhi dialect)	490,000
Maithili	2,869,000
● Nepali (Eastern Pahari)	12,169,000
Rajbansi	108,000
Tharu	1,302,000
Urdu	264,000
Tibeto-Burman languages	
Bhutia (Sherpa)	157,000
Chepang	29,000
Gurung	294,000
Limbu	333,000
Magar	558,000
Newari	901,000
Rai and Kiranti	578,000
Tamang	1,185,000
Thakali	9,800
Thami	20,000
Other	773,000
Netherlands, The[2]	
Arabic	133,000
● Dutch	15,556,000
Dutch and Frisian	*613,000*
Turkish	105,000
Other	444,000
Netherlands Antilles	
● Dutch	
English	14,000
Papiamento	145,000
Other	10,000
New Caledonia[1]	
● French	75,000
Indonesian	5,000
Melanesian languages	99,000
Polynesian languages	26,000
Vietnamese	3,100
Other	12,000
New Zealand	
● English	3,483,000
English-Māori	155,000
● Māori	15,000
Other	349,000
Nicaragua	
English Creole	31,000
Misumalpan languages	
Miskito	90,000
Sumo	9,000
● Spanish	5,350,000
Other	2,300
Niger[1]	
Atlantic languages	
Fula (Fulani)	1,106,000
Berber languages	
Tamashek (Tuareg)	1,185,000
Chadic languages	
Hausa	6,029,000
Hausa (lingua franca)	*8,016,000*
● French	*1,694,000*
Gur (Voltaic) languages	
Gurma	34,000
Saharan languages	
Kanuri	508,000
Teda (Tubu)	45,000
Semitic languages	
Arabic	34,000
Songhai and Zerma	2,416,000
Other	23,000
Nigeria[1]	
Arabic	305,000
Bura	1,932,000
Edo	4,271,000
● English/English Creole (lingua franca)	*56,943,000*
Fula (Fulani)	14,134,000
Hausa	26,743,000
Hausa (lingua franca)	*63,044,000*
Ibibio	7,016,000
Igbo (Ibo)	22,574,000
Ijo (Ijaw)	2,237,000
Kanuri	5,186,000
Nupe	1,525,000
Tiv	2,847,000
Yoruba	26,743,000
Other	9,762,000
Northern Mariana Islands	
● Carolinian	3,100
● Chamorro	16,000
Chinese	16,900
● English	8,000
English (lingua franca)	*66,000*
Philippine languages	17,600
Other Pacific Island languages	3,900
Other	6,700
Norway[2]	
Danish	18,000
English	24,000
● Norwegian	4,411,000
Swedish	13,000
Other	102,000
Oman	
● Arabic (Omani)	2,012,000
Other	609,000
Pakistan	
Balochi	4,484,000
Brahui	1,821,000
English (lingua franca)	*16,842,000*
Pashto	19,579,000
Punjabi	
Hindko	3,621,000
Punjabi	71,778,000
Sindhi	
Saraiki	14,642,000
Sindhi	17,537,000
● Urdu	11,326,000
Other	4,242,000
Palau	
Chinese	300
● English	600
English (lingua franca)	*20,000*
● Palauan	17,000
Philippine languages	2,000
Other	700
Panama	
Amerindian languages	
Bokota	5,500
Chibchan	
Guaymí (Ngobe Bugle)	166,000
Kuna	63,000
Teribe	3,000
Chocó	
Emberá	20,000
Wounaan	3,000
Arabic	18,000
Chinese	9,000
English	
English Creoles	436,000
● Spanish	2,393,000
Papua New Guinea[1]	
● English	*159,000*
Melanesian languages	1,121,000
Motu	*181,000*
Papuan languages	4,349,000
Tok Pisin (English Creole)	*3,624,000*
Other	113,000
Paraguay	
German	51,000
● Guarani	2,267,000
Guarani-Spanish	2,739,000
Portuguese	174,000
● Spanish	369,000
Other	41,000
Peru	
Amerindian languages	
● Aymara	624,000
● Quechua	4,465,000
Other	190,000
● Spanish	21,657,000
Other	212,000
Philippines	
Aklanon	595,000
Bantoanon	74,000
Bicol	4,614,000
Bilaan	43,000
Bontoc	64,000
Butuanon	85,000
Cebuano	18,882,000
Chavacano	500,000
Chinese	74,000
Davaweno (Mansaka)	553,000
● English (lingua franca)	*42,207,000*
● Filipino	23,761,000
Hiligaynon	7,389,000
Ibaloi (Nabaloi)	138,000
Ibanag	298,000
Ifugao	223,000
Ilocano	7,559,000
Ilongot	117,000
Kalinga	138,000
Kankanai	308,000
Kinaray-a (Hamtikanon)	510,000
Maguindanao	1,180,000
Manobo	542,000
Maranao	1,031,000
Masbateño	564,000
Palawano	85,000
Pampango	2,424,000
Pangasinan	1,467,000
Romblon	255,000
Samal	510,000
Sambal	213,000
Subanon	330,000
Surigaonon	595,000
Tau Sug	936,000
Tboli	106,000
Tinggian	74,000
Tiruray	74,000
Waray-Waray	3,094,000
Yakan	160,000
Other	1,595,000
Poland	
Belarusian	190,000
German	500,000
● Polish	37,704,000
Ukrainian	230,000
Portugal[2]	
● Portuguese	10,079,000
Other	102,000
Puerto Rico	
● English	543,000
● Spanish	3,297,000
Other	39,000
Qatar[2]	
● Arabic	250,000
Other[18]	376,000
Reunion	
Chinese	21,000
Comorian	21,000
● French	*232,000*
French Creole	697,000
Malagasy	11,000
Tamil	*148,000*
Other	11,000
Romania[1]	
Bulgarian	8,000
Czech	4,000
German	64,000
Hungarian	1,427,000
Polish	4,000
● Romanian	19,346,000
Romany (Tigani)	540,000
Russian	43,000
Serbo-Croatian	26,000
Slovak	22,000
Tatar	22,000
Turkish	43,000
Ukrainian	64,000
Other	43,000
Russia[1]	
Adyghian	119,000
Armenian	713,000
Avar	604,000
Azerbaijani (Azeri)	336,000
Bashkir	1,375,000
Belarusian	972,000
Buryat	453,000
Chechen	898,000
Chuvash	1,722,000
Dargin	353,000
Georgian (Kartuli)	132,000
German	788,000
Ingush	253,000
Kabardian	367,000
Kalmyk	166,000
Karachay	150,000
Kazakh	569,000
Komi-Permyak	147,000
Komi-Zyryan	354,000
Kumyk	286,000
Lak	117,000
Lezgi (Lezgian)	295,000
Mari	66,000
Mordvin	723,000
Ossetian	463,000
Romanian	95,000
Romany	130,000
● Russian	118,000,000
Tabasaran	97,000
Tatar	5,519,000
Tuvan	198,000
Udmurt	713,000
Ukrainian	3,446,000
Uzbek	127,000
Yakut	441,000
Other	3,836,000
Rwanda	
● English	
● French	*576,000*
● Rwanda	8,387,000
St. Kitts and Nevis	
● English	
English/English Creole	46,400
St. Lucia	
● English	32,000
English/French Creole	130,000
St. Vincent and the Grenadines	
● English	
English/English Creole	112,000
Other	1,000
Samoa	
● English	1,000
● Samoan	85,000
Samoan-English	93,000
San Marino[1]	
● Italian (Romagnolo)	29,000
São Tomé and Príncipe	
Crioulo (Portuguese Creole)	124,000
English	
French	1,000
● Portuguese	
Other	17,000
Saudi Arabia[1]	
● Arabic	22,809,000
Other	1,199,000
Senegal	
● French	*3,547,000*
Senegalese	
Bambara	91,000
Diola	497,000
Fula (Fulani)-Tukulor	2,199,000
Malinke (Mandingo)	375,000
Serer	1,267,000
Soninke	132,000
Wolof	4,865,000
Wolof (lingua franca)	*8,108,000*
Other	446,000
non-Senegalese	223,000
Serbia[19]	
Albanian	1,738,000
Hungarian	346,000
Macedonian	49,000
Romanian	40,000
Romany	148,000
● Serbian	7,920,000
Slovak	69,000
Vlach	20,000
Other	198,000
Seychelles	
English	3,000
English (lingua franca)	*29,000*
French	1,000
French (lingua franca)	*78,000*
Seselwa (French Creole)	75,000
Other	3,000
Sierra Leone[1]	
Atlantic languages	
Bullom-Sherbro	190,000
Fula (Fulani)	190,000
Kissi	114,000
Limba	418,000
Temne	1,578,000
● English	*475,000*
Krio (English Creole [lingua franca])	*4,182,000*
Mande languages	
Kono-Vai	257,000
Kuranko	171,000
Mende	1,720,000
Susu	76,000
Yalunka	171,000
Other	86,000
Singapore[1]	
Chinese	3,253,000
● English	*1,585,000*
● Malay	589,000
● Mandarin Chinese	*1,837,000*
● Tamil (and other Indian languages)	335,000
Other	56,000
Slovakia[1]	
Czech and Silesian	59,000
German	5,000
Hungarian	569,000
Polish	3,000
Romany	90,000

Language (continued)

Major languages by country	Number of speakers
Ruthenian (Rusyn) and Ukrainian	35,000
● Slovak	4,626,000
Other	15,000
Slovenia	
Hungarian	9,000
Serbo-Croatian	156,000
● Slovene	1,732,000
Other	74,000
Solomon Islands[1]	
● English	*9,000*
Melanesian languages	385,000
Papuan languages	39,000
Polynesian languages	16,000
Solomon Island Pidgin (English Creole)	*157,000*
Other	10,000
Somalia[1]	
● Arabic	
English	
● Somali	7,892,000
Other	133,000
South Africa	
● Afrikaans	5,961,000
● English	3,675,000
Nguni	
● Ndebele	717,000
● Swazi	1,210,000
● Xhosa	7,888,000
● Zulu	10,667,000
Sotho	
● North Sotho (Pedi)	4,213,000
● South Sotho	3,540,000
● Tswana (Western Sotho)	3,675,000
● Tsonga	1,972,000
● Venda	1,031,000
Other	224,000
Spain	
Basque (Euskera)	641,000
● Castilian Spanish	30,373,000
Catalan (Catalá)	6,886,000
Galician (Gallego)	2,604,000
Other	305,000
Sri Lanka	
English[20]	10,000
English-Sinhala	1,051,000
English-Sinhala-Tamil	684,000
English-Tamil	218,000
● Sinhala	11,510,000
Sinhala-Tamil	1,785,000
● Tamil	3,748,000
Other	60,000
Sudan, The[1]	
● Arabic	18,818,000
Arabic (lingua franca)	*22,816,000*
Bari	934,000
Beja	2,434,000
Dinka	4,400,000
● English	
Fur	782,000
Lotuko	565,000
Nubian languages	3,086,000
Nuer	1,869,000
Shilluk	652,000
Zande (Azande)	1,032,000
Other	3,542,000
Suriname	
● Dutch	*111,000*
English/English Creole	*415,000*
Sranantonga	172,000
Sranantonga-other	172,000
Other (mostly Hindi, Javanese, and Saramacca)	91,000
Swaziland[1]	
● English	*50,000*
● Swazi (Swati)	976,000
Zulu	20,000
Other	81,000
Sweden[3]	
Arabic	69,000
Danish	41,000
English	32,000
Finnish	211,000
German	46,000
Iranian languages[1]	50,000
Norwegian	47,000
Polish	39,000
South Slavic languages[1]	117,000
Spanish	57,000
● Swedish	8,021,000
Turkish	29,000
Other	199,000
Switzerland	
● French	1,410,000
● German	4,669,000
● Italian	562,000
Romansch	41,000
Other	654,000
Syria[1]	
● Arabic	15,829,000
Kurdish	1,585,000
Other	173,000
Taiwan	
Austronesian languages	
Ami	140,000
Atayal	91,000
Bunun	43,000
Paiwan	69,000
Puyuma	10,000
Rukai	11,000
Saisiyat	6,000
Tsou	7,000
Yami	4,000
Chinese languages	
Hakka	2,481,000
● Mandarin	4,535,000
Min (South Fukien)	15,049,000
Other	122,000
Tajikistan	
Russian	633,000
● Tajik (Tojik)	4,066,000
Uzbek	1,515,000
Other	322,000
Tanzania[1]	
Chaga (Chagga), Pare	1,719,000
● English	*3,775,000*
Gogo	1,381,000
Ha	1,202,000
Haya	2,066,000
Hehet	2,414,000
Iramba	1,003,000
Luguru	1,719,000
Luo	288,000
Makonde	2,066,000
Masai	348,000
Ngoni	467,000
Nyakusa	1,898,000
Nyamwesi (Sukuma)	7,401,000
Shambala	1,500,000
● Swahili	3,100,000
Swahili (lingua tranca)	*31,790,000*
Tatoga	258,000
Yao	854,000
Other	5,394,000
Thailand[1]	
Chinese	7,764,000
Karen	226,000
Malay	2,328,000
Mon-Khmer languages	
Khmer	810,000
Kuy	687,000
Other	226,000
Tai languages	
Lao	17,221,000
● Thai (Siamese)	33,662,000
Other	441,000
Other	656,000
Togo[1]	
Atlantic (Mel) languages	
Fula (Fulani)	74,000
Benue-Congo languages	
Ana (Ana-Ife)	136,000
Nago	14,000
Yoruba	11,000
Chadic languages	
Hausa	15,000
● French	*2,704,000*
Gur (Voltaic) languages	
Basari	95,000
Chakossi (Akan)	64,000
Chamba	53,000
Dye (Gangam)	51,000
Gurma	184,000
Kabre	748,000
Konkomba	77,000
Kotokoli (Tem)	313,000
Moba	292,000
Moore (Mossi)	14,000
Namba (Lamba)	166,000
Naudemba (Losso)	223,000
Tamberma	30,000
Yanga	16,000
Kwa languages	
Adele	11,000
Adja (Aja)	170,000
Ahlo	10,000
Akposo	145,000
Ane (Basila)	307,000
Anlo	4,300
Anyaga	11,000
Ewe	1,259,000
Fon	54,000
Hwe	6,500
Kebu	63,000
Kpessi	4,300
Peda-Hula (Pla)	22,000
Watyi (Ouatchi)	559,000
Other	229,000
Tonga	
● English	*31,000*
● Tongan	100,000
Other	2,000
Trinidad and Tobago	
● English	
English Creole[21]	37,000
Hindi	45,000
Trinidad English	1,195,000
● Other	3,000
Tunisia	
● Arabic	6,911,000
Arabic-French	2,596,000
Arabic-French-English	309,000
Arabic-other	10,000
Other-no Arabic	31,000
Other	31,000
Turkey[1]	
Arabic	967,000
Kurdish[22]	7,482,000
● Turkish	61,825,000
Other	323,000
Turkmenistan[1]	
Armenian	37,000
Azerbaijani (Azeri)	40,000
Balochi	40,000
Kazakh	96,000
Russian	328,000
Tatar	40,000
● Turkmen	3,731,000
Ukrainian	25,000
Uzbek	446,000
Other	85,000
Tuvalu	
English	
Kiribati (Gilbertese)	800
Tuvaluan (Ellice)	9,400
Uganda[1]	
Bantu languages	
Amba	98,000
Ganda (Luganda)	4,603,000
Gisu (Masaba)	1,145,000
Gwere	415,000
Kiga (Chiga)	2,127,000
Konjo	556,000
Nkole (Nyankole and Hororo)	2,727,000
Nyole	349,000
Nyoro	753,000
Ruli	109,000
Rundi	153,000
Rwanda	818,000
Samia	338,000
Soga	2,094,000
● Swahili	
Swahili (lingua franca)	*8,944,000*
Toro	742,000
Central Sudanic languages	
Lugbara	1,200,000
Madi	196,000
Ndo	251,000
● English	*2,727,000*
Nilotic languages	
Acholi	1,124,000
Alur	600,000
Kakwa	131,000
Karamojong	535,000
Kumam	175,000
Lango	1,494,000
Padhola	382,000
Sebei (Kupsabiny)	164,000
Teso	1,527,000
Other (mostly Gujarati and Hindi)	633,000
Ukraine	
Belarusian	145,000
Bulgarian	154,000
Hungarian	145,000
Polish	29,000
Romanian	318,000
Russian	15,714,000
● Ukrainian	30,937,000
Other	414,000
United Arab Emirates[2]	
● Arabic	1,606,000
Other[16]	2,212,000
United Kingdom	
● English	57,559,000
Scots-Gaelic	79,000
Welsh	565,000
Other	961,000
United States	
Amharic	42,000
Arabic	683,000
Armenian	225,000
Bengali	53,000
Cajun	42,000
Chinese (including Formosan)	2,247,000
Czech	117,000
Danish	42,000
Dutch	180,000
English	239,407,000
English (lingua franca)	*282,724,000*
Finnish	64,000
French	2,150,000
French Creole (mostly Haitian)	233,000
German	1,537,000
Greek	406,000
Gujarati	262,000
Hebrew	217,000
Hindi (including Urdu)	645,000
Hungarian	131,000
Ilocano	53,000
Italian	1,121,000
Japanese	531,000
Korean	994,000
Kru (Gullah)	85,000
Lithuanian	74,000
Malayalam	42,000
Miao (Hmong)	187,000
Mon-Khmer (mostly Cambodian)	202,000
Navajo	198,000
Norwegian	106,000
Pennsylvania Dutch	106,000
Persian	347,000
Polish	742,000
Portuguese	627,000
Punjabi	64,000
Romanian	85,000
Russian	785,000
Samoan	42,000
Serbo-Croatian	260,000
Slovak	106,000
Spanish	31,230,000
Swedish	95,000
Syriac	42,000
Tagalog	1,361,000
Tai (including Laotian)	300,000
Turkish	53,000
Ukrainian	127,000
Vietnamese	1,122,000
Yiddish	199,000
Other	858,000
Uruguay	
● Spanish	3,235,700
Other	114,000
Uzbekistan[1]	
Kazakh	1,046,000
Russian	1,542,000
Tajik	1,232,000
Tatar	414,000
● Uzbek	19,429,000
Other	1,977,000
Vanuatu[2,3]	
● Bislama (English Creole)	116,000
● English	58,000
● French	29,000
Other	1,900
Venezuela	
Amerindian languages	
Goajiro	170,000
Warrau (Warao)	21,000
Other	160,000
● Spanish	24,795,000
Other	553,000
Vietnam[1]	
Bahnar	177,000
Cham	125,000
Chinese (Hoa)	1,142,000
French	*395,000*
Hre	125,000
Jarai	312,000
Khmer	1,132,000
Koho	114,000
Man (Mien, or Yao)	602,000
Miao (Meo, or Hmong)	716,000
Mnong	83,000
Muong	1,162,000
Nung	903,000
Rade (Rhadê)	249,000
Roglai	96,000
San Chay (Cao Lan)	146,000
San Diu	125,000
Sedang	125,000
Stieng	62,000
Tai	1,329,000
Tho (Tay)	1,515,000
● Vietnamese	70,972,000
Other	168,000
Virgin Islands (U.S.)	
● English	91,000
French	2,800
Spanish	15,000
Other	2,800
West Bank[24]	
Arabic	2,275,000
Hebrew	192,000
Western Sahara	
Arabic	262,000
Yemen[1]	
● Arabic	19,930,000
Other	80,000
Zambia[25]	
Bemba group	
Bemba	3,217,000
Bemba (lingua tranca)	*5,643,000*
Bisa	124,000
Lala	260,000
Lamba	237,000
Other	451,000
● English	124,000
English (lingua tranca)	*2,032,000*
Lozi (Barotse) group	
Lozi (Barotse)	688,000
Other	124,000
Mambwe group	
Lungu	79,000
Mambwe	124,000
Mwanga (Winawanga)	148,000
Other	11,000
North-Western group	
Kaonde	248,000
Lunda	214,000
Luvale (Luena)	192,000
Other	293,000
Nyanja (Maravi) group	
Chewa	621,000
Ngoni	181,000
Nsenga	463,000
Nyanja (Maravi)	847,000
Nyanja (lingua franca)	*2,822,000*
Other	68,000
Tonga (Ila-Tonga) group	
Ila	102,000
Lenje	169,000
Tonga	1,185,000
Other	135,000
Tumbuka group	
Senga	79,000
Tumbuka	316,000
Other	11,000
Other	102,000
Zimbabwe	
● English	258,000
English (lingua franca)	*5,477,000*
Ndebele (Nguni)	1,902,000
Nyanja	269,000
Shona	8,453,000
Other	837,000

[1]Figures given represent ethnolinguistic groups. [2]Data refer to nationality (usually resident aliens holding foreign passports). [3]Data are partly based on place of residence. [4]Majority of population speak Moore (language of the Mossi), Dyula is language of commerce [5]Swahili also spoken [6]English and French also spoken. [7]Based on "nationality" at 1982 census. [8]Includes naturalized citizens [9]French is the universal language throughout France; traditional dialects and minority languages are retained regionally in the approximate numbers shown, however [10]Data reflect multilingualism, 2000 population estimate is 233,000. [11]Refers to Irish speakers in Gaeltacht areas. [12]Includes the population of the Golan Heights and East Jerusalem; excludes the Israeli population in the West Bank and Gaza Strip [13]Kosovo included in Serbia [14]English and French also spoken [15]English and Italian also spoken. [16]Data reflect ability to speak the language, not mother tongue; 2003 population estimate is 160,000 [17]Montenegro included in Serbia [18]Mostly Pakistanis, Indians, and Iranians. [19]Includes Montenegro and Kosovo. [20]English has official status as the "link language" between Sinhala and Tamil [21]Spoken on Tobago only [22]Other estimates of the Kurdish population range from 6 percent to 20–25 percent [23]Data reflect multilingualism; 2000 population is 190,000 [24]Excludes East Jerusalem [25]Groups are officially defined geographic divisions; elements comprising them are named by language

Religion

The following table presents statistics on religious affiliation for each of the countries of the world. An assessment was made for each country of the available data on distribution of religious communities within the total population; the best available figures, whether originating as census data, membership figures of the churches concerned, or estimates by external analysts in the absence of reliable local data, were applied as percentages to the estimated 2001 midyear population of the country to obtain the data shown below.

Several concepts govern the nature of the available data, each useful separately but none the basis of any standard of international practice in the collection of such data. The word "affiliation" was used above to describe the nature of the relationship joining the religious bodies named and the populations shown. This term implies some sort of formal, usually documentary, connection between the religion and the individual (a baptismal certificate, a child being assigned the religion of its parents on a census form, maintenance of one's name on the tax rolls of a state religion, etc.) but says nothing about the nature of the individual's personal religious practice, in that the individual may have lapsed, never been confirmed as an adult, joined another religion, or may have joined an organization that is formally atheist.

The user of these statistics should be careful to note that not only does the nature of the affiliation (with an organized religion) differ greatly from country to country, but the social context of religious practice does also. A country in which a single religion has long been predominant will often show more than 90% of its population to be *affiliated*, while in actual fact, no more than 10% may actually *practice* that religion on a regular basis. Such a situation often leads to undercounting of minority religions (where someone [head of household, communicant, child] is counted at all), blurring of distinctions seen to be significant elsewhere (a Hindu country may not distinguish Protestant [or even Christian] denominations; a Christian country may not distinguish among its Muslim or Buddhist citizens), or double-counting in countries where an individual may conscientiously practice more than one "religion" at a time.

Until 1989 communist countries had for long consciously attempted to ignore, suppress, or render invisible religious practice within their borders. Countries with large numbers of adherents of traditional, often animist, religions and belief systems usually have little or no formal methodology for defining the nature of local religious practice. On the other hand, countries with strong missionary traditions, or good census organizations, or few religious sensitivities may have very good, detailed, and meaningful data.

The most comprehensive works available are DAVID B BARRETT (ed.), *World Christian Encyclopedia* (2001); and PETER BRIERLEY, *World Churches Handbook* (1997).

Religion

Religious affiliation	2001 population
Afghanistan	
Sunnī Muslim	23,090,000
Shī'ī Muslim	2,310,000
other	490,000
Albania	
Muslim	1,200,000
Roman Catholic	520,000
Albanian Orthodox	320,000
other	1,050,000
Algeria	
Sunnī Muslim	30,550,000
Ibādīyah Muslim	180,000
other	90,000
American Samoa	
Congregational	23,800
Roman Catholic	11,300
other	23,400
Andorra	
Roman Catholic	60,000
other	7,000
Angola	
Roman Catholic	6,440,000
Protestant	1,550,000
African Christian	710,000
other	1,660,000
Antigua and Barbuda	
Protestant	30,000
Anglican	23,000
Roman Catholic	8,000
other	10,000
Argentina	
Roman Catholic	29,920,000
Protestant	2,040,000
Muslim	730,000
Jewish	500,000
nonreligious	880,000
other	3,430,000
Armenia	
Armenian Apostolic (Orthodox)	2,454,000
other	1,353,000
Aruba	
Roman Catholic	80,000
other	18,000
Australia	
Roman Catholic	5,230,000
Anglican	4,260,000
Uniting Church	1,460,000
Presbyterian	740,000
other Protestant	1,400,000
Orthodox	540,000
nonreligious	3,220,000
other	2,510,000
Austria	
Roman Catholic	6,060,000
Protestant (mostly Lutheran)	430,000
atheist and nonreligious	690,000
other	890,000
Azerbaijan	
Shī'ī Muslim	5,299,000
Sunnī Muslim	2,271,000
other	535,000
Bahamas, The	
Protestant	135,000
Roman Catholic	50,000
Anglican	32,000
other	77,000
Bahrain	
Shī'ī Muslim	420,000
Sunnī Muslim	140,000
other	140,000
Bangladesh	
Muslim	112,660,000
Hindu	16,260,000
other	2,360,000
Barbados	
Anglican	89,000
Protestant	80,000
Roman Catholic	12,000
other	88,000
Belarus	
Belarusian Orthodox	3,151,000
Roman Catholic	1,772,000
other	5,062,000
Belgium	
Roman Catholic	8,310,000
nonreligious	600,000
other	1,360,000
Belize	
Roman Catholic	143,000
Protestant	67,000
Anglican	17,000
other	20,000
Benin	
Voodoo (traditional beliefs)	3,390,000
Roman Catholic	1,370,000
Muslim	1,320,000
other	500,000
Bermuda	
Anglican	23,700
Methodist	10,400
Roman Catholic	8,800
other	20,900
Bhutan	
Lamaistic Buddhist	510,000
Hindu	140,000
other	40,000
Bolivia	
Roman Catholic	7,540,000
Protestant	770,000
other	210,000
Bosnia and Herzegovina	
Sunnī Muslim	1,690,000
Serbian Orthodox	1,180,000
Roman Catholic	710,000
other	350,000
Botswana	
African Christian	490,000
Protestant	170,000
Roman Catholic	60,000
other (mostly traditional beliefs)	870,000
Brazil	
Roman Catholic (including syncretic Afro-Catholic cults having Spiritist beliefs and rituals)	124,470,000
Evangelical Protestant	39,850,000
other	7,800,000
Brunei	
Muslim	222,000
other	121,000
Bulgaria	
Bulgarian Orthodox	5,690,000
Muslim (mostly Sunnī)	940,000
other	1,320,000
Burkina Faso	
Muslim	5,960,000
traditional beliefs	4,180,000
Christian	2,040,000
other	80,000
Burundi	
Roman Catholic	4,050,000
nonreligious	1,160,000
other (mostly Protestant)	1,020,000
Cambodia	
Buddhist	10,780,000
Chinese folk-religionist	600,000
traditional beliefs	550,000
Muslim	290,000
other	500,000
Cameroon	
Roman Catholic	4,180,000
traditional beliefs	3,750,000
Muslim	3,350,000
Protestant	3,270,000
other	1,250,000
Canada	
Roman Catholic	14,010,000
Protestant	8,620,000
Anglican	2,490,000
Eastern Orthodox	440,000
Jewish	360,000
Muslim	290,000
Buddhist	190,000
Hindu	180,000
Sikh	170,000
nonreligious	3,880,000
other	380,000
Cape Verde	
Roman Catholic	370,000
other	35,000
Central African Republic	
Roman Catholic	660,000
Muslim	560,000
traditional beliefs	550,000
Protestant	520,000
other	1,290,000
Chad	
Muslim	4,690,000
Roman Catholic	1,770,000
Protestant	1,250,000
traditional beliefs	640,000
other	350,000
Chile	
Roman Catholic	11,810,000
Evangelical Protestant	1,910,000
other	1,690,000
China	
nonreligious	661,390,000
Chinese folk-religionist	256,260,000
atheist	152,990,000
Buddhist	108,110,000
Christian	76,540,000
Muslim	18,360,000
traditional beliefs	1,280,000
Colombia	
Roman Catholic	39,590,000
other	3,480,000
Comoros	
Sunnī Muslim	555,000
other	11,000
Congo, Dem. Rep. of the	
Roman Catholic	21,990,000
Protestant	16,950,000
African Christian	7,170,000
traditional beliefs	5,740,000
Muslim	750,000
other	1,040,000
Congo, Rep. of the	
Roman Catholic	1,430,000
Protestant	490,000
African Christian	360,000
other	610,000
Costa Rica	
Roman Catholic	3,380,000
Protestant	360,000
other	190,000
Côte d'Ivoire	
Muslim	6,340,000
Roman Catholic	3,400,000
traditional beliefs	2,790,000
nonreligious	2,220,000
Protestant	870,000
other	770,000
Croatia	
Roman Catholic	3,890,000
Serbian Orthodox	250,000
Sunnī Muslim	100,000
Protestant	30,000
other	130,000
Cuba	
Roman Catholic	4,420,000
Protestant	270,000
other (mostly Santeria)	6,500,000
Cyprus	
Greek Orthodox	630,000
Muslim (mostly Sunnī)	200,000
other (mostly Christian)	40,000
Czech Republic	
Roman Catholic	4,010,000
Evangelical Church of Czech Brethren	200,000
Czechoslovak Hussite	180,000
Silesian Evangelical	30,000
Eastern Orthodox	20,000
atheist and nonreligious	4,100,000
other	1,730,000
Denmark	
Evangelical Lutheran	4,600,000
Muslim	120,000
other	640,000
Djibouti	
Sunni Muslim	434,000
other	27,000
Dominica	
Roman Catholic	50,000
Protestant	12,000
other	10,000
Dominican Republic	
Roman Catholic	7,110,000
Protestant	560,000
other	1,020,000
East Timor	
Roman Catholic	780,000
Protestant	50,000
Muslim	30,000
other	40,000
Ecuador	
Roman Catholic	11,910,000
Protestant	440,000
other	530,000
Egypt	
Sunnī Muslim	58,060,000
Coptic Orthodox[1]	6,520,000
other	660,000
El Salvador	
Roman Catholic	4,880,000
Protestant	1,070,000
other	290,000
Equatorial Guinea	
Roman Catholic	390,000
other	110,000
Eritrea	
Eritrean Orthodox	1,980,000
Muslim	1,920,000
other	400,000
Estonia	
Estonian Orthodox	277,000
Evangelical Lutheran	187,000
other	899,000

Religion (continued)

Religious affiliation	2001 population
Ethiopia	
Ethiopian Orthodox	33,110,000
other Christian	7,090,000
Muslim (mostly Sunnī)	21,710,000
traditional beliefs	3,180,000
other	820,000
Feroe Islands	
Evangelical Lutheran	38,000
other	9,000
Fiji	
Christian (mostly Methodist and Roman Catholic)	437,000
Hindu	316,000
Muslim	65,000
other	9,000
Finland	
Evangelical Lutheran	4,420,000
other	770,000
France	
Roman Catholic	38,690,000
nonreligious	9,230,000
Muslim	4,180,000
atheist	2,380,000
Protestant	720,000
Jewish	590,000
other	3,290,000
French Guiana	
Roman Catholic	91,000
other	77,000
French Polynesia	
Protestant	119,000
Roman Catholic	94,000
other	25,000
Gabon	
Roman Catholic	690,000
Protestant	220,000
African Christian	170,000
other	160,000
Gambia, The	
Muslim (mostly Sunnī)	1,340,000
other	70,000
Gaza Strip	
Muslim (mostly Sunnī)	1,190,000
other	20,000
Georgia	
Georgian Orthodox	1,828,000
Sunnī Muslim	549,000
Armenian Apostolic (Orthodox)	279,000
Russian Orthodox	133,000
other (mostly nonreligious)	2,200,000
Germany	
Protestant (mostly Evangelical Lutheran)	29,330,000
Roman Catholic	27,590,000
Muslim	3,660,000
atheist	1,800,000
other (mostly nonreligious)	20,020,000
Ghana	
traditional beliefs	4,860,000
Muslim	3,910,000
Protestant	3,310,000
African Christian	2,870,000
Roman Catholic	1,890,000
other	3,050,000
Greece	
Greek Orthodox	10,010,000
Muslim	360,000
other	500,000
Greenland	
Evangelical Lutheran	36,500
other	19,800
Grenada	
Roman Catholic	54,000
Anglican	14,000
other	34,000
Guadeloupe	
Roman Catholic	350,000
other	82,000
Guam	
Roman Catholic	118,000
Protestant	19,000
other	21,000
Guatemala	
Roman Catholic	8,880,000
Evangelical Protestant	2,540,000
other	270,000
Guernsey	
Anglican	42,000
other	22,000
Guinea	
Muslim	6,470,000
Christian	760,000
other	380,000
Guinee-Bissau	
traditional beliefs	590,000
Muslim	530,000
Christian	170,000
other	20,000
Guyana	
Hindu	264,000
Protestant	145,000
Roman Catholic	89,000
Muslim	70,000
Anglican	67,000
other	142,000
Haiti	
Roman Catholic	4,770,000
Protestant	1,590,000
other	610,000
Honduras	
Roman Catholic	5,740,000
Evangelical Protestant	690,000
other	200,000
Hong Kong	
Buddhist and Taoist	4,970,000
Protestant	290,000
Roman Catholic	280,000
other	1,200,000
Hungary	
Roman Catholic	6,120,000
Protestant	2,470,000
nonreligious	750,000
other	850,000
Iceland	
Evangelical Lutheran	260,000
other	20,000
India	
Hindu	759,350,000
Sunnī Muslim	92,380,000
traditional beliefs	34,930,000
Shī'ī Muslim	30,790,000
independent	30,750,000
Sikh	22,290,000
Protestant	15,130,000
Roman Catholic	13,940,000
Buddhist	7,290,000
Jain	4,160,000
atheist	1,670,000
Bahā'ī	1,190,000
Zoroastrian (Parsi)	210,000
nonreligious	12,910,000
other	3,000,000
Indonesia	
Muslim	185,060,000
Protestant	12,820,000
Roman Catholic	7,600,000
Hindu	3,880,000
Buddhist	2,190,000
other	660,000
Iran	
Shī'ī Muslim	57,180,000
Sunnī Muslim	3,460,000
Zoroastrian	1,780,000
Bahā'ī	430,000
Christian	340,000
other	250,000
Iraq	
Shī'ī Muslim	13,890,000
Sunnī Muslim	8,510,000
Christian	750,000
other	180,000
Ireland	
Roman Catholic	3,500,000
other	320,000
Isle of Man	
Anglican	30,000
Methodist	7,000
Roman Catholic	6,000
other	31,000
Israel	
Jewish[2]	4,960,000
Muslim (mostly Sunnī)	930,000
other	360,000
Italy	
Roman Catholic	46,260,000
nonreligious and atheist	9,600,000
Muslim	680,000
other	1,350,000
Jamaica	
Protestant	1,020,000
Roman Catholic	270,000
Anglican	100,000
other	1,230,000
Japan	
Shintoist[3]	118,270,000
Buddhist[3]	88,490,000
Christian	1,470,000
other	10,250,000
Jersey	
Anglican	55,000
Roman Catholic	21,000
other	14,000
Jordan	
Sunnī Muslim	4,800,000
Christian	210,000
other	120,000
Kazakhstan	
Muslim (mostly Sunnī)	6,988,000
Russian Orthodox	1,216,000
Protestant	318,000
other (mostly nonreligious)	6,345,000
Kenya	
Roman Catholic	6,780,000
African Christian	6,400,000
Protestant	6,170,000
traditional beliefs	3,540,000
Anglican	2,900,000
Muslim	2,240,000
Orthodox	720,000
other	2,030,000
Kiribati	
Roman Catholic	50,000
Congregational	36,000
other	9,000
Korea, North	
atheist and nonreligious	15,000,000
traditional beliefs	3,430,000
Ch'ŏndogyo	3,050,000
other	480,000
Korea, South	
nonreligious	23,490,000
Buddhist	11,040,000
Protestant	9,370,000
Roman Catholic	3,160,000
Confucian	230,000
Wonbulgyo	90,000
other	290,000
Kosovo	
Muslim	1,775,000
Orthodox	107,300
Roman Catholic	58,500
Protestant	10,000
Kuwait	
Sunnī Muslim	1,020,000
Shī'ī Muslim	680,000
other Muslim	230,000
other (mostly Christian and Hindu)	340,000
Kyrgyzstan	
Muslim (mostly Sunni)	3,701,000
Russian Orthodox	276,000
other (mostly nonreligious)	958,000
Laos	
Buddhist	2,750,000
traditional beliefs	2,350,000
other	540,000
Latvia	
Roman Catholic	350,000
Evangelical Lutheran	345,000
Russian Orthodox	181,000
other (mostly nonreligious)	1,482,000
Lebanon	
Shī'ī Muslim	1,230,000
Sunnī Muslim	770,000
Maronite Catholic	690,000
Druze	260,000
Greek Orthodox	220,000
Armenian Apostolic (Orthodox)	190,000
Greek Catholic (Melchite)	170,000
other	110,000
Lesotho	
Roman Catholic	820,000
Protestant	280,000
African Christian	260,000
traditional beliefs	170,000
Anglican	100,000
other	550,000
Liberia	
traditional beliefs	1,390,000
Christian	1,270,000
Muslim	520,000
other	60,000
Libya	
Sunnī Muslim	5,040,000
other	200,000
Liechtenstein	
Roman Catholic	26,000
other	7,000
Lithuania	
Roman Catholic	2,660,000
Russian Orthodox	90,000
other (mostly nonreligious)	940,000
Luxembourg	
Roman Catholic	400,000
other	40,000
Macau	
nonreligious	271,000
Buddhist	75,000
other	100,000
Macedonia	
Serbian (Macedonian) Orthodox	1,210,000
Sunnī Muslim	580,000
other	260,000
Madagascar	
traditional beliefs	7,670,000
Roman Catholic	3,250,000
Protestant	3,630,000
other	1,420,000
Malawi	
Roman Catholic	2,600,000
Protestant	2,070,000
African Christian	1,770,000
Muslim	1,560,000
traditional beliefs	820,000
other	1,730,000
Malaysia	
Muslim	10,770,000
Chinese folk-religionist	5,450,000
Christian	1,880,000
Hindu	1,660,000
Buddhist	1,500,000
other	1,350,000
Maldives	
Sunnī Muslim	273,000
other	2,000
Mali	
Muslim	9,010,000
traditional beliefs	1,760,000
Christian	220,000
other	10,000
Malta	
Roman Catholic	363,000
other	21,000
Marshall Islands	
Protestant	32,800
Roman Catholic	3,700
other	15,700
Martinique	
Roman Catholic	336,000
other	52,000
Mauritania	
Sunnī Muslim	2,720,000
other	20,000
Mauritius	
Hindu	610,000
Roman Catholic	330,000
Muslim	190,000
other	70,000
Mayotte	
Sunnī Muslim	153,000
Christian	5,000
Mexico	
Roman Catholic	90,370,000
Protestant	3,820,000
other Christian	1,820,000
other (mostly nonreligious)	3,970,000
Micronesia	
Roman Catholic	63,600
Protestant	40,100
other	14,200
Moldova	
Romanian Orthodox	1,263,000
Russian (Moldovan) Orthodox	342,000
other (mostly nonreligious)	2,007,000
Monaco	
Roman Catholic	28,000
other	4,000
Mongolia	
Tantric Buddhist (Lamaist)	2,340,000
Muslim	100,000
Montenegro	
Orthodox	430,000
Muslim	129,000
Roman Catholic	25,000
other	31,000
Morocco	
Muslim (mostly Sunnī)	28,730,000
other	500,000
Mozambique	
traditional beliefs	9,750,000
Roman Catholic	3,060,000
Muslim	2,040,000
Protestant	1,720,000
African Christian	1,400,000
other	1,400,000
Myanmar (Burma)	
Buddhist	37,560,000
Christian	2,060,000
Muslim	1,610,000
traditional beliefs	480,000
Hindu	210,000
other	70,000
Namibia	
Protestant (mostly Lutheran)	850,000
Roman Catholic	320,000
African Christian	200,000
other	430,000
Nauru	
Protestant	6,100
Roman Catholic	3,300
other	2,700
Nepal	
Hindu	19,180,000
traditional beliefs	2,350,000
Buddhist	2,050,000
Muslim	970,000
Christian	600,000
other	140,000
Netherlands, The	
Roman Catholic	4,950,000
Dutch Reformed Church (NHK)	2,240,000
Reformed Churches	1,120,000
Muslim	720,000
nonreligious	6,550,000
other	400,000
Netherlands Antilles	
Roman Catholic	152,000
other	54,000
New Caledonia	
Roman Catholic	132,000
Protestant	31,300
other	52,200

Religious affiliation	2001 population
New Zealand	
Anglican	674,000
Roman Catholic	505,000
Presbyterian	489,000
Methodist	130,000
Baptist	57,000
Mormon	44,000
Ratana	39,000
nonreligious	954,000
other	969,000
Nicaragua	
Roman Catholic	3,590,000
Protestant	810,000
other (mostly nonreligious)	520,000
Niger	
Sunnī Muslim	9,390,000
traditional beliefs	900,000
other	70,000
Nigeria	
Muslim	55,600,000
traditional beliefs	12,500,000
Christian	58,100,000
other	500,000
Northern Mariana Islands	
Roman Catholic	53,600
other	19,700
Norway	
Evangelical Lutheran (Church of Norway)	3,990,000
other	530,000
Oman	
Ibādiyāh Muslim	1,840,000
Sunnī Muslim	350,000
Hindu	190,000
Christian	100,000
other	20,000
Pakistan	
Sunnī Muslim	113,950,000
Shī'ī Muslim	25,010,000
Christian	3,560,000
Hindu	1,730,000
other	370,000
Palau	
Roman Catholic	7,600
Modekne	5,200
Protestant	4,900
other	2,100
Panama	
Roman Catholic	2,330,000
Protestant	420,000
other	150,000
Papua New Guinea	
Protestant	3,180,000
Roman Catholic	1,500,000
Anglican	210,000
other	420,000
Paraguay	
Roman Catholic	4,990,000
Protestant	280,000
other	370,000
Peru	
Roman Catholic	23,170,000
Protestant	1,730,000
other (mostly nonreligious)	1,190,000
Philippines	
Roman Catholic	63,530,000
Protestant	4,160,000
Muslim	3,500,000
Aglipayan	2,010,000
Church of Christ (Iglesia ni Cristo)	1,790,000
other	1,620,000
Poland	
Roman Catholic	35,050,000
Polish Orthodox	550,000
other (mostly nonreligious)	3,050,000
Portugal	
Roman Catholic	9,520,000
other	810,000
Puerto Rico	
Roman Catholic	2,480,000
Protestant	1,080,000
other	270,000
Qatar	
Muslim (mostly Sunnī)	490,000
Christian	60,000
other	40,000
Réunion	
Roman Catholic	599,000
Hindu	33,000
other	102,000
Romania	
Romanian Orthodox	19,460,000
Roman Catholic	1,140,000
other	1,810,000
Russia	
Russian Orthodox	23,580,000
Muslim	10,980,000
Protestant	1,320,000
Jewish	590,000
other (mostly nonreligious)	107,960,000
Rwanda	
Roman Catholic	3,730,000
Protestant	1,530,000
traditional beliefs	660,000
Muslim	580,000
Anglican	570,000
other	260,000
St. Kitts and Nevis	
Anglican	10,000
Methodist	10,000
other	15,000
Pentecostal	7,000
other	12,000
St. Lucia	
Roman Catholic	125,000
Protestant	20,000
other	13,000
St. Vincent and the Grenadines	
Anglican	20,000
Pentecostal	17,000
Methodist	12,000
Roman Catholic	12,000
other	52,000
Samoa	
Mormon	46,200
Congregational	44,000
Roman Catholic	38,100
Methodist	21,800
other	29,100
San Marino	
Roman Catholic	24,000
other	3,000
São Tomé and Príncipe	
Roman Catholic	111,000
African Christian	16,000
other	20,000
Saudi Arabia	
Sunnī Muslim	20,490,000
Shī'ī Muslim	840,000
Christian	840,000
Hindu	250,000
other	330,000
Senegal	
Sunnī Muslim	9,010,000
traditional beliefs	640,000
Roman Catholic	480,000
other	160,000
Serbia	
Orthodox	6,576,000
Roman Catholic	426,000
Muslim	248,000
Protestant	85,000
other/unknown	402,000
Seychelles	
Roman Catholic	69,800
other	10,800
Sierra Leone	
Sunnī Muslim	2,490,000
traditional beliefs	2,190,000
Christian	620,000
other	130,000
Singapore	
Buddhist and Taoist	1,695,000
Muslim	495,000
Christian	485,000
Hindu	133,000
nonreligious	493,000
other	21,000
Slovakia	
Roman Catholic	3,270,000
Slovak Evangelical	340,000
other (mostly nonreligious)	1,800,000
Slovenia	
Roman Catholic	1,650,000
other	340,000
Solomon Islands	
Protestant	173,000
Anglican	149,000
Roman Catholic	83,000
other	75,000
Somalia	
Sunnī Muslim	7,364,000
other	125,000
South Africa	
Christian	36,220,000
independents	17,040,000
Protestant	13,860,000
Roman Catholic	3,090,000
traditional beliefs	3,660,000
Hindu	1,050,000
Muslim	1,050,000
Bahā'ī	260,000
Jewish	170,000
nonreligious	1,050,000
other	130,000
Spain	
Roman Catholic	36,920,000
Muslim	200,000
other (mostly non-religious)	3,010,000
Sri Lanka	
Buddhist	13,270,000
Hindu	2,190,000
Muslim	1,750,000
Roman Catholic	1,300,000
other	900,000
Sudan, The	
Sunnī Muslim	25,360,000
Christian	6,020,000
traditional beliefs	4,300,000
other	390,000
Suriname	
Hindu	119,000
Roman Catholic	91,000
Muslim	85,000
Protestant	71,000
other	68,000
Swaziland	
African Christian	480,000
Protestant	160,000
traditional beliefs	120,000
other	340,000
Sweden	
Church of Sweden (Lutheran)	7,690,000
other	1,200,000
Switzerland	
Roman Catholic	3,330,000
Protestant	2,890,000
other	1,000,000
Syria	
Sunnī Muslim	12,380,000
Shī'ī Muslim	2,010,000
Christian	920,000
Druze	500,000
other	920,000
Taiwan	
nonreligious	10,670,000
Buddhist	5,100,000
Taoist	4,040,000
I Kuan Tao	990,000
Protestant	440,000
Roman Catholic	320,000
Tien Te Chiao	210,000
Tien Ti Chiao	190,000
Confucianism (Li)	150,000
Hsuan Yuan Chiao	140,000
Muslim	50,000
Shinto (Tenrikyo)	20,000
Bahā'ī	20,000
Tajikistan	
Sunnī Muslim	4,920,000
Shī'ī Muslim	310,000
Russian Orthodox	90,000
atheist	120,000
other (mostly nonreligious)	820,000
Tanzania	
Christian	18,260,000
Muslim	11,520,000
traditional beliefs	5,830,000
other	620,000
Thailand	
Buddhist	57,920,000
Muslim	2,850,000
Christian	440,000
other	40,000
Togo	
traditional beliefs	1,940,000
Roman Catholic	1,250,000
Sunnī Muslim	970,000
Protestant	530,000
other	450,000
Tonga	
Free Wesleyan	44,000
Roman Catholic	16,000
other	41,000
Trinidad and Tobago	
Roman Catholic	380,000
Hindu	308,000
Protestant	244,000
Anglican	142,000
Muslim	76,000
other	149,000
Tunisia	
Sunnī Muslim	9,720,000
other	104,000
Turkey	
Muslim (mostly Sunnī)	64,360,000
nonreligious	1,340,000
other	530,000
Turkmenistan	
Muslim (mostly Sunnī)	4,752,000
Russian Orthodox	129,000
other (mostly nonreligious)	581,000
Tuvalu	
Congregational	9,400
other	1,600
Uganda	
Roman Catholic	10,050,000
Anglican	9,450,000
Muslim (mostly Sunnī)	1,250,000
traditional beliefs	1,050,000
other	2,190,000
Ukraine	
Ukrainian Orthodox (Russian patriarchy)	9,491,000
Ukrainian Orthodox (Kiev patriarchy)	4,746,000
Ukrainian Autocephalous Orthodox	332,000
Ukrainian Catholic (Uniate)	3,417,000
Protestant	1,736,000
Roman Catholic	576,000
Jewish	423,000
other (mostly nonreligious)	28,044,000
United Arab Emirates	
Sunnī Muslim	2,490,000
Shī'ī Muslim	500,000
other	120,000
United Kingdom	
Christian	49,510,000
Anglican	26,140,000
Roman Catholic	5,590,000
Protestant	5,020,000
Eastern Orthodox	370,000
other Christian	12,390,000
Muslim	1,220,000
Hindu	440,000
Jewish	310,000
Sikh	240,000
other (mostly non-religious and atheist)	8,240,000
United States	
Christian (professing)	242,011,000
Christian (affiliated)	196,929,000
independent	80,639,000
Protestant	66,287,000
Roman Catholic	59,542,000
Eastern Orthodox	5,915,000
Anglican	2,464,000
other Christian	10,348,000
multi-affiliated Christians	–28,266,000
Christian (unaffiliated)	45,082,000
non-Christian	44,056,000
nonreligious	25,745,000
Jewish	5,771,000
Muslim	4,242,000
Buddhist	2,515,000
atheist	1,181,000
Hindu	1,059,000
New-Religionist	832,000
Bahā'ī	773,000
Ethnic religionist	447,000
Sikh	240,000
Chinese folk-religionist	80,000
other	1,171,000
Uruguay	
Roman Catholic	2,590,000
Protestant	150,000
Mormon	50,000
Jewish	30,000
other	480,000
Uzbekistan	
Muslim (mostly Sunnī)	19,156,000
Russian Orthodox	195,000
other (mostly nonreligious)	5,804,000
Vanuatu	
Presbyterian	70,000
Roman Catholic	28,000
Anglican	27,000
other	69,000
Venezuela	
Roman Catholic	22,050,000
other	2,590,000
Vietnam	
Buddhist	53,290,000
Roman Catholic	6,180,000
New-Religionist	
Cao Dai	2,810,000
Hoa Hao	1,690,000
other	16,500,000
Virgin Islands (U.S.)	
Protestant	56,000
Roman Catholic	41,000
other	24,000
West Bank	
Muslim (mostly Sunnī)	1,860,000
Jewish[4]	230,000
Christian and other	180,000
Western Sahara	
Sunnī Muslim	250,000
other	1,000
Yemen	
Muslim (mostly Sunnī)	18,050,000
other	20,000
Zambia	
traditional beliefs	2,640,000
Protestant	2,240,000
Roman Catholic	1,650,000
other	3,240,000
Zimbabwe	
African Christian	4,580,000
traditional beliefs	3,430,000
Protestant	1,400,000
Roman Catholic	1,090,000
other	870,000

[1]Official 1986 census figure is 5.9 percent. [2]Includes the Golan Heights and East Jerusalem; excludes the West Bank and Gaza Strip. [3]Many Japanese practice both Shintoism and Buddhism.
[4]Excludes East Jerusalem.

Vital statistics, marriage, family

This table provides some of the basic measures of the factors that influence the size, direction, and rates of population change within a country. The accuracy of these data depends on the effectiveness of each respective national system for registering vital and civil events (birth, death, marriage, etc.) and on the sophistication of the analysis that can be brought to bear upon the data so compiled.

Data on birth rates, for example, depend not only on the completeness of registration of births in a particular country but also on the conditions under which those data are collected: Do all births take place in a hospital? Are the births reported comparably in all parts of the country? Are the records of the births tabulated at a central location in a timely way with an effort to eliminate inconsistent reporting of birth events, perinatal mortality, etc.? Similar difficulties attach to death rates but with the added need to identify "cause of death." Even in a developed country such identifications are often left to nonmedical personnel, and in a developing country with, say, only one physician for every 10,000 population, there will be too few physicians to perform autopsies to assess accurately the cause of death after the fact and also too few to provide ongoing care at a level where records would permit inference about cause of death based on prior condition or diagnosis.

Calculating natural increase, which at its most basic is simply the difference between the birth and death rates, may be affected by the differing degrees of completeness of birth and death registration for a given country. The total fertility rate may be understood as the average number of children that would be borne per woman if all childbearing women lived to the end of their childbearing years and bore children at each age at the average rate for that age. Calculating a meaningful fertility rate requires analysis of changing age structure of the female population over time, changing mortality rates among mothers and their infants, and changing medical practice at births, each improvement of natural survivorship or medical support leading to greater numbers of live-born children and greater numbers of children who survive their first year (the basis for measurement of infant mortality, another basic indicator of demographic conditions and trends within a population).

As indicated above, data for causes of death are not only particularly difficult to obtain, since many countries are not well equipped to collect the data, but also difficult to assess, as their accuracy may be suspect and their meaning may be subject to varying interpretation. Take the case of a citizen of a less developed country who dies of what is clearly a lung infection: Was the death complicated by chronic malnutrition, itself complicated by a parasitic infestation, these last two together so weakening the subject that he died of an infection that he might have survived had his general health been better? Similarly, in a developed country: Someone may die from what is identified in an autopsy as a cerebrovascular accident, but if that accident occurred in a vascular system that was weakened by diabetes, what was the actual cause of death? Statistics on causes of death seek to identify the "underlying" cause (that which sets the final train of events leading to death in motion) but often must settle for the most proximate cause or symptom. Even this kind of analysis may be misleading for those charged with interpreting the data with a view to ordering health-care priorities for a particular country. The eight groups of causes of death utilized here include most, but not all, of the detailed causes classified by the World Health Organization and would not, thus, aggregate to the country's crude death rate for the same year. Among the lesser causes excluded by the present classification are: benign neoplasms; anemias; mental disorders; kidney and genitourinary diseases not classifi-

Vital statistics, marriage, family

country	vital rates						causes of death (rate per 100,000 population)								
	year	birth rate per 1,000 population	death rate per 1,000 population	infant mortality rate per 1,000 live births	rate of natural increase per 1,000 population	total fertility rate	year	infectious and parasitic diseases	malignant neoplasms (cancers)	endocrine and metabolic disorders	diseases of the nervous system	diseases of the circulatory system	diseases of the respiratory system	diseases of the digestive system	accidents, poisoning, and violence
Afghanistan	2005	47.0	20.7	163.1	26.3	6.75	.	.	.	.	.	.	.	.	.
Albania	2004	13.8	5.7	22.3	8.1	2.05	2003	3.0	95.5	5.9	17.9	288.5	32.9	10.1	39.2
Algeria	2005	17.1	4.6	31.0	12.5	1.92	.	.	.	.	.	.	.	.	.
American Samoa	2004	26.7	4.5	15.2	22.2	3.25	2002	.	62.0	48.0	.	147.0	18.0	..	72.0
Andorra	2004	10.9	3.9	4.1	7.0	1.29	2002	14.0	223.0	20.0	66.0	269.0	72.0	43.0	56.0
Angola	2005	45.6	24.5	185.4	21.1	6.42	.	.	.	.	.	.	.	.	.
Antigua and Barbuda	2005	17.3	5.4	19.5	11.9	2.26	1999	11.3	111.0	53.0	14.8	296.0	93.0	28.4	52.0
Argentina	2003	18.4	8.0	16.2	10.4	2.28	2002	37.2	155.8	25.7	15.5	272.6	73.3	30.9	44.2
Armenia	2004	11.7	8.0	24.2	3.7	1.31	2004	7.3	139.9	50.2	8.7[2]	438.0	47.0	30.5	36.7
Aruba	2004	12.1	5.1	6.0	7.0	1.79	2002	24.6	126.4	28.3	4.8	181.1	26.4	13.0	45.3
Australia	2004	12.7	6.6	4.7	6.1	1.77	2004	8.6	180.7	23.9	21.5	223.0	54.7	21.5	38.8
Austria	2004	9.7	9.1	4.5	0.6	1.42	2003	2.0	238.1	22.3	33.5	432.2	50.9	44.6	53.7
Azerbaijan	2004	16.1	6.1	9.8	10.0	2.05	2002	16.8	77.2	17.2	19.3	345.5	38.7	66.5	22.4
Bahamas, The	2005	17.9	8.9	25.2	8.9	2.20	2000	9.2	73.8	37.5	12.2	145.0	26.3	29.3	71.8
Bahrain	2005	18.1	4.1	17.3	14.0	2.63	2003	11.9	39.3	24.4	5.9	86.6	20.7	13.8	26.5
Bangladesh	2005	30.0	8.4	62.6	21.6	3.13	2002	122.0	21.0	..	..	54.0	71.0	..	35.0
Barbados	2005	12.8	8.7	11.7	4.1	1.64	2000	38.3	123.3	70.2	18.8	219.6	46.6	25.2	15.0
Belarus	2004	9.0	14.3	6.9	–5.3	1.20	2003	10.8	171.2	7.6	14.9	693.5	45.0	28.4	161.6
Belgium	2004	11.1	9.8	4.3	1.3	1.64	1997	13.1	294.1	22.8	57.8	388.4	78.9	44.4	54.3
Belize	2005	29.3	5.7	25.4	23.6	3.68	2000	39.1	107.2	42.4	9.6	248.8	50.0	18.8	77.0
Benin	2005	39.6	12.5	81.3	27.1	5.32	.	.	.	.	.	.	.	.	.
Bermuda	2003	13.4	6.9	2.0	6.5	1.90	2000	14.5	117.6	37.1	16.1	336.8	67.7	27.4	37.1
Bhutan	2005	34.0	12.9	100.4	21.1	4.81	.	.	.	.	.	.	.	.	.
Bolivia	2005	23.8	7.6	53.1	16.2	2.94	2000	.	73.5	..	..	370.3	..	..	109.7
Bosnia and Herzegovina	2003	9.2	8.3	7.7	0.9	1.18	2003	6.1	149.8	25.2	6.4	441.0	22.7	21.1	24.7
Botswana	2005	23.3	29.4	54.6	–6.1	2.85	.	..	.	..	..	..	..	..	..
Brazil	2004	18.1	6.1	30.7	12.0	1.97	2002	26.2[3]	95.7	27.6	10.5[3]	204.1	52.0[3]	25.3[3]	79.2
Brunei	2004	20.0	2.8	8.8	17.2	2.33	2002	.	52.3	26.5	.	98.8	31.2	.	48.2
Bulgaria	2004	9.0	14.2	11.6	–5.2	1.29	2005	8.4	231.7	25.6	10.7	968.1	57.7	42.8	50.8
Burkina Faso	2005	46.0	15.9	92.9	30.1	6.54	..	..	.	..	..	..	..	..	..
Burundi	2005	42.5	13.8	64.4	28.7	6.63	.	..	.	.	.	..	.	.	..
Cambodia	2005	26.9	9.1	68.8	17.8	3.44	.	.	.	..	.	.	..	..	..
Cameroon	2005	34.3	13.6	64.9	20.7	4.47	.	.	.	.	.	.	.	.	.
Canada	2005	10.5	7.3	4.8	3.2	1.61	2002	10.1	207.5	27.8	30.7	240.6	56.6	26.5	44.1
Cape Verde	2005	25.3	6.6	47.8	18.7	3.48	..	..	..	..	..	..	..	..	..
Cayman Islands	2005	14.4	3.5	8.2	10.9	1.90	2000	.	99.5	.	.	136.8	24.9	..	34.8
Central African Republic	2005	34.3	18.8	87.3	15.5	4.50	.	.	.	.	.	.	.	.	.
Chad	2005	46.2	16.7	93.1	29.5	6.32	.	.	.	.	.	.	.	.	.
Chile	2005	15.4	5.8	8.8	9.6	2.02	2003	13.0[4]	123.5	20.3[4]	12.3[4]	148.6	46.6	41.4	30.6
China	2005	12.4	6.5	24.2	5.9	1.72	2002[5]	16.7	119.7	17.2	5.4	162.5	78.1	17.1	43.5
Colombia	2005	20.8	5.6	21.0	15.2	2.56	2002	37.8	79.9	20.0	5.1[7]	150.2	41.3[7]	17.0[7]	132.4
Comoros	2005	37.5	8.4	74.9	29.1	5.09	.	.	.	.	.	.	.	.	.
Congo, Dem. Rep. of the	2005	44.1	13.5	90.7	30.6	6.54	.	.	.	.	.	.	.	.	.
Congo, Rep. of the	2005	43.0	13.3	81.5	29.7	6.14	.	.	.	.	.	.	.	.	.
Costa Rica	2005	16.5	3.7	9.8	12.8	2.00	2003	9.4[8]	78.1	14.0[8]	8.8[8]	105.0	31.0[8]	26.0[8]	46.0
Côte d'Ivoire	2005	35.1	14.9	89.1	20.2	4.50	.	.	.	.	.	.	.	.	.
Croatia	2005	9.4	11.1	6.1	–1.7	1.35	2002	12.8	276.1	21.0	11.2	499.6	41.1	42.7	57.7
Cuba	2004	11.3	7.2	5.8	4.1	1.54	2001	6.7	149.7	15.6	9.7	295.4	88.7	26.4	51.8
Cyprus	2005	10.9	6.7	3.5	4.2	1.83	.	.	.	.	.	.	.	.	.
Czech Republic	2005	10.0	10.5	3.7	–0.5	1.23	2004	3.2	287.1	13.9	19.3	539.3	46.6	44.5	68.5

able under the main groups; maternal deaths (for which data *are* provided, however, in the "Health services" table); diseases of the skin and musculoskeletal systems; congenital and perinatal conditions; and general senility and other ill-defined (ill-diagnosed) conditions, a kind of "other" category.

Expectation of life is probably the most accurate single measure of the quality of life in a given society. It summarizes in a single number all of the natural and social stresses that operate upon individuals in that society. The number may range from as few as 40 years of life in the least developed countries to as much as 80 years for women in the most developed nations. The lost potential in the years separating those two numbers is prodigious, regardless of how the loss arises—wars and civil violence, poor public health services, or poor individual health practice in matters of nutrition, exercise, stress management, and so on.

Data on marriages and marriage rates probably are less meaningful in terms of international comparisons than some of the measures mentioned above because the number, timing, and kinds of social relationships that substitute for marriage depend on many kinds of social variables—income, degree of social control, heterogeneity of the society (race, class, language communities), or level of development of civil administration (if one must travel for a day or more to obtain a legal civil ceremony, one may forgo it). Nevertheless, the data for a single country say specific things about local practice in terms of the age at which a man or woman typically marries, and the overall rate will at least define the number of legal civil marriages, though it cannot say anything about other, less formal arrangements (here the figure for children born within marriage in the next section may identify some of the societies in which economics or social constraints may operate to limit the number of marriages that are actually confirmed on civil registers). The available data usually include both first marriages and remarriages after annulment, divorce, widowhood, or the like.

The data for families provide information about the average size of a family unit (individuals related by blood or civil register) and the average number of children under a specified age (set here at 15 to provide a consistent measure of social minority internationally, though legal minority depends on the laws of each country). When well-defined family data are not collected as part of a country's national census or vital statistics surveys, data for households have been substituted on the assumption that most households worldwide represent families in some conventional sense. But increasing numbers of households worldwide are composed of unrelated individuals (unmarried heterosexual couples, aged [or younger] groups sharing limited [often fixed] incomes for reasons of economy, or homosexual couples). Such arrangements do not yet represent great numbers overall. Increasing numbers of census programs, however, even in developing countries, are making more adequate provision for distinguishing these nontraditional, often nonfamily households.

Internet resources for further information:

- World Health Organization Mortality Database (World)
  http://www3.who.int/whosis/mort/table1_process.cfm
- Pan American Health Organization (the Americas)
  http://www.paho.org
- National Center for Health Statistics (U.S.)
  http://www.cdc.gov/nchs
- U.S. Census Bureau: International Data Base (World)
  http://www.census.gov/ipc/www/idbprint.html

expectation of life at birth (latest year)		nuptiality, family, and family planning														country
		marriages			age at marriage (latest)						families (F), households (H) (latest)					
					groom (percent)			bride (percent)			families (households)		children		induced abortions		
male	female	year	total number	rate per 1,000 population	19 and under	20–29	30 and over	19 and under	20–29	30 and over	total ('000)	size	number under age 15	percent within marriage	number	ratio per 100 live births	
43.2	43.5	..	..	..	..	..	..	..	..	..	H 2,774	H 8.0	H 2.8[1]	..	..	..	Afghanistan
74.8	80.3	2004	20,949	6.7	0.9	63.7	35.4	22.4	67.5	10.1	F 729	F 4.2	F 1.6	..	12,087	25.7	Albania
71.7	74.9	2002	218,620	7.0	0.7	67.1	32.2	29.8	61.4	8.8	H 5,072	H 6.2	H 3.0	..	..	..	Algeria
72.5	79.8	2004	287	4.5	.	.	.	.	.	.	H 9	H 6.0	H 2.7	71.7	..	..	American Samoa
80.6	86.6	2004	218	2.9	.	.	.	.	.	.	..	..	..	..	..	..	Andorra
36.5	38.2	..	..	..	..	..	..	..	..	..	H 2,787	H 5.0	..	..	..	..	Angola
69.8	74.7	2001	1,787	23.6	1.2	38.4	60.4	2.8	53.1	44.1	H 24	H 3.1	H 1.2	25.7	..	..	Antigua and Barbuda
72.4	80.1	2003	129,049	3.4	5.6	71.5	22.9	26.0	58.6	15.4	H 10,106	H 3.6	H 1.0	67.5	..	..	Argentina
68.3	76.0	2004	16,975	5.3	0.9	72.3	26.8	16.9	73.3	9.8	H 841	H 4.5	H 1.8	88.6	10,487	28.0	Armenia
76.0	82.8	2004	1,184	12.1	0.8	27.4	71.8	3.0	37.9	59.1	H 29	H 3.1	..	54.3	..	..	Aruba
78.1	83.0	2003	106,394	5.4	0.5	42.4	57.1	2.4	52.7	44.9	H 7,488	H 2.6	H 0.6	67.8	84,460	33.6	Australia
76.4	82.1	2004	38,528	4.7	1.1	34.0	64.9	3.8	46.2	50.0	H 3,337	H 2.4	H 0.5	64.1	2,380	3.0	Austria
69.6	75.2	2004	62,177	7.5	0.9	67.5	31.6	22.4	65.5	12.1	H 1,740	H 4.7	H 1.7	89.5	19,798	15.0	Azerbaijan
62.1	69.0	2001	1,787	5.8	0.6	41.6	57.8	4.6	50.6	44.8	H 87	H 3.5	..	43.2	..	..	Bahamas, The
71.7	76.8	2004	4,667	6.7	1.6	66.9	31.5	20.5	64.4	15.1	H 109	H 6.2	H 2.2	100.0	1,749	12.9	Bahrain
63.6	61.5	1998	1,154,000	9.2	..	..	..	..	..	..	H 25,673	H 5.2	..	..	..	..	Bangladesh
70.6	74.6	2000	3,516	13.1	0.1	40.2	59.7	1.4	53.6	44.9	H 97	H 2.8	H 1.5	26.9	723	19.6	Barbados
63.2	76.0	2004	60,265	6.1	3.1	67.3	29.6	14.8	62.9	22.3	H 3,210	H 3.1	H 0.8	76.0	71,700	80.6	Belarus
75.9	81.7	2004	43,326	4.2	0.5	51.3	48.2	3.1	61.2	35.7	F 4,319	F 2.4	F 0.5	69.0	15,595	13.9	Belgium
66.5	70.4	2003	1,713	6.3	7.1	56.4	36.5	24.9	51.5	23.6	H 55	H 5.0	H 2.2	40.3	990	15.1	Belize
51.5	53.8	..	..	..	..	..	..	..	..	..	H 1,068	H 6.4	..	..	..	..	Benin
75.7	79.9	2003	861	13.8	—	22.2	77.8	1.0	29.7	69.3	H 28	H 2.3	H 0.5	64.2	92	11.0	Bermuda
62.0	64.0	..	..	..	..	..	..	..	..	..	H 147	H 4.6	..	..	..	..	Bhutan
62.9	68.2	..	..	..	..	..	..	..	..	..	H 1,923	H 4.3	H 1.6	80.9	..	..	Bolivia
65.0	70.0	2004	21,470	5.6	1.3	61.8	36.9	15.2	64.0	20.8	H 1,203	H 3.4	H 1.1	88.8	..	..	Bosnia and Herzegovina
33.9	33.8	..	..	..	..	..	..	..	..	..	H 414	H 4.3	H 2.0	28.8	..	..	Botswana
67.7	75.9	2004	806,968	6.2	4.3	57.9	37.8	18.8	55.2	26.0	F 48,514	F 3.5	H 1.2	..	..	..	Brazil
72.1	77.1	2004	2,027	5.8	2.3	55.0	42.7	11.7	62.2	26.1	H 57	H 6.1	H 2.0	99.6	..	..	Brunei
68.9	76.0	2003	30,645	3.9	1.2	61.9	36.9	10.0	70.8	19.2	H 2,913	H 2.7	..	48.7	48,035	71.3	Bulgaria
47.0	50.0	..	..	..	..	..	..	..	..	..	H 1,759	H 6.8	..	..	..	..	Burkina Faso
49.6	51.0	..	..	..	..	..	..	..	..	..	H 1,398	H 5.0	..	..	..	..	Burundi
57.0	60.9	..	..	..	..	..	..	..	..	..	H 2,418	H 5.7	..	..	..	..	Cambodia
50.7	51.1	..	..	..	..	..	..	..	..	..	H 2,880	H 5.5	..	..	..	..	Cameroon
76.7	83.6	2004	146,377	4.7	0.7	43.4	55.9	2.5	52.9	44.6	H 12,021	H 2.6	H 0.6	72.3	103,768	30.9	Canada
67.1	73.9	1994	1,200	3.2	..	..	..	..	..	..	H 95	H 4.7	..	28.9	..	..	Cape Verde
77.3	82.6	2005	810	1.7	..	..	..	..	..	..	..	H 2.6	..	..	..	..	Cayman Islands
43.3	43.5	..	..	..	..	..	..	..	..	..	H 646	H 6.1	..	..	..	..	Central African Republic
45.6	48.9	..	..	..	..	..	..	..	..	..	H 1,574	H 5.0	..	..	..	..	Chad
73.5	80.2	2003	56,659	3.6	2.6	58.0	39.4	10.5	62.2	27.3	H 4,141	H 3.6	..	65.7	..	..	Chile
70.4	73.7	2004	8,672,000	6.7	..	..	..	..	..	..	H 348[6]	H 3.7	H 1.1	..	6,340,000	37.1	China
67.9	75.7	..	..	..	..	..	..	..	..	..	H 8,835	H 4.9	F 2.5	75.2	..	..	Colombia
59.6	64.3	..	..	..	..	..	..	..	..	..	H 94	H 6.3	..	..	..	..	Comoros
49.7	52.6	..	..	..	..	..	..	..	..	..	H 18,326	H 2.3	..	..	..	..	Congo, Dem. Rep. of the
51.2	53.4	..	..	..	..	..	..	..	..	..	H 326	H 4.7	H 2.0	..	..	..	Congo, Rep. of the
76.6	81.0	2004	25,370	6.0	4.4	52.4	43.2	16.8	51.6	31.6	H 960	H 4.3	..	39.6	..	..	Costa Rica
46.2	51.5	..	..	..	..	..	..	..	..	..	H 2,027	H 8.1	..	..	..	..	Côte d'Ivoire
72.0	79.0	2004	22,700	5.1	1.0	59.1	39.9	8.4	68.0	23.6	H 1,877	H 2.3	H 0.6	89.6	5,232	13.0	Croatia
74.9	79.7	2004	50,878	4.5	2.8	30.7	66.5	11.8	34.7	53.5	F 3,121	F 3.6	H 1.6	..	67,277	52.9	Cuba
77.0	81.4	2004	5,349	7.3	0.7	49.8	49.5	3.9	63.2	32.9	H 233	H 3.0	H 1.1	96.7	..	..	Cyprus
72.6	79.4	2004	51,447	5.0	0.5	51.8	47.7	2.9	66.6	30.5	H 3,828	H 2.6	..	69.4	27,574	28.2	Czech Republic

Vital statistics, marriage, family (continued)

country	vital rates						causes of death (rate per 100,000 population)								
	year	birth rate per 1,000 population	death rate per 1,000 population	infant mortality rate per 1,000 live births	rate of natural increase per 1,000 population	total fertility rate	year	infectious and parasitic diseases	malignant neoplasms (cancers)	endocrine and metabolic disorders	diseases of the nervous system	diseases of the circulatory system	diseases of the respiratory system	diseases of the digestive system	accidents, poisoning, and violence
Denmark	2005	11.8	10.3	4.4	1.5	1.78	2001	8.7	298.2	34.4	20.8	394.7	105.6	54.1	64.6
Djibouti	2005	40.0	19.4	104.1	20.6	5.40	..	...	..	...	...	...	...	...	...
Dominica	2005	15.3	6.7	13.7	8.5	1.94	1999	18.3	154.2	90.2	9.2	283.7	66.7	26.1	36.6
Dominican Republic	2005	23.5	5.7	29.4	17.8	2.86	1998	30.6	38.0	15.9	4.7	102.7	19.0	17.2	42.1
East Timor	2005	27.2	6.3	47.1	20.9	3.61	.	..	..	...	...	...	...	...	...
Ecuador	2005[1]	22.7	4.2	23.7	18.5	2.72	2002	26.8[3]	82.3	30.6[3]	8.0[3]	153.1	36.2[3]	22.6[3]	46.7
Egypt	2005	25.5	6.4	32.6	19.1	2.88	2000	32.3	25.7	11.5	5.4	230.3	49.5	48.6	26.3
El Salvador	2004	17.7	4.4	10.5	13.3	3.20	1999	32.8	44.4	19.5	12.3	88.3	40.5	25.8	118
Equatorial Guinea	2005	36.0	15.0	91.2	21.0	4.62	...	...	.	...	...	...	...	...	...
Eritrea	2005	34.8	9.9	47.4	24.9	5.20	...	...	.	...	.	...	...	...	...
Estonia	2005	10.6	12.9	5.5	–2.3	1.47	2005	8.0	258.5	19.0	18.8	685.8	35.1	51.3	123.2
Ethiopia	2005	38.6	15.1	95.3	23.5	5.33	..	...	..	...	...	...	...	...	...
Faroe Islands	2005	14.0	8.7	6.4	5.3	1.80	1999	4.1	257.2	16.8	...	339.2	48.8	20.1	39.9
Fiji	2005	22.7	5.7	12.6	17.0	2.75	2001	45.8	38.0	23.7	0.5	330.0	50.2	14.1	31.7
Finland	2004	11.0	9.1	3.1	1.9	1.80	2005	7.0	202.0	12.0	19.2	374.7	47.0	26.3	71.5
France	2005	12.8	8.7	3.6	4.1	1.94	2001	17.9	185.0	20.5	33.8	272.8	32.3	29.7	55.6
French Guiana	2004	28.4	4.0	12.1	24.4	3.01	1999	c. 33	c. 54	c. 16	...	c. 100	...	c. 16	c. 71
French Polynesia	2005	17.6	5.0	6.3	12.6	2.04	2002	12.0	103.0	16.0	11.0	113.0	46.0	13.0	54.0
Gabon	2005	36.3	12.0	55.4	24.3	4.77	...	...	...	...	...	...	...	...	...
Gambia, The	2005	39.9	12.5	73.1	27.4	5.13	...	...	...	...	..	...	...	...	..
Gaza Strip	2005	40.0	3.9	22.9	36.1	5.91	...	...	...	...	...	...	...	...	...
Georgia	2004	11.5	11.3	23.8	0.2	1.44	2004	9.3	128.3	19.8	4.0	707.9	92.8	39.7	44.5
Germany	2005	8.4	10.1	4.1	–1.7	1.36	2003	12.6[4]	253.6	29.6[4]	20.2[4]	384.0	70.3	51.2	38.8
Ghana	2005	31.1	9.9	56.4	21.2	4.10	...	...	...	...	...	...	...	...	...
Greece	2005	9.4	9.2	5.5	0.2	1.29	2003	5.9[4]	160.5	9.3[4]	11.7[4]	326.5	46.0	16.2	32.5
Greenland	2005	15.9	7.8	15.8	8.1	2.41	1996–98	64.9	181.5	3.9[10]	1.8[10]	187.5	51.8	5.7[10]	110.1
Grenada	2005	22.3	7.2	14.6	15.1	2.37	1996	18.3	125.2	89.5	11.2	235.1	38.7	18.3	43.8
Guadeloupe	2005	15.4	6.1	8.6	9.3	1.91	2002	23.8[11]	148.3	31.5	...	207.5	32.1[11]	31.4[11]	75.6
Guam	2005	19.0	4.4	6.9	14.6	2.60	2002	1.7	77.0	28.5	6.9	162.7	32.6	16.9	69.7
Guatemala	2004	31.0	5.4	26.2	25.6	4.04	1999	59.3	44.9	48.2	8.9	74.7	110.8	33.5	71.6
Guernsey	2004	9.7	8.9	4.8	0.8	1.38	1996	5.3	282.3	15.9	15.9	441.1	150.0	49.4	24.7
Guinea	2005	42.0	15.6	91.5	26.4	5.83	...	...	...	...	...	...	...	...	...
Guinea-Bissau	2005	37.6	16.7	107.2	20.9	4.93	...	..	.	...	...	...	...	...	..
Guyana	2005	18.5	8.3	33.3	10.2	2.05	1996	41.4	40.7	79.6	9.8	190.8	40.0	29.7	64.8
Haiti	2005	36.6	12.3	73.5	24.3	5.02	2002	...	55.3	31.1	...	227.9	...	...	59.3
Honduras	2005	28.5	6.0	26.5	22.5	3.50	..	..	...	...	...	...	...	...	...
Hong Kong	2005	8.2	5.5	2.4	2.7	0.97	2005	10.8[2]	174.9	13.1[2]	4.1[2]	136.3	87.1[2]	21.5[2]	33.6
Hungary	2005	9.7	13.4	7.3	–3.7	1.32	2002	1.9	325.2	24.8	16.8	668.1	46.3	90.5	94.0
Iceland	2005	14.5	6.2	2.3	8.3	2.05	2005	4.1	173.2	10.5	46.1	222.4	61.4	19.7	35.3
India	2005	22.3	8.3	56.3	14.0	2.78	2002	...	71.0	...	...	268.0	58.0	...	100.0
Indonesia	2005	20.7	6.3	35.6	14.4	2.44	...	..	...	...	...	...	...	...	..
Iran	2005	13.9	4.3	41.6	9.6	1.82	2002	67.0	65.0	18.0	29.0	232.0	23.0	41.0	104.0
Iraq	2005	32.5	5.5	50.3	27.0	4.28	2002	..	54.0	...	...	187.0	...	...	115.0
Ireland	2005	14.9	6.8	4.7	8.1	1.87	2005	4.1	184.3	37.0[2]	8.5[2]	241.7	95.7	24.0	31.5
Isle of Man	2005	11.6	9.9	2.3	1.7	1.65	2004	—	244.8	14.3[2]	29.8[2]	454.9	144.3	54.4[2]	33.5
Israel	2004	21.3	5.5	4.5	15.8	2.90	2003	15.0	143.0	42.0	7.0	168.0	39.0	27.0	31.0
Italy	2005	9.7	9.8	5.9	–0.1	1.34	2003	6.4	282.9	30.7	24.1	429.5	73.0	42.9	45.5
Jamaica	2005	15.8	5.9	19.2	9.9	2.50	2002	12.0	130.0	81.0	13.0	321.0	61.0	43.0	38.0
Japan	2005	8.4	8.5	2.7	–0.1	1.25	2005	14.5	232.1	9.5	8.2[8]	228.1	94.9	28.9	49.6
Jersey	2005	11.0	8.5	5.2	2.5	1.57	2000–03	..	255.0	...	...	328.0	136.0	48.0	35.0
Jordan	2004	28.1	3.2	18.1	24.9	2.86	...	...	.	...	...	...	...	...	...
Kazakhstan	2005	15.8	9.5	29.2	6.3	1.90	2003	32.7	179.8	14.2	16.3	867.9	98.7	65.6	165.2
Kenya	2005	40.1	14.7	61.5	25.4	4.96	...	...	.	...	...	...	...	...	...
Kiribati	2005	30.9	8.4	48.5	22.5	4.20	2002	65.2	...	52.6	...	80.0	40.0	67.5	...
Korea, North	2005	16.1	7.1	24.0	9.0	2.15	2002	...	90.0	...	..	288.0	62.0	...	62.0
Korea, South	2004	9.8	5.1	6.4	4.7	1.25	2004	10.7	135.1	25.6	8.5	120.4	29.4	25.0	63.0
Kosovo	2007	15.6	3.1	11.1	12.5	3.0	...	...	...	...	...	...	...	...	...
Kuwait	2004	19.8	2.0	8.9	17.8	3.00	2002	5.0	22.4	11.0	3.3	72.3	9.3	4.7	27.2
Kyrgyzstan	2005	21.4	7.2	29.7	14.2	2.69	2002	7.6	60.5	6.5	11.8	338.4	83.6	42.3	26.1
Laos	2005	36.0	11.8	85.2	24.2	4.77	2002	...	73.0	...	...	210.0	58.0	...	112.0
Latvia	2005	9.3	14.2	7.8	–4.9	1.29	2005	12.8	256.6	11.0	16.4	785.7	40.3	47.1	139.7
Lebanon	2005	18.9	6.2	24.5	12.7	1.92	2002	...	67.0	...	...	305.0	33.0	...	87.0
Lesotho	2005	25.1	28.7	88.8	–3.6	3.35	...	..	..	...	..	...	...	...	...
Liberia	2005	45.6	23.9	162.0	21.7	6.09	...	...	...	...	...	...	...	...	...
Libya	2005	26.8	3.5	24.6	23.3	3.34	..	.	..	.	.	...	...	...	...
Liechtenstein	2005	10.8	6.4	4.7	4.4	1.51	2003	5.8	148.7	...	..	233.3	32.1	8.7	26.3
Lithuania	2005	8.9	12.8	6.8	–3.9	1.26	2005	13.7[8]	235.7	9.8[8]	10.5[8]	697.7	162.5	43.6[8]	50.8
Luxembourg	2005	11.7	7.9	2.6	3.8	1.70	2005	24.5	205.0	15.5	32.2	306.6	60.0	33.3	46.2
Macau	2005	7.7	3.4	3.3	4.3	1.00	2004	9.1	102.5	3.5	2.2	96.1	52.2	11.2	26.0
Macedonia	2005	11.0	9.0	12.8	2.0	1.57	2005	4.9	157.6	34.2	5.9	527.7	28.8	16.3	35.4
Madagascar	2005	41.7	11.4	76.8	30.3	5.66	...	...	...	...	.	...	...	...	...	...
Malawi	2005	43.5	19.6	96.1	23.9	598	..	...	..	...	...	...	...	...	...
Malaysia	2005	19.6	4.4	5.1	15.2	3.07	2002	101.0	83.0	.	...	149.0	40.0	...	43.0
Maldives	2005	35.4	7.2	15.0	28.2	5.02	2002	...	54.0	.		196.0	43.0	23.0	44.0
Mali	2005	50.0	17.2	109.5	32.8	7.47	2002	1,487.0	54.0			135.0	36.0	...	120.0
Malta	2004	9.5	7.5	5.9	2.0	1.37	2002	4.5	185.6	26.3	12.6	335.4	88.0	26.3	31.4
Marshall Islands	2005	33.5	4.9	29.5	28.6	3.93	2003–04	83.7	41.9	..	...	...	...	..	23.7
Martinique	2005	13.4	7.2	7.3	6.2	1.90	2002	52.3	164.8	36.1		234.2	...	...	55.7
Mauritania	2005	41.4	12.4	70.9	29.0	5.94	2002	...	71.0	...	...	178.0	44.0	26.0	...
Mauritius	2005	15.1	7.0	14.8	8.1	1.96	2003	8.5	78.9	45.0	10.4	357.9	60.0	34.8	38.9
Mayotte	2005	41.6	7.9	62.4	33.7	5.89	...	...	...	...	..	...	...	...	...
Mexico	2004	18.8	4.5	12.6	14.3	2.49	2001	18.2	58.3	62.2	7.4	98.5	36.9	42.3	51.3
Micronesia	2005	25.1	4.9	30.2	20.2	3.25	2003	40.0	57.1	54.4	...	116.1	55.3	...	86.8
Moldova	2004	14.8	12.8	41.0	2.0	1.22	2004	17.4	127.9	8.3[8]	8.5[8]	598.0	63.4	106.4	92.9
Monaco	2005	9.3	12.7	5.4	–3.4	1.76	...	...	...	...	...	...	...	...	...

expectation of life at birth (latest year)		nuptiality, family, and family planning														country
		marriages			age at marriage (latest)						families (F), households (H) (latest)					
					groom (percent)			bride (percent)			families (households)		children		induced abortions	
male	female	year	total number	rate per 1,000 population	19 and under	20–29	30 and over	19 and under	20–29	30 and over	total ('000)	size	number under age 15	percent within marriage	number	ratio per 100 live births	
75.2	79.9	2004	37,711	7.2	0.2	26.5	73.3	1.0	37.1	61.9	H 2,467	H 2.2	.	54.6	14,674	22.7	Denmark
41.8	44.4	1999	3,808	6.1	...	...	...	...	...		H 98	H 5.6	.	96.8		.	Djibouti
72.0	77.9	1999	339	4.7	—	37.0	63.0	2.7	56.2	41.1	H 19	H 3.6	H 2.2	24.1		..	Dominica
69.9	73.0	2001	24,470	2.9	.	..	.	.			H 2,195	H 3.9	..	32.8	31,068	17.3	Dominican Republic
63.6	68.3	...	..	.	...	..		.			H 197	H 4.7	.	.		.	East Timor
73.4	79.2	2004	63,299	4.7	10.2	58.6	31.2	25.6	53.7	20.7	H 2,876	H 4.5		67.9		..	Ecuador
68.8	73.2	2003	537,092	7.9	2.9	58.8	38.3	10.4	56.3	33.3	H 14,476	H 4.6	H 2.1	100.0	10^9		Egypt
67.6	75.0	2002	25,996	4.0	3.9	50.7	45.4	13.4	52.9	33.7	H 1,467	H 4.3	..	27.2			El Salvador
48.0	51.4	...	.	.	.	..				..		H 4.5	.				Equatorial Guinea
57.4	60.7	...	..	.	.	...					H 792	H 5.0	.				Eritrea
66.3	77.8	2003	5,699	4.2	1.5	49.7	48.8	7.1	57.4	35.5	H 567	H 2.4	H 0.8	42.0	10,074	72.0	Estonia
47.7	50.0	1999	630,290	9.1	..	..	..	..	.		H 12,874	H 5.2	...	...		.	Ethiopia
75.8	82.7	2004	235	4.9							F 14	F 3.0	F 0.9	62.0			Faroe Islands
67.1	72.1	1998	8,058	10.1	.	.					F 137	F 6.0	F 2.5	82.7	.	.	Fiji
75.3	82.3	2004	29,342	5.6	0.9	37.5	61.6	2.7	46.7	50.6	H 2,373	H 2.2	.	59.2	11,091	19.2	Finland
76.7	83.8	2004	258,342	4.3	0.2	38.2	61.6	1.6	50.6	47.8	H 24,643	H 2.4	H 1.0	53.6	205,600	27.0	France
73.8	80.6	2003	524	2.9	0.8	25.6	73.6	4.8	41.6	53.6	H 33	H 3.4	H 1.2	16.1	388	16.8	French Guiana
73.5	78.4	2004	1,148	4.5	..						H 55	H 4.4	H 1.7	29.9			French Polynesia
53.6	56.5	...	.		..						H 260	H 5.0	..				Gabon
52.3	56.0	...	..	..							H 154	H 8.6	.			..	Gambia, The
70.7	73.3	...	..	.	..	..		..	..				.			..	Gaza Strip
67.8	74.9	2004	14,866	3.4	5.8	58.0	36.2	21.9	59.9	18.2	H 1,225	H 4.0	H 1.1	54.1	13,908	29.8	Georgia
75.8	82.0	2004	395,992	4.8	0.7	44.6	54.7	3.7	56.3	40.0	H 38,720	H 2.1	H 0.3	70.8	129,650	18.4	Germany
57.7	59.3	..	..	..	..	..	..	..	..	..	H 4,463	H 4.9	H 2.2	..	..	..	Ghana
76.6	81.4	2004	51,377	4.6	0.8	46.3	52.9	7.0	65.4	27.6	H 3,600	H 2.9	H 0.7	95.1	12,289	12.1	Greece
66.1	73.3	1999	250	4.5	1.1	44.6	54.3	2.7	59.6	37.7	F 31	F 1.8	F 0.5	29.2	869	97.1	Greenland
62.7	66.3	2001	509	5.0	0.3	28.6	71.1	2.6	40.1	57.3	H 29	H 3.3	H 2.2	18.1			Grenada
74.7	81.2	2003	1,701	3.9	0.2	21.7	78.1	1.6	38.2	60.2	H 146	H 2.9	H 0.9	34.7	561	8.7	Guadeloupe
75.3	81.6	2003	1,334	8.2	3.0	55.5	41.5	9.2	59.3	31.5	H 44	H 3.7	H 1.3	42.8	.	.	Guam
64.3	71.6	2003	51,247	3.9	18.1	55.9	26.0	41.0	40.8	18.2	H 2,600	H 4.5	.	34.8			Guatemala
77.3	83.4	2000	343	5.7		.				..	H 21	H 2.6	H 0.5	65.2			Guernsey
48.2	50.6	.				.					H 1,161	H 6.6	.	..			Guinea
44.8	48.5	..								.	H 179	H 7.0	H 2.8	11.3			Guinea-Bissau
62.9	68.3	..	..								H 196	H 4.5	H 2.1				Guyana
51.6	54.3	..	..								H 1,732	H 4.7	H 1.8				Haiti
66.5	70.7	...	.								H 1,520	H 4.4	H 2.8				Honduras
78.8	84.4	2004	41,376	6.0	0.5	33.1	66.4	2.0	55.6	42.4	H 2,298	H 3.1	..	94.5	15,880	31.9	Hong Kong
68.6	76.9	2005	44,234	4.4	0.9	53.0	46.1	4.2	67.8	26.5	F 4,104	F 2.5	F 0.8	66.0	48,689	49.9	Hungary
78.9	82.8	2005	1,607	5.4	0.2	30.7	69.1	0.7	44.9	54.4	H 104	H 2.8	H 1.3	36.3	951	23.0	Iceland
63.6	65.2	...	.	.	...	...					H 194,736	H 5.4	H 2.4	.	723,142	2.8	India
67.1	72.1	2003	1,588,000	7.7	.					.	H 53,972	H 3.9	..	..		.	Indonesia
68.6	71.4	2004	602,347	8.9	.	..					H 14,456	H 4.5	H 2.2	100			Iran
67.5	70.0	2000	171,134	7.3	.				.		H 3,965	H 6.4	H 4.1	.	..	..	Iraq
75.0	80.3	2005	20,723	5.0	0.7	62.2	37.1	1.6	74.7	23.7	H 1,328	H 3.0	H 1.3	68.0	6,320	10.3	Ireland
75.0	81.9	2004	399	5.1	0.3	30.8	68.9	1.5	39.8	58.7	H 29,377	H 2.4	...	63.9	152	17.6	Isle of Man
77.6	81.8	2003	39,154	6.1	3.4	69.3	27.3	18.3	88.2	13.5	H 1,856	H 3.6	H 1.1	96.6	20,378	14.0	Israel
77.6	83.2	2004	250,764	4.3	0.4	47.6	52.0	3.3	41.2	55.5	F 21,488	F 2.7	F 0.5	85.1	124,118	22.1	Italy
69.2	72.7	2004	21,670	8.3	0.3	33.1	66.6	1.6	43.8	54.6	H 753	H 3.5	H 1.4	14.9	...	..	Jamaica
78.6	85.6	2004	720,417	5.6	1.2	50.4	48.4	2.8	62.5	34.7	H 47,043	H 2.6		99.0	301,673	27.2	Japan
76.8	81.9	2001	660	7.6	...	...	.	...	..	...	H 36	H 2.4	H 0.4	88.1	296	28.0	Jersey
70.6	72.4	2004	53,754	10.0	2.8	66.7	30.5	33.0	56.6	10.4	H 919	H 5.3	H 3.4	100	...	...	Jordan
61.2	72.2	2004	114,685	7.6	3.2	68.3	28.5	15.3	68.2	16.5	H 3,984	H 3.8	H 1.4	76.1	135,000	61.2	Kazakhstan
48.9	47.1	...	...	.	...	..	.		..	..	H 6,848	H 4.5	H 2.7	...	...	..	Kenya
58.7	64.9	...	...	...	...	...	...	...	...	...	H 13	H 6.5	H 2.5	...	...	...	Kiribati
68.7	74.2	...	...	...	...	...	...	...	...	...	H 4,565	H 4.6	H 1.7	...	...	...	Korea, North
71.7	79.3	2004	310,944	6.5	0.4	41.7	57.9	1.6	64.4	34.0	H 14,852	H 3.2	H 1.0	99.5	...	.	Korea, South
69.8	71.4	...	...	...	...	.	...	...	...	...	.	H 6.5	...	...	...	..	Kosovo
75.9	77.9	2004	12,359	5.2	5.6	66.4	28.0	22.4	53.5	24.1	H 472	H 4.8	H 1.6	100.0	19^9	..	Kuwait
64.3	72.2	2004	34,542	6.8	2.1	73.2	24.7	18.5	69.7	11.8	H 1,145	H 4.3	H 1.9	83.2	19,984	18.2	Kyrgyzstan
53.1	57.2	...	...	...	...	...	...	...	...	...	H 891	H 6.2	...	...	...	...	Laos
67.1	77.2	2005	12,544	5.5	1.2	54.9	43.9	6.1	61.7	32.2	H 907	H 2.5	H 0.8	55.0	13,723	67.5	Latvia
70.2	75.2	2005	29,705	7.8	...	...	..	...	...	...	H 727	H 4.3	H 2.2	...	...	...	Lebanon
45.1	54.2	...	...	...	...	...	.	...	...	...	H 439	H 4.1	H 2.0	...	...	...	Lesotho
37.0	40.8	...	...	...	...	...	..	...	...	...	H 474	H 5.0	...	...	...	...	Liberia
74.3	78.8	2002	33,323	5.9	...	...	..	...	...	...	H 794	H 6.3	F 2.9	...	...	...	Libya
76.0	83.2	2004	164	4.8	—	54.5	44.5	0.0	66.3	29.2	H 14	H 2.5	H 0.7	82.7	...	...	Liechtenstein
66.4	77.8	2005	19,938	5.8	2.1	61.7	36.2	9.3	65.7	25.0	H 1,357	H 2.5	H 0.8	71.5	10,644	35.0	Lithuania
75.0	81.0	2004	1,999	4.4	0.4	34.7	64.9	2.5	47.0	50.5	H 172	H 2.5	H 0.5	73.9	...	...	Luxembourg
77.4	82.0	2004	1,737	3.8	1.1	43.2	55.7	3.9	63.2	32.9	H 156	H 2.8	H 0.9	82.7	...	...	Macau
71.3	76.4	2005	14,500	7.1	3.0	67.6	29.4	18.7	66.0	15.3	H 561	H 3.6	H 1.3	87.6	11,407	38.9	Macedonia
54.6	59.4	...	...	...	...	...	...	...	...	...	H 3,650	H 4.6	H 2.0	...	...	...	Madagascar
41.7	41.2	...	...	...	...	...	...	...	...	...	H 2,735	H 4.5	...	...	...	...	Malawi
71.8	76.2	2004	160,064	6.3	...	...	...	...	...	...	H 5,562	H 4.6	...	...	...	...	Malaysia
62.8	65.4	2004	3,400	11.8	13.7	58.2	29.1	..	...	...	H 43	H 6.5	...	...	...	...	Maldives
46.7	50.7	...	...	...	...	...	...	.	...	...	H 1,757	H 6.0	...	...	...	...	Mali
76.4	80.4	2004	2,402	6.0	0.7	61.0	38.3	3.9	71.7	24.4	H 132	H 3.0	H 1.2	80.9	47	1.2	Malta
68.1	72.1	...	...	...	...	...	...	...	...	..	H 8	H 7.9	...	...	...	...	Marshall Islands
75.9	82.0	2003	1,414	3.6	0.1	19.9	80.0	0.8	33.4	65.8	H 127	H 3.0	H 0.8	31.8	2,900	42.9	Martinique
50.5	55.0	...	...	...	...	...	...	...	...	...	H 487	H 5.5	...	...	...	...	Mauritania
68.7	75.6	2003	10,812	8.8	1.3	54.7	44.0	15.9	59.5	24.6	F 310	F 3.9	F 2.0	72.8	...	...	Mauritius
59.2	63.6	...	...	...	...	...	...	...	...	...	H 37	H 4.3	H 2.3	89.2	...	...	Mayotte
72.7	77.6	2003	584,142	5.6	12.5	61.8	25.7	28.3	54.6	17.1	H 25,483	H 4.2	H 2.0	72.5	3,486	0.1	Mexico
68.0	71.6	...	...	...	...	...	...	...	...	...	H 16	H 7.0	...	...	...	...	Micronesia
64.5	72.2	2004	25,164	7.0	4.4	84.8	10.8	27.5	68.6	3.9	H 1,318	H 3.2	H 1.1	75.5	17,965	46.9	Moldova
75.7	83.6	2004	171	5.2	..	...	..	...	..	...	H 14	H 2.3	H 0.3	96.8	...	...	Monaco

Vital statistics, marriage, family (continued)

country	vital rates						causes of death (rate per 100,000 population)								
	year	birth rate per 1,000 population	death rate per 1,000 population	infant mortality rate per 1,000 live births	rate of natural increase per 1,000 population	total fertility rate	year	infectious and parasitic diseases	malignant neoplasms (cancers)	endocrine and metabolic disorders	diseases of the nervous system	diseases of the circulatory system	diseases of the respiratory system	diseases of the digestive system	accidents, poisoning, and violence
Mongolia	2005	17.6	6.0	22.2	11.6	2.26	2003		121.6	.		244.1	34.2	49.0	84.0
Montenegro	2004	12.6	9.2	7.8	3.4	1.82	2004		156.5			477.5	37.2	...	34.5
Morocco	2005	22.3	5.6	41.6	16.7	2.73	2002	120.0	41.0			201.0	23.0	. .	40.0
Mozambique	2005	35.8	21.0	130.8	14.8	4.70								.	.
Myanmar (Burma)	2004	23.2	11.2	81.0	12.0	2.08	2002	477.0	74.0			258.0	57.0	...	92.0
Namibia	2005	25.2	18.4	49.0	6.8	3.18									
Nauru	2005	25.1	6.8	10.0	18.3	3.19	2003		79.5	159.0		119.2	149.0	.	79.5
Nepal	2005	31.5	9.5	67.0	22.0	4.19	2002	472.0	63.0	.		203.0		...	86.0
Netherlands, The	2005	11.5	8.4	4.9	3.1	1.70	2005	11.2	247.4	27.5	21.8	268.8	87.7	33.0	32.8
Netherlands Antilles	2004	14.2	7.7	10.4	6.5	2.02	1995[12]	16.7	149.0	61.7	9.9	71.6	40.8	21.4	47.6
New Caledonia	2005	17.2	4.9	6.4	12.3	2.20	2004	11.6	120.5	13.8	12.1	110.5	49.0	13.9	91.4
New Zealand	2004	14.3	7.0	5.6	7.3	2.01	2000	4.6	201.8	26.7	21.2	289.3	54.4	19.1	42.8
Nicaragua	2005	24.9	4.5	29.1	20.4	2.81	2000	15.0	31.9	17.4	5.9	66.9	18.4	16.6	39.4
Niger	2005	51.3	21.2	119.7	30.1	7.55	2002	1,697.0	50.0	. .	. .	121.0	34.0	...	...
Nigeria	2005	40.7	17.2	98.8	23.5	5.53	.	.	. .		. .	...	...	...	...
Northern Mariana Islands	2005	19.5	2.3	7.1	17.2	1.27	2000[13]					...	...	...	30.8
Norway	2005	12.3	8.9	3.1	3.4	1.84	2004	12.8	228.5	18.1	29.3	345.5	76.1	30.3	55.6
Oman	2005	36.7	3.9	19.5	32.8	5.84	2002	39.0	37.0	17.0		126.0	.	...	35.0
Pakistan	2003	26.5	7.0	76.2	19.5	4.44	2003	104.0	41.8	.		96.5	67.0	...	42.6
Palau	2004	12.6	6.9	16.2	5.7	1.82	2002	138.0	61.0			244.0	45.0	.	34.0
Panama	2005	22.0	5.3	16.7	16.7	2.70	2004	31.0[8]	74.6	26.1	4.1[8]	122.2	41.2	11.2[8]	44.7
Papua New Guinea	2005	30.0	7.4	51.5	22.6	3.96	2002	436.0	50.0	...	..	153.0	36.0	...	...
Paraguay	2005	29.4	4.5	25.6	24.9	3.93	2000	16.8	43.1	20.9	2.7	80.5	24.1	11.8	38.2
Peru	2005	20.9	6.3	31.9	14.6	2.56	2002		112.0	14.0	.	113.0	27.0	...	60.0
Philippines	2005	24.1	5.6	23.5	18.5	3.41	2001		48.4	..	..	143.7	65.1	...	34.3
Poland	2005	9.6	9.7	6.4	–0.1	1.24	2004	6.2[8]	235.2	14.8	11.0	441.8	44.2	41.0	65.4
Portugal	2005	10.5	9.7	4.0	0.8	1.42	2003	19.7[8]	217.2	48.2[8]	19.6[8]	391.7	91.3	43.8	54.7
Puerto Rico	2005	13.3	7.3	8.2	6.0	1.91	2004	40.4[3]	124.0	66.0	32.3[3]	230.9	74.4[3]	40.9[3]	63.4[3]
Qatar	2004	17.4	1.8	8.6	15.6	2.95	2004		18.1	12.2	.	33.8	11.4	...	33.8
Réunion	2005	19.0	5.6	6.8	13.4	2.42	2002		111.7	...	...	164.5	41.1	48.4[3]	54.5
Romania	2005	10.2	12.3	16.8	–2.1	1.29	2004	13.5	204.1	10.5	8.7	739.0	63.5	70.2	62.5
Russia	2004	10.5	15.9	11.5	–5.4	1.37	2004	25.0	201.0	16.9[8]	20.2[8]	892.0	64.0	59.0	221.0
Rwanda	2005	40.4	15.8	89.1	24.6	5.49	. .	. .	. .	. .	. .	. .	...	...	...
St Kitts and Nevis	2005	18.1	8.5	14.5	9.6	2.33	2002	104.6	110.4			404.9	. .	...	42.9
St Lucia	2004	14.6	6.9	19.0	7.7	2.25	2002	19.0[4]	101.8	77.4	13.9[4]	192.7	43.1[4]	17.7[4]	50.1[4]
St Vincent and the Grenadines	2003	18.5	7.6	18.1	10.9	1.95	2003	49.0	114.2	115.2	7.1	252.4	42.2	20.4	34.5
Samoa	2003	28.6	5.5	29.7	23.1	3.21	2002	89.0	54.0	39.0	8.0	222.0	43.0	29.0	35.0
San Marino	2004	10.3	6.2	3.4	4.1	1.32	2005		288.2	.		331.8	...	...	26.8
São Tomé and Príncipe	2005	40.8	6.7	43.1	34.1	5.71			.	...		.	...	...	...
Saudi Arabia	2005	29.6	2.6	13.2	27.0	4.05	2002		44.0	20.0		144.0		...	...
Senegal	2005	39.2	11.4	62.7	27.8	5.26				. .				.	
Serbia[14]	2005	10.4	14.3	6.7	–3.9	1.60	2003	6.9	254.0	35.5	14.1	763.1	51.8	42.5	51.6
Seychelles	2004	17.4	7.4	11.8	10.0	2.00	2004		131.0	...		268.0	74.0	43.7	...
Sierra Leone	2005	46.1	23.4	162.8	22.7	6.15		.	...			..	...	...	...
Singapore	2005	10.0	4.3	2.1	5.7	1.24	2005	.	120.33	14.3		146.1	83.7	...	22.2
Slovakia	2005	10.1	9.9	6.8	0.2	1.25	2001	3.5	220.6	14.9	8.6	533.4	50.7	48.4	56.5
Slovenia	2005	9.1	9.4	4.1	–0.3	1.26	2005	5.4[2]	259.6	36.3[2]	13.6[2]	382.2	69.9	52.7	71.7
Solomon Islands	2005	30.7	4.0	21.3	26.7	4.04	2002		43.0	.	..	157.0	45.0	...	...
Somalia	2005	45.6	17.0	116.7	28.6	6.84	..	..	.	. .	...	..	..	...	...
South Africa	2005	18.5	21.3	53.6	–2.8	2.73	1996	92.9	65.2	29.5	14.7	149.8	67.0	20.3	131.3
Spain	2005	10.5	8.8	4.4	1.7	1.32	2004	16.0[8]	230.2	23.5[8]	30.3[8]	283.8	89.7	44.3	39.0
Sri Lanka	2004	18.5	5.8	11.2	12.7	2.11	2002		101.0	.		252.0	82.0	.	81.0
Sudan, The	2005	35.2	9.2	62.5	26.0	4.85				.		. .		...	...
Suriname	2005	17.9	5.5	21.5	12.4	2.07	2002		87.0	32.0		265.0	...		76.0
Swaziland	2005	27.9	28.8	71.8	–0.9	3.62			..	. .		..	.	.	...
Sweden	2005	11.2	10.2	3.1	1.0	1.75	2001	12.4	243.0	25.3	24.0	479.9	68.3	33.0	53.3
Switzerland	2005	9.7	8.1	4.2	1.6	1.42	2004	9.9[3]	207.0	25.0[3]	31.8[3]	301.1	51.6	33.1[3]	44.9
Syria	2005	28.3	4.9	29.5	23.4	3.50	2002		56.0	...		156.0	...	...	38.0
Taiwan	2005	9.1	6.1	5.9	3.0	1.18	2005		141.2	39.4		104.2	21.0	21.3	50.6
Tajikistan	2005	26.4	4.6	46.4	21.8	3.19	2001	30.5	28.3	6.8	7.8	186.3	58.3	20.3	25.8
Tanzania	2005	38.2	16.7	98.5	21.5	5.06	.							...	...
Thailand	2005	14.0	7.0	20.2	7.0	1.63	2000	51.7	63.4	13.0	17.3	52.6	34.1	14.6	60.6
Togo	2005	37.2	10.0	62.2	27.2	5.01	. .	.	. .	. .	. .		. .	. .	...
Tonga	2005	25.2	5.4	15.7	19.8	3.80	2002		77.2	43.6	.	190.1	49.5	...	...
Trinidad and Tobago	2005	12.7	10.4	25.8	2.3	1.75	2000	55.8	99.1	110.7	14.7	278.7	32.5	25.1	80.6
Tunisia	2005	15.5	5.1	24.8	10.4	1.75	2002		57.0		.	267.0	.	...	62.0
Turkey	2005	18.9	6.2	23.6	12.7	2.19	2003	21.0	91.0	15.0	2.0	340.0	11.0	14.0	24.0
Turkmenistan	2005	27.7	8.8	73.1	18.9	3.41	1998	99.1	43.9	9.2	5.8	314.6	101.1	30.2	59.3
Tuvalu	2005	21.9	7.2	20.0	14.7	3.00	2002	.		.		35.0	7.0	...	...
Uganda	2005	48.0	13.5	69.8	34.5	6.92	...			..	.	.	...	...	...
Ukraine	2005	9.0	16.6	10.0	–7.6	1.20	2002	24.4	166.9	7.2	11.2	799.7	56.7	48.4	153.5
United Arab Emirates	2004	14.6	1.4	8.7	13.2	2.39	2002	17.6	34.1	...		119.6	...	...	61.9
United Kingdom	2005	12.0	9.7	5.1	2.3	1.79	2003	8.6	229.0	13.5	28.1	346.2	126.2	42.0	34.3
United States	2005	14.0	8.2	6.4	5.8	2.07	2004	20.9[3]	187.4	24.8	32.2[3]	293.8	78.6	29.8[3]	47.8
Uruguay	2005	14.3	9.4	14.3	4.9	2.04	2002	20.1[3]	236.3	26.9[3]	27.6[3]	327.1	50.6	38.8[3]	33.0
Uzbekistan	2005	20.3	5.5	71.1	14.8	2.94	2004	15.2	42.1	29.5	12.3	276.9	43.4	32.2	38.0
Vanuatu	2005	23.1	7.9	55.2	15.2	2.77	2002	112.6	50.3	..		194.5	65.3	26.1	.
Venezuela	2005	22.0	5.1	16.8	16.9	2.69	2002	31.7	67.8	29.9[3]	7.5[3]	137.4	25.9[3]	18.2[3]	83.9
Vietnam	2005	17.1	6.2	26.0	10.9	1.94	2002	93.6	80.4			200.7	64.3		60.8
Virgin Islands (U.S.)	2005	14.2	6.3	8.0	7.9	2.19	2002	27.5	114.6	25.6	19.3[3]	15	19.3[3]	24.9[3]	31.6
West Bank	2005	32.4	4.0	19.6	28.4	4.40				.		.	..	...	...
Western Sahara	2005	41.2	12.6	75.7	28.6	5.94	.	.	..	. .	.	.	.	...	..
Yemen	2005	43.1	8.5	61.5	34.6	6.67				.		.	.	...	. .
Zambia	2005	41.3	22.3	100.3	19.0	5.47				.		. .	...	...	. .
Zimbabwe	2005	28.2	21.9	52.3	6.3	3.18	1990	64.7	28.4	4.9	9.4	40.8	39.5	12.1	44.9

expectation of life at birth (latest year)		nuptiality, family, and family planning														country
		marriages			age at marriage (latest)						families (F), households (H) (latest)					
					groom (percent)			bride (percent)			families (households)		children		induced abortions	
male	female	year	total number	rate per 1,000 population	19 and under	20–29	30 and over	19 and under	20–29	30 and over	total ('000)	size	number under age 15	percent within marriage	number	ratio per 100 live births	
61.6	67.8	2004	11,200	4.4	3.8	73.1	23.1	9.5	73.8	16.7	H 607	H 4.2		82.2	12,870	25.9	Mongolia
70.0	75.2	2004	3,440	5.5	0.1	52.7	47.2	1.3	63.2	35.5	H 191	H 3.3	. .			.	Montenegro
68.4	73.1	.			.					.	H 5,760	H 5.3	H 2.5				Morocco
39.9	40.8	..							...	.	F 4,270	F 4.2	F 2.0	73.1			Mozambique
59.4	64.0	.		. .	. .						H 8,550	H 5.0	. .				Myanmar (Burma)
44.7	43.1										H 396	H 4.9	. .				Namibia
59.2	66.5	1995	57	5.3							H 2	H 6.1	H 2.6				Nauru
60.1	59.5	...	. .	. .	. .	. .	. .				H 4,600	H 5.3	H 2.3				Nepal
76.7	81.2	2004	73,441	4.5	0.2	30.5	69.3	1.8	46.2	52.0	H 6,794	H 2.4	H 0.4	64.9	29,450	14.6	Netherlands, The
73.6	78.2	2004	710	3.9	. .	.	.				H 62	H 2.9	H 2.1	51.6		.	Netherlands Antilles
71.9	78.6	2004	895	4.0	0.1	30.2	69.7	2.7	45.9	51.4	H 62	H 3.6		34.1	1,466	33.7	New Caledonia
76.2	82.0	2004	21,006	5.2	1.0	39.1	59.9	2.8	48.3	48.9	H 1,550	H 2.6	H 0.7	55.2	17,531	30.4	New Zealand
68.3	72.5	2003	20,411	3.9	.			.	.		H 1,044	H 4.9	. .		.		Nicaragua
43.5	43.5	...									H 1,883	H 6.2			.		Niger
46.2	47.3	..	.	.	..						H 24,554	H 4.9					Nigeria
73.3	78.6	...	.	.	.						H 19	H 3.7	H 1.5	40.2			Northern Mariana Islands
77.7	82.5	2005	22,392	4.8	0.4	28.1	71.5	2.0	44.6	53.4	H 1,981	H 2.3	.	48.2	13,989	24.6	Norway
70.9	75.5	.		.							H 343	H 6.8					Oman
64.7	65.5		.								H 21,350	H 7.1					Pakistan
67.8	75.7	. .									H 5	H 3.9			44		Palau
72.7	77.9	2003	10,310	3.3	1.2	41.0	57.8	6.1	49.8	44.1	H 770	H 4.1	H 1.5	18.5	11	0.02	Panama
62.8	67.2	. .	. .	.	.	.	.				H 1,138	H 4.8			. .	..	Papua New Guinea
72.4	77.6	2002	17,400	3.0	4.2	64.8	31.0	30.4	50.2	19.4	H 1,368	H 4.1	H 1.9	68.7		.	Paraguay
67.8	71.4	2003	51,500	1.9							H 5,855	H 4.5	.	57.8			Peru
67.0	72.9	2003	593,553	7.3	3.3	63.6	33.1	13.5	65.4	21.1	F 15,967	F 5.0	F 2.4	93.9	2,315		Philippines
70.8	79.4	2005	206,900	5.4	1.3	73.3	25.4	7.2	77.6	15.2	H 13,337	H 2.8	.	82.8	199	0.06	Poland
74.9	81.4	2004	49,178	4.7	1.4	60.2	38.4	6.9	65.3	27.8	H 3,474	H 3.0	H 0.8	70.9	906	0.8	Portugal
74.4	82.4	2003	25,236	6.5	5.1	50.1	44.8	13.1	50.0	36.9	H 1,278	H 3.0	H 1.0	59.6			Puerto Rico
71.1	76.3	2004	2,649	3.5	1.1	60.0	38.9	13.5	69.0	17.5	H 100	H 7.4	. .		172	1.3	Qatar
72.3	80.1	2003	3,212	4.2	0.5	39.9	59.6	4.5	53.1	42.4	H 250	H 3.0		33.0	4,385	29.7	Réunion
67.7	75.1	2003	133,953	6.2	1.1	66.8	32.1	15.3	65.2	19.5	H 7,320	H 3.0	. .	70.6	224,807	106	Romania
59.9	73.3	2004	979,667	6.8	6.5	64.5	29.0	28.5	47.7	23.8	H 51,209	H 2.8	H 0.8	70.2	1,797,567	120	Russia
46.5	48.4	...	.	.	.	.	.				H 2,400	H 3.4	H 2.3	94.9		.	Rwanda
69.3	75.2	2001	325	7.1	9.8	42.5	47.7	15.6	50.8	33.6	H 23	H 2.0	H 1.4	19.2	..		St. Kitts and Nevis
70.0	77.4	2004	459	2.8	0.2	29.2	70.6	2.5	41.3	56.2	H 49	H 3.2	H 2.0	14.0			St. Lucia
68.8	74.4	2003	491	4.7	1.0	37.0	62.0	4.8	46.3	48.9	H 27	H 3.9	H 2.0	15.6			St. Vincent and the Grenadines
67.9	73.7	1998	935	4.6	0.5	51.0	48.5	8.0	65.0	27.0	H 25	H 7.2		43.5		. .	Samoa
78.6	85.0	2006	216	7.2	—	31.4	68.6	—	38.2	61.8	H 12	H 2.5	H 0.4	91.2			San Marino
65.4	68.6	...	.								H 26	H 5.5					São Tomé and Príncipe
73.5	77.6	2003	98,343	4.1						.	H 3,900	H 6.3		100.0	5[9]		Saudi Arabia
54.6	57.3	.		.							H 1,157	H 8.7					Senegal
69.9	75.4	2004	42,030	5.3	1.2	53.3	45.5	10.2	61.3	28.5	H 2,521	H 3.2	.	77.8	26,645	34.1	Serbia[14]
69.0	76.4	2004	408	4.9	0.9	27.2	71.9	3.3	42.3	54.4	H 23	H 3.5	H 1.9	24.7	440	29.4	Seychelles
37.7	42.1	.		.							H 860	H 6.0		. .			Sierra Leone
77.9	81.6	2004	22,789	5.2	0.6	50.2	49.2	2.8	70.3	26.9	H 1,170	H 3.6	H 1.3		12,070	32.5	Singapore
70.3	77.8	2005	26,149	4.9	2.6	64.8	32.6	8.4	73.4	18.2	H 2,100	H 2.5		75.2	15,307	28.5	Slovakia
74.1	81.3	2005	5,769	2.9	0.4	50.0	49.6	2.7	66.0	31.3	H 685	H 2.9		53.3	6,403	35.3	Slovenia
70.2	75.3	...				...			..	..	H 67	H 6.9				. .	Solomon Islands
46.4	49.9	...										H 5.8				..	Somalia
49.0	52.5	2005	180,657	3.9	0.2	33.2	66.6	2.0	49.9	48.1	H 11,400	H 4.0		75.9	82,686	10.8	South Africa
76.7	83.2	2004	216,149	5.1	0.3	47.5	52.2	1.4	62.1	36.5	H 15,600	H 2.8		76.8	84,985	18.7	Spain
72.5	76.5	2002	190,618	9.5	1.3	64.3	34.4	16.7	67.1	16.2	H 4,450	H 4.3		96.3		. .	Sri Lanka
57.3	59.8	...	.	.	.	.	.				H 6,300	H 6.2				.	Sudan, The
70.0	75.6	2004	1,951	4.0	1.1	48.0	50.9	19.4	46.3	34.3	H 109	H 4.0					Suriname
32.5	34.0	.									H 169	H 6.4					Swaziland
78.4	82.8	2004	43,088	4.8	0.1	20.0	79.9	1.8	34.2	64.0	H 4,320	H 2.1	H 0.5	44.6	34,454	34.1	Sweden
78.7	83.9	2005	40,139	5.4	0.1	20.0	79.9	1.8	34.2	64.0	H 3,182	H 2.3	H 0.4	86.7	11,792	16.3	Switzerland
68.7	71.4	2002	174,449	9.5	...	. .	. .	. .	. .	. .	H 3,460	H 5.2	F 2.4	. .			Syria
73.6	79.4	2005	142,082	6.3	1.5	62.3	36.2	6.0	77.7	16.3	H 7,083	H 3.5	H 1.0	95.9	42,282	14.9	Taiwan
60.9	67.0	2005	52,352	7.6	8.6	80.0	11.4	39.2	56.0	4.8	H 1,265	H 5.2	H 2.7	90.8	18,822	10.6	Tajikistan
44.6	45.9	...	.								H 7,150	H 5.0	H 2.3				Tanzania
69.7	74.4	2003	328,356	5.2					..	.	H 17,853	H 3.5	.		.		Thailand
55.0	59.1	.									H 812	H 6.0	...				Togo
66.7	71.8	2003	697	6.9	8.3	63.5	28.2	22.6	59.0	18.4	F 18	F 5.5	F 2.7	80.6		.	Tonga
65.6	67.9	2002	7,434	5.8	1.5	46.6	51.9	10.5	53.9	35.6	H 347	H 3.8	H 1.3	. .		—	Trinidad and Tobago
73.2	76.7	2001	61,800	6.4	.	43.3	56.7	13.2	65.8	21.0	H 2,210	H 4.5	H 1.9	99.8	19,000	10.6	Tunisia
68.9	73.8	2004	477,451	6.7	3.3	74.6	22.1	22.5	66.2	11.3	H 17,460	H 4.1	.			...	Turkey
58.0	64.9	1998	25,000	5.4	3.0	87.4	9.6	16.1	77.1	6.8	H 850	H 5.7	H 2.4	96.2	32,000	28.8	Turkmenistan
65.8	70.3	...	..	.					..	..	H 1.8	H 5.3	H 2.2	90.5	...	.	Tuvalu
49.4	50.9	.			. .	.					H 5,255	H 4.7	.	.	. .	...	Uganda
62.2	74.0	2004	278,225	5.9	3.7	64.9	31.4	20.0	57.6	22.4	H 18,250	H 2.6	H 0.8	78.6	289,065	67.7	Ukraine
72.7	77.9	2004	12,794	2.9	...	. .	.	. .	.	.	H 650	H 6.4	.	. .	66[9]	...	United Arab Emirates
75.9	81.0	2004	311,180	5.2	0.7	35.3	64.0	2.6	45.9	51.5	H 24,200	H 2.4	H 1.7	57.1	197,913	29.6	United Kingdom
74.8	80.1	2005	2,230,000	7.5	4.3	51.8	43.9	10.9	55.8	35.3	H 114,384	H 2.6	F 1.0	64.3	1,293,000	31.9	United States
72.0	79.4	2004	13,123	4.0	2.6	51.5	45.9	11.1	55.4	33.5	H 1,090	H 3.1	H 0.9	42.9	.	..	Uruguay
60.8	67.7	2005	130,800	5.0	5.2	84.9	9.9	36.7	57.8	5.5	H 4,640	H 5.6	H 2.4	95.8	54,900	10.4	Uzbekistan
61.0	64.1	...	..	.	...	...	..		...	...	H 45	H 4.7	H 2.2	...	113	2.4	Vanuatu
71.3	77.6	2004	74,103	2.8	5.8	56.2	38.0	19.3	55.4	25.3	H 6,080	H 4.3	H 2.2	47.0	...	...	Venezuela
67.8	73.6	2002	964,701	12.1	.	. .	. .			. .	H 18,590	H 4.4	H 1.9	...	1,000,000	59.0	Vietnam
75.1	83.0	2001[15]	4,087	37.4	0.4	33.6	66.0	1.9	45.9	52.2	H 43	H 2.5	H 1.0	30.2		...	Virgin Islands (U.S.)
71.3	74.9	2004[16]	27,634	. .	7.8	73.8	18.4	53.8	40.5	5.7		.	.	. .		..	West Bank
48.7	51.3	..			..	..	..	.	.	..		...	...	...		.	Western Sahara
59.9	63.7	.				..	..	.		..	H 3,010	H 6.9	...	.	.		Yemen
37.5	37.4		..	. .	..	..	...		..	...	H 2,116	H 5.1	H 2.1	..	.	.	Zambia
40.2	38.0	.	.							...	H 2,620	H 4.5	H 1.1	95.8		.	Zimbabwe

[1]Excludes nomadic tribes. [2]2003. [3]2000. [4]2001. [5]Based on urban sample population. [6]Millions of households. [7]1999. [8]2002. [9]Abortions performed abroad [10]1995. [11]1996. [12]Includes Aruba [13]Natural causes of death: 177.7 per 100,000 population. [14]Excludes Kosovo. [15]Includes numerous marriages of visitors. [16]Includes Gaza Strip.

National product and accounts

This table furnishes, for most of the countries of the world, breakdowns of (1) gross national income (GNI)—its global and per capita values, and purchasing power parity (PPP), (2) growth rates (2000–05) and principal industrial and accounting components of gross domestic product (GDP), and (3) principal elements of each country's balance of payments, external public debt outstanding, including international goods trade, invisibles, and tourism payments.

Measures of national output. The two most commonly used measures of national output are GDP and GNI. Each of these measures represents an aggregate value of goods and services produced by a specific country. The GDP, the more basic of these, is a measure of the total value of goods and services produced entirely within a given country. The GNI, the more comprehensive value, is composed of both domestic production (GDP) and the net income from current (short-term) transactions with other countries. When the income received from other countries is greater than payments to them, a country's GNI is greater than its GDP. In theory, if all national accounts could be equilibrated, the global summation of GDP would equal GNI.

In the first section of the table, data are presented for the nominal GNI, the nominal GNI per capita, and the GNI purchasing power parity per capita. "Nominal" refers to value in current prices for the year indicated. Purchasing power parity (PPP) is an economic theory used to determine the number of units in a country's currency that are required to buy the same amount of goods and services in another country. PPP is expressed in a common currency, usually U.S. dollars, and as such it is often used to compare the standards of living between countries. PPPs per capita in this table are nearly always values calculated by the World Bank. Beside the GNI are given figures for annual growth of total and per capita "real" GDP ("real" figures being adjusted to eliminate the effect of recent inflation [most often] or, occasionally, of deflation between two given dates) along with average annual population growth rates for the same span of years. Values should be compared cautiously, as they are subject to a number of distortions, notably of exchange rate, but also of PPP and in the existence of elements of national production that do not enter the monetary economy in such a way as to be visible to fiscal authorities (*e.g.*, food, clothing, or housing produced and consumed within families or communal groups or services exchanged). "Real" GDP data in this section are taken from the World Bank *World Development Indicators* whereas population growth rates are based on EB calculations.

The internal structure of the national product. GDP/GNI values allow comparison of the relative size of national economies, but further information is provided when these aggregates are analyzed according to their industrial sectors of origin and component kinds of expenditure.

The distribution of GDP for ten industrial sectors, usually compiled from national sources, is aggregated into three major industrial groups:

1. The primary sector, composed of agriculture (including forestry and fishing) and mineral production (including fossil fuels).
2. The secondary sector, composed of manufacturing, construction, and public utilities.

National product and accounts

country	gross national income (GNI), 2006			gross domestic product (GDP), 2000–05			origin of gross domestic product (GDP) by economic sector, 2005 (%)									
	nominal ('000,000 U.S.$)	per capita		average annual growth rates, 2000–05			primary		secondary			tertiary				other
		nominal (U.S.$)	purchasing power parity (PPP; U.S.$)	real GDP (%)	population (%)	real GDP per capita (%)	agriculture	mining	manufacturing	construction	public utilities	transp., communications	trade	financial svcs.	other svcs.	government	
Afghanistan	8,309	319	700[1]	12.0	3.3	8.7	—— 38 ——		15	—— 9 ——		9	8	6	4	7	4
Albania	9,542	3,010	5,840	5.3	0.4	4.9	—— 21 ——		8[1]	13[1]	…	8[1]	20[1]	1, 2	10[1]	20[1, 2]	—
Algeria	111,547	3,350	6,900	5.2	1.5	3.7	8	45	5	—— 7 ——		—————— 19 ——————				9	7
American Samoa	334[3]	5,800[3]	..	..	..	..	…	.	.	…	..	…	…	…	…	…	…
Andorra	3,337	44,960	39,000[3]			.			.	.	..	…	…	…	…	…	…
Angola	43,088	2,600	2,360	9.9	2.5	7.4	8[4]	53[4]	4[4]	4[4]	—	——15[4]——		———— 14[4] ————			2[4]
Antigua and Barbuda	916	10,890	13,490	3.8	0.9	2.9	3	1	2	14	3	17	17	14	6	14	9
Argentina	208,992	5,340	15,390	2.2	1.0	1.2	10[4]	6[4]	23[4]	3[4]	2[4]	8[4]	13[4]	15[4]	10[4]	5[4]	5[4]
Armenia	6,151	2,040	5,880	12.4	–0.4	12.8	23[1]	5	19[1, 5]	15[1]	4[1]	6[1]	11[1]	5[1]	7[1]	3[1]	7[1]
Aruba	2,244	21,600	22,500[3]	..		.	—	—	3[6]	6[6]	6[6]	9[6]	24[6]	26[6]	11[6]	12[6]	3[6]
Australia	747,304	36,400	31,860	3.2	1.2	2.0	3[4]	2[4]	11[4]	6[4]	2[4]	8[4]	13[4]	27[4]	14[4]	4[4]	10[4]
Austria	318,478	38,200	36,300	1.5	0.4	1.1	3	—	18[1]	7[1]	2[1]	7[1]	16[1]	20[1]	13[1]	5[1]	10[1]
Azerbaijan	18,676	2,200	5,960	12.7	0.8	11.9	9	5	47[5]	10	1	9	7	——14——		3	—
Bahamas, The	6,077	18,600	21,500			…	5[7]	8[7]	3[7]	2[7]	—[7]	10[7]	20[7]	…	…	…	…
Bahrain	15,229	20,600	18,770[3]			.	—	26	13	4	1	1	12	32	4	13	–6
Bangladesh	72,050	460	2,340	5.4	1.4	4.0	20[1]	1[1]	15[1]	8[1]	1[1]	11[1]	14[1]	10[1]	14[1]	3[1]	3[1]
Barbados	3,307	11,300	12,240	3.5	0.3	3.2	3	1	6	5	3	5	24	16	5	13	19
Belarus	36,838	3,800	8,810	7.5	–0.5	8.0	10	5	31[5]	8	—	11	12	———— 28 ————			—
Belgium	395,886	38,000	34,460	1.5	0.3	1.2	1	—	15	4	2	8	13	25	15	6	11
Belize	1,003	3,600	6,640	4.0	3.1	0.9	12	1	8	4	3	11	20	16	7	10	8
Benin	4,649	530	1,160	4.0	2.9	1.1	33	—	8	4	1	8	17	———— 21 ————			8
Bermuda	5,056	78,500				..	1	5	8[5]		2	6	13	57	9	5	—
Bhutan	921	1,400	1,400	8.8	2.8	6.0	25[1]	1[1]	7[1]	19[1]	9[1]	8[1]	10[1]	6[1]	—— 12[1] ——		3[1]
Bolivia	10,163	1,100	2,890	3.0	1.7	1.3	15[1]	10[1]	17[1]	3[1]	2[1]	11[1]	11[1]	12[1]	5[1]	9[1]	5[1]
Bosnia and Herzegovina	11,566	3,000		5.0	0.4	4.6	9[1]	2[1]	10[1]	4[1]	6[1]	9[1]	14[1]	6[1]	11[1]	10[1]	19[1]
Botswana	8,153	4,400	8,500	5.9	0.1	5.8	2	33	4	5	3	4	12	12	4	16	5
Brazil	1,041,609	5,500	8,800	2.2	1.5	0.7	9[4]	4[4]	22[4]	7[4]	3[4]	5[4]	7[4]	16[4]	14[4]	9[4]	4[4]
Brunei	11,481	30,100				..	1	49	12	3	1	9	3	9	1	12	—
Bulgaria	30,782	4,000	10,140	5.0	–0.6	5.6	8	5	17[5]	4	4	12	7	4	——29——		15
Burkina Faso	6,226	430	1,330	5.1	3.6	1.5	29[4]	1[4]	15[4]	4[4]	—[4]	6[4]	18[4]	———— 22[4] ————			5[4]
Burundi	903	110	710	2.2	3.3	–1.1	32	1	12	5	—	5	———————— 30————————				15
Cambodia	6,177	440	2,920	8.9	1.7	7.2	32	—	18	6	1	7	13	7	9	2	5
Cameroon	17,707	970	2,370	3.7	2.2	1.5	20[1]	7[1]	18[1]	3[1]	1[1]	7[1]	20[1]	1[1]	—— 17[1] ——		6[1]
Canada	1,249,635	38,400	34,610	2.5	1.0	1.5	2	4	16	6	3	5	15	24	20	6	–1
Cape Verde	1,089	2,100	5,980	5.5	1.8	3.7	9	5	8[5]	9	—	19	21	9	2	12	11
Cayman Islands	1,443	32,100				..	—— 4 ——		2	10	—	11	23	———— 49 ————			1
Central African Republic	1,416	330	1,280	–1.4	1.3	–2.7	54[4]	7[4]	2[4]	4[4]	1[4]	4[4]	10[4]	—— 6[4] ——		7[4]	5[4]
Chad	3,509	340	1,230	14.5	3.0	11.5	21	43	5	2	—	——13——		—— 8 ——		7	1
Chile	126,436	7,700	11,260	4.3	1.1	3.2	6[1]	8[1]	16[1]	8[1]	3[1]	8[1]	11[1]	20[1]	11[1]	4[1]	5[1]
China	2,641,846	2,000	7,730[3]	9.6	0.6	9.0	14[4]	5	45[4, 5]	7[4]	—[4]	6[4]	8[4]	8[4]	9[4]	3[4]	—[4]
Colombia	125,898	2,800	7,620	3.5	1.6	1.9	12[1]	7[1]	14[1]	5[1]	5[1]	7[1]	11[1]	15[1]	—— 20[1] ——		—[1]
Comoros	397	490	2,010	3.0	2.2	0.8	51	..	4	5	2	9	17	6	—	10	–4
Congo, Dem. Rep. of the	7,784	130	720	4.4	2.8	1.6	47[1]	10[1]	5[1]	4[1]	3[1]	4[1]	16[1]	—— 7[1] ——		2[1]	2[1]
Congo, Rep. of the	5,787	1,600	940	3.9	3.0	0.9	6[1]	52[1]	6[1]	4[1]	1[1]	6[1]	9[1]	—— 7[1] ——		7[1]	2[1]
Costa Rica	21,367	4,900	10,770	4.2	1.5	2.7	8	—	20	4	3	9	18	13	17	4	4
Côte d'Ivoire	17,052	900	1,550	–0.1	2.1	–2.1	23[1]	1[1]	16[1]	3[1]	2[1]	5[1]	14[1]	———— 28[1] ————			8[1]
Croatia	40,251	8,800	13,670	4.7	0.3	4.4	6	—	20	6	—	8	15	15	—— 17 ——		13
Cuba	51,504	4,600		3.4	0.3	3.1	4	1	11	7	1	8	24	6	—— 36 ——		2
Cyprus[9]	18,191	23,700	21,480[3]	3.8	1.4	2.4	3	—	9	8	2	8	19	23	13	10	5
Czech Republic	134,001	13,200	21,160	3.5	–0.1	3.6	3	2	26	7	4	10	12	17	13	6	—
Denmark	278,800	51,300	36,110	1.2	0.3	0.9	2	3	11	5	2	8	11	20	18	5	15
Djibouti	792	970	2,540	3.2	2.0	1.2	3	—	3	7	5	24	15	12	14	18	–1
Dominica	287	4,200	6,490	3.1	–0.7	4.8	15	1	7	7	5	10	13	12	1	16	13
Dominican Republic	29,890	3,100	8,290	2.8	1.5	1.3	11	1	13	10	2	19	19	7	7	7	4
East Timor	847	760				.	32[1]	1[1]	4[1]	9[1]	1[1]	9[1]	8[1]	9[1]	1[1]	27[1]	–1[1]

3. The tertiary sector, which includes transportation and communications, trade (wholesale and retail, including restaurants and hotels), financial services (including banking, real estate, insurance, and business services), other services (community, social, and personal), and government services.

The category "other" contains adjustments such as import duties and bank service charges that are not distributed by sector.

There are three major domestic components of GDP expenditure: private consumption (analyzed in greater detail in the "Household budgets and consumption" table), government spending, and gross domestic investment. The fourth, nondomestic, component of GDP expenditure is net foreign trade; values are given for both exports (a positive value) and imports (a negative value, representing obligations to other countries). The sum of these five percentages, excluding statistical discrepancies and rounding, should be 100% of the GDP.

External public debt Because the majority of the world's countries are in the less developed bloc, and because their principal financial concern is often external debt and its service, data are given for outstanding external public and publicly guaranteed long-term debt rather than for total public debt, which is the major concern in the developed countries. For comparability, the data are given in U.S. dollars. The data presented in the table come from the World Bank's *Global Development Finance* (annual).

Balance of payments (external account transactions). The external account records the sum (net) of all economic transactions of a current nature between one country and the rest of the world. The account shows a country's net of overseas receipts and obligations, including not only the trade of goods and merchandise but also such invisible items as services, interest and dividends, short- and long-term investments, tourism, transfers to or from overseas residents, etc. Each transaction gives rise either to a foreign claim for payment, recorded as a deficit (*e.g.*, from imports, capital outflows), or a foreign obligation to pay, recorded as a surplus (*e.g.*, from exports, capital inflows) or a domestic claim on another country. Any international transaction automatically creates a deficit in the balance of payments of one country and a surplus in that of another. Values are given in U.S. dollars for comparability. The data in this section are taken from *International Financial Statistics* (monthly) published by the International Monetary Fund.

Tourist trade. Net income or expenditure from tourism (in U.S. dollars for comparability) is often a significant element in a country's balance of payments. Receipts from foreign nationals reflect payments for goods and services from foreign currency resources by tourists in the given country. Expenditures by nationals abroad are also payments for goods and services, but in this case made by the residents of the given country as tourists abroad. The majority of the data in this section are compiled by the World Tourism Organization.

gross domestic product (GDP) by type of expenditure, 2006 (%)					external public debt outstanding (long-term, disbursed only), 2005						balance of payments, 2006 (current external transactions, '000,000 U.S.$)			tourist trade, 2006 ('000,000 U.S.$)		country
consumption		gross domestic investment	foreign trade		total ('000,000 U.S.$)	creditors (%)		debt service			net transfers		current balance of payments	receipts from foreign nationals	expenditures by nationals abroad	
private	government		exports	imports		official	private	total ('000,000 U.S.$)	repayment (%) principal	repayment (%) interest	goods, merchandise	invisibles				
121	10	17	33	−81	8,000											Afghanistan
63	10	51	23	−47	1,375	93	7	66	62.1	37.9	2,123	1,452	−670.9	854	786	Albania
29	12	32	50	−23	15,476	78.9	21.1	5,079	83.0	17.0	1,749	1,723	25.8	184	370	Algeria
															35	American Samoa
58	18	30	26	−32												Andorra
39	20	13	74	−47	9,428	33.8	66.2	2,183	88.9	11.1	15,756[3]	−10,618[3]	5,138[3]	88	74	Angola
36	20	54	61	−71							−358.0[6]	222.2[6]	−135.8[6]	327	40	Antigua and Barbuda
64	12	16	23	−15	61,952	32.8	67.2	3,232	48.3	51.7	13,976	−5,923	8,053	2,753	3,572	Argentina
72	11	29	22	−34	923	99.8	0.2	25.0	64.0	36.0	−902.7	815.4	−87.3	141	146	Armenia
52	27	33	63	−75	478.6						−52.6	−206.2	258.8	1,096	241	Aruba
56	18	27	21	−22							−9,684	−31,460	−41,144	14,940	15,076	Australia
56	18	21	55	−50							641.0	9,618	10,259	15,589	10,994	Austria
36	8	32	70	−46	1,344	95.5	4.5	76.0	72.4	27.6	7,745	−4,037	3,708	78	164	Azerbaijan
68	14	33	46	−61							−852.0[3]	87.3	−764.7[3]	2,069	184	Bahamas, The
34	14	21	97	−67							3,137	−1,219	1,918	925	414	Bahrain
73	6	29	18	−26	17,938	97.1	2.9	754	73.6	26.4	3,199[3]	3,023[3]	−176.2[3]	70	371	Bangladesh
67	20	19	50	−56	660	52.4	47.6	96.3	56.8	43.2	−1,086[3]	699.3[3]	−386.7[3]	897	96	Barbados
52	20	30	62	−64	783	72.3	27.7	215	82.3	17.7	−2,398	886	−1,512	253	672	Belarus
53	23	21	90	−87							3,915	3,940	7,855	9,842	14,814	Belgium
75	13	19	60	−67	970	32.2	67.8	226	69.0	31.0	−49.8	25.1	−24.7	204	42	Belize
76	12	21	19	−28	1,762	100.0	--	60	68.3	31.7	−273.5[1]	−43[1]	−316.5[1]	119[1]	291	Benin
59	11	19	47	−36										393	294	Bermuda
49	22	54	40	−65	636.7	100.0	—	6.6	69.7	30.3				19		Bhutan
69	16	13	31	−28	4,564	99.5	0.5	284	64.8	35.2	481.0[3]	17.4[3]	498.4[3]	239	186	Bolivia
86	23	21	27	−57	2,560	93.9	6.1	108	50.9	49.1	−4,237	2,976	−1,261	565	123	Bosnia and Herzegovina
29	37	20	48	−34	438	97.3	2.7	50.1	77.2	22.8	1,604[3]	−135[3]	1,469[3]	562	282	Botswana
60	20	17	15	−12	94,497	27.0	73.0	16,053	57.2	42.8	46,115	−32,839	13,276	3,861	4,720	Brazil
25	22	13	71	−32							1,600[7]	−1,972[7]	−372[7]	.	.	Brunei
71	18	30	64	−83	4,587	66.2	33.8	2,099	83.9	16.1	−6,810	1,800	−5,010	2,383	1,299	Bulgaria
68	22	24	10	−24	1,920	100.0	—	41	61.0	39.0	−392.0[8]	11.2[8]	−380.8[8]	25[8]	22[8]	Burkina Faso
84	26	23	6	−39	1,228	99.8	0.2	39	69.2	30.8	−190.8	−134.3	−325.1	1.5	60	Burundi
92	0	19	69	−79	3,155	100.0	—	20	40.0	60.0	−1,056.1	718.6	−337.4	840	97	Cambodia
67	11	21	27	−26	5,521	98.1	1.9	548	67.0	33.0	307.7[4]	−982.9[4]	−675.2[4]	114[4]	212[4]	Cameroon
56	19	22	37	−34	. .						45,146	−24,349	20,797	13,590	18,341	Canada
76	20	39	16	−52	482.3	100.0	—	31.8	79.9	20.1	−441.5	401.5	−40	122	67	Cape Verde
63	15	22	62	−61	207.5											Cayman Islands
98	7	6	12	23	871	96.6	3.4	--	—	—				41	321	Central African Republic
24	23	24	56	−27	1,537	97.9	2.1	47	61.7	38.3				257	807	Chad
55	10	20	45	−31	9,096	12.2	87.8	1,925	76.2	23.8	2,078	3,178	5,256	1,256	1,057	Chile
36	13	43	41	−33	82,853	63.0	37.0	8,765	75.0	25.0	217,746	32,120	249,866	29,296	27,759	China
62	19	21	23	−24	22,491	46.7	53.3	6,589	70.9	29.1	322	−3,383	−3,061	1,218	1,127	Colombia
94	13	14	12	−33	259.3	100.0	—	3.9	66.7	33.3				14		Comoros
87	8	17	31	−43	9,412	96.1	3.9	209	53.6	46.4				.		Congo, Dem. Rep. of the
24	8	25	91	−47	5,161	59.2	40.8	100	65.0	35.0	3,374	−2,471	903.2	34	103	Congo, Rep. of the
66	14	28	50	−57	3,470	41.3	58.7	484	75.2	24.8	−2,604	1,527	−1,077	1,666	470	Costa Rica
67	16	12	47	−42	9,007	73.8	26.2	164	73.2	26.8	3,151.9	−2,623	529.2	50[4]	192[4]	Côte d'Ivoire
55	20	27	46	−48	9,782	22.4	77.6	1,926	74.8	25.2	−10,511	7,336	3,175	7,370	754	Croatia
51	39	9	15	−15	. .	.	.	.	.	.	.	.	.	1,920	.	Cuba
66	18	21	50	−54							−5,023	3,944	−1,079	2,318	932	Cyprus[9]
49	22	26	74	−72	. .						2,979	−7,565	−4,586	4,623	2,405	Czech Republic
48	25	22	53	−49							2,906	3,790	6,696	4,493	5,469	Denmark
62	29	20	42	−53	389	100.0	—	17.1	77.8	22.2	−280.5	181.4	−99.1	7.1	2.8	Djibouti
71	18	27	44	−60	231.5	70.1	29.9	16.5	67.9	32.1	−103.5[3]	21.9[3]	−81.6[3]	56	10	Dominica
75	10	24	33	−42	6,093	45.8	54.2	831	66.4	33.6	−4,750	3,964	−786.1	3,508	352	Dominican Republic
68	50	19	3	40												East Timor

National product and accounts (continued)

country	gross national income (GNI), 2006			gross domestic product (GDP), 2000–05			origin of gross domestic product (GDP) by economic sector, 2005 (%)									
	nominal ('000,000 U.S.$)	per capita		average annual growth rates, 2000–05			primary		secondary			tertiary				other
		nominal (U.S.$)	purchasing power parity (PPP, U.S.$)	real GDP (%)	population (%)	real GDP per capita (%)	agriculture	mining	manufacturing	construction	public utilities	transp., communications	trade	financial svcs.	other svcs	government
Ecuador	36,796	2,800	4,400	5.1	1.3	3.8	7	16	10	7	2	15	14	10	7	5	7
Egypt	111,348	1,500	4,680	3.7	1.8	1.9	14	[5]	[32][5]	4	2	10	14	10	3	10	1
El Salvador	15,553	2,300	5,340	2.2	1.8	0.4	[9][1]	[1][1]	[22][1]	[4][1]	[2][1]	[10][1]	[19][1]	[16][1]	[7][1]	[7][1]	[3][1]
Equatorial Guinea	3,023	6,100	10,150	18.6	2.3	16.3	[3][1]	[86][1]	[5][1]	[1][1]	—[1]	—[1]	[1][1]	—[1]	[1][1]	[1][1]	[2][1]
Eritrea	1,360	290	1,090	3.5	2.3	1.2	[14][4]	[1][4]	[10][4]	[10][4]	—[4]	[12][4]	[18][4]	———	[27][4]	———	[8][4]
Estonia	15,183	11,300	17,530	7.5	–0.4	7.9	4	1	16	7	3	12	15	18	11	5	8
Ethiopia	13,278	160	1,190	4.2	2.5	1.7	48	1	5	5	2	5	14	9	7	5	–1
Faroe Islands	1,472[4]	30,680[4]	31,000[4]	2.4	1.1	1.3	[22][8]	[6][8]	[3][8]	[6][8]	[2][8]	[8][8]	[11][8]	[14][8]	[4][8]	[21][8]	[3][8]
Fiji	2,929	3,500	6,200	3.1	0.9	2.2	14	1	13	5	3	17	20	12	—— 18 ——		–3
Finland	210,516	40,000	34,810	2.4	0.3	2.1	[3][1]	—[1]	[19][1]	[5][1]	[2][1]	[9][1]	[11][1]	[18][1]	—— 20[1] ——		[13][1]
France	2,256,465	35,700	32,136	1.5	0.6	0.9	2	—	12	6	2	3	9	31	18	7	10
French Guiana	1,610[1]	9,040[1]	..	..	..	..	[5][6]	[2][6]	[10][6]	[9][6]	[1][6]	—[6]	[15][6]	[14][6]	[28][6]	[16][6]	—[6]
French Polynesia	5,643	21,800	17,500	5.1	1.6	3.5	..	..	..	..	..	..	..	..	..	..	..
Gabon	6,828	5,200	5,310	1.7	1.7	0.0	[6][1]	[45][1]	[5][1]	[2][1]	[1][1]	[5][1]	[6][1]	[2][1]	[13][1]	[8][1]	[7][1]
Gambia, The	485	300	1,970	3.7	2.9	0.8	30	—	5	6	1	18	16	5	3	7	9
Gaza Strip[10]	5,530	1,400	..	..	..	..	9	—	14	2	3	11	11	———	50	———	—
Georgia	8,296	1,900	3,690	7.4	–0.7	8.1	15	[11]	[16][11]	8	[11]	12	15	7	10	7	10
Germany	2,901,482	35,100	31,280	0.7	0.1	0.6	[1][4]	[4, 11]	[21][4, 11]	[4][4]	[4, 11]	[6][4]	[11][4]	[28][4]	[23][4]	[6][4]	—[4]
Ghana	12,000	520	2,640	5.1	2.2	2.9	37	5	9	8	3	5	7	4	3	11	8
Greece	307,364	27,600	24,570	4.4	0.3	4.1	[5][1]	[1][1]	[10][1]	[8][1]	[2][1]	[9][1]	[19][1]	[19][1]	—— 20[1] ——		[7][1]
Greenland	1,618	28,000	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grenada	419	4,000	7,810	0.9	0.5	0.4	5	1	6	22	6	23	15	13	3	17	–11
Guadeloupe	9,136	20,040	..				[7][7]	[7, 11]	[8][7, 11]	[7][7]	[7, 11]	[7][7]	[18][7]	———	[52][7]	———	[1][7]
Guam	2,500[3, 12]	15,000[3, 12]	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Guatemala	30,030	2,300	4,800	2.5	2.4	0.1	23	1	12	2	5	12	25	10	6	6	–2
Guernsey[13]	2,886[3]	45,370[3]	..	..	..	..	2	—	3	8		———	———	64	———	———	23
Guinea	2,815	300	2,410	2.9	2.2	0.7	[23][1]	[14][1]	[4][1]	[10][1]	[1][1]	[6][1]	—— 24[1] ——		[7][1]	[5][1]	[6][1]
Guinea-Bissau	306	190	830	–0.5	2.0	–2.5	60	[11]	[9][11]	3	[11]	3	17	———	8	———	—
Guyana	857	1,200	4,680	4.5	0.2	4.3	30	8	3	5	1	9	4	7	2	15	16
Haiti	4,619	490	1,490	–0.5	1.4	–1.9	25	—	8	8	1	6	26	12	—— 11 ——		3
Honduras	8,989	1,290	3,540	3.6	2.5	1.1	12	2	18	4	5	6	11	15	16	7	4
Hong Kong	190,156	26,700	38,180	4.3	0.8	3.5	—	—	3	3	3	10	28	22	—— 17 ——		14
Hungary	104,036	10,300	17,920	4.1	–0.3	4.4	4	—	19	4	3	7	11	19	13	8	12
Iceland	15,096	50,600	35,980	2.6	0.9	1.7	[10][1]	—	[10][1]	[9][1]	[3][1]	[8][1]	[13][1]	[22][1]	—— 25[1] ——		[3][1]
India	887,483	770	3,800	7.0	1.6	5.4	19	3	15	6	2	22	13	———	13	———	7
Indonesia	308,964	1,350	3,950	4.7	1.3	3.4	13	10	28	6	1	7	15	8	5	4	3
Iran	238,669	3,400	8,480	5.8	0.9	4.9	11	25	11	4	2	7	11	16	3	10	—
Iraq	46,919	1,700	..	–11.4	2.9	–14.3	11	60	2	1	—	11	10	2	2	1	—
Ireland	185,955	44,000	35,540	5.2	1.8	3.4	[2][4]	[4]	[28][4]	[7][4]	[1][4]	[5][4]	[11][4]	[19][4]	[22][4]	[4][4]	—[4]
Isle of Man	2,719[3]	34,000[3]	..				1	—	9	9	2	7	12	64	4	5	–4
Israel	138,986	20,400	25,470[3]	1.9	1.8	0.1	2	—	13	4	2	7	9	23	13	17	10
Italy	1,843,325	31,400	29,840	0.6	0.4	0.2	2	—	16	5	2	7	14	24	13	6	11
Jamaica	9,448	3,500	4,030	1.8	0.9	0.9	5	4	13	10	4	11	20	12	7	11	3
Japan	4,520,998	35,300	33,730	1.4	0.2	1.2	[2][1]	—	[20][1]	[6][1]	[3][1]	[7][1]	[13][1]	[18][1]	[22][1]	[9][1]	—[1]
Jersey	5,800[3]	66,000[3]	..	..	..	..	1	—	2	5	1	4	10	69	—— 7 ——		1
Jordan	14,595	2,540	6,200	6.1	2.2	3.9	2	2	17	4	2	14	7	16	5	16	15
Kazakhstan	72,388	4,700	7,780	10.1	0.2	9.9	6	[11]	[33][11]	[11]	[11]	13	13	———	37	———	–13
Kenya	23,564	650	1,300	3.4	2.4	1.0	25	1	11	3	2	11	12	9	4	15	7
Kiribati	130	1,400	8,970	0.3	1.8	–1.5	6	—	1	5	1	6	13	12	—— 48 ——		8
Korea, North	25,600	1,108	..	..	..	..	[27][1]	[9][1]	[19][1]	[9][1]	[4][1]	—	—	—— 10[1] ——		[23][1]	[–11][1]
Korea, South	856,565	18,150	23,800	4.6	0.5	4.1	3	—	25	8	2	6	8	14	14	11	9
Kosovo	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kuwait	111,464	40,100	..	7.3	4.9	2.4	—	54	7	2	1	5	5	14	—— 13 ——		–1
Kyrgyzstan	2,712	520	1,980	4.0	1.2	2.8	29	1	11	3	3	6	21	3	7	4	12
Laos	3,270	570	2,050	6.2	2.3	3.9	44	3	21	3	3	6	10	—	5	4	1
Latvia	19,531	8,530	15,340	7.9	–0.6	8.5	3	—	10	6	2	11	20	19	11	6	12
Lebanon	21,662	5,340	5,460	4.0	1.0	3.0	[10][7]	—[7]	[10][7]	[2][7]	[7][7]	[3][7]	[32][7]	[18][7]	[10][7]	[8][7]	—[7]
Lesotho	1,748	880	4,340	2.9	–0.1	3.0	16	2	17	14	4	4	12	10	9	6	6
Liberia	546	150	..	–6.8	1.5	–8.3	64	—	12	2	1	7	6	3	1	3	–2
Libya	50,107	8,300	..	5.3	2.0	3.3	3	73	1	3	1	3	5	2	5	3	1
Liechtenstein	2,893	82,800	..	..	..	..	[7][1]	—[1]	[40][1]	..	..	..	..	[26][1]	—— 26[1] ——		[1][1]
Lithuania	28,630	8,400	14,930	7.8	–0.5	8.3	5	1	19	7	4	11	17	11	9	5	11
Luxembourg	32,911	71,300	55,970	6.2	0.9	5.3	—	—	9	5	1	——18 ——		44	—— 15 ——		8
Macau	14,902	31,200	24,300	6.7	1.8	4.9	—	—	[6][4]	[4][4]	[3][4]	[6][4]	[12][4]	[19][4]	[9][4]	[8][4]	[33][4, 14]
Macedonia	6,251	3,070	7,610	1.7	0.2	1.5	11	—	16	5	4	8	15	11	9	7	14
Madagascar	5,414	280	960	2.0	2.8	–0.8	[26][1]	[1, 15]	———	[17][1, 15]	———	[15][1]	[12][1]	[1][1]	[15][1]	[6][1]	[8][1]
Malawi	2,191	160	720	3.4	2.5	0.9	21	1	14	1	1	4	17	5	2	3	31
Malaysia	141,751	5,430	11,300	4.8	2.4	2.4	9	16	31	3	3	6	13	11	6	7	4
Maldives	870	2,900	..	7.5	1.6	5.9	9	1	7	5	4	16	4	12	20	14	6
Mali	5,704	480	1,130	5.9	2.5	3.4	37	10	6	6	2	5	16	6	—— 6 ——		6
Malta	5,899	14,600	21,000	2.4	0.7	1.7	2	—	15	4	1	9	16	16	17	7	13
Marshall Islands	191	3,300	..				10	—	12	11	2	5	18	———	42	———	—
Martinique	5,780[4]	14,730[4]	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mauritania	2,830	930	2,600	4.0	3.0	1.0	21	14	5	—— 8 ——		5	12	——12 ——		13	10
Mauritius	6,460	5,170	13,570	4.0	1.0	3.0	[5][1]	—[1]	[18][1]	[5][1]	[2][1]	[11][1]	[18][1]	[17][1]	[3][1]	[13][1]	[8][1]
Mayotte	444[6]	2,780[6]	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mexico	816,892	7,760	11,330	1.9	1.4	0.5	3	1	16	5	1	9	19	12	—— 23 ——		11
Micronesia	256	2,320	7,830	0.3	1.1	–0.8	[14][7]	—[7]	[1][7]	[9][7]	[1][7]	[12][7]	[14][7]	———	[49][7]	———	–4[7]
Moldova	3,356	880	2,880	7.1	–0.3	–7.4	[18][1]	—[1]	[14][1]	[4][1]	[2][1]	[12][1]	[11][1]	———	[27][1]	———	[12][1]
Monaco	1,165	35,700	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mongolia	2,916	1,120	2,280	5.8	1.3	4.5	22	20	4	2	2	12	25	———	13	———	—
Montenegro	2,270[12]	3,800[12]	..	..	..	..	8	1	8	3	5	10	14	14	12	9	6
Morocco	64,066	2,050	5,000	4.3	1.4	2.9	14	2	17	5	6	8	12	——12 ——		17	7
Mozambique	6,790	320	1,220	8.6	1.8	6.8	20	1	13	6	6	16	23	5	7	3	—
Myanmar (Burma)	13,611	280		9.2	1.0	8.2	[51][1]	—	[10][1]	[4][1]	—[1]	[10][1]	[23][1]	[1][1]	—— –1[1] ——		—[1]

gross domestic product (GDP) by type of expenditure, 2006 (%)					external public debt outstanding (long-term, disbursed only), 2005						balance of payments, 2006 (current external transactions; '000,000 U.S.$)			tourist trade, 2006 ('000,000 U.S.$)		country
consumption		gross domestic investment	foreign trade		total ('000,000 U.S.$)	creditors (%)		debt service			net transfers		current balance of payments	receipts from foreign nationals	expenditures by nationals abroad	
private	government		exports	imports		official	private	total ('000,000 U.S.$)	repayment (%) principal	repayment (%) interest	goods, merchandise	invisibles				
64	11	24	34	−33	10,662	54.2	45.8	1,525	56.3	43.7	712[3]	−771[3]	−59[3]	486	401	Ecuador
75	13	20	28	−36	24,892	94.2	5.8	2,000	73.2	26.8	−8,438	11,073	2,635	6,851	1,629	Egypt
94	10	16	26	−46	4,760	59.3	40.7	521	42.8	57.2	−3,008[3]	2,222[3]	−786.5[3]	543	347	El Salvador
6	3	33	95	−38	223.9	93.2	6.8	3.9	76.9	23.1	. .	. .	. .	. .	.	Equatorial Guinea
82	37	18	5	−42	723	95.4	4.6	20.2	58.4	41.6	−434.6[6]	329.9[6]	−104.7[6]	66	.	Eritrea
53	16	38	84	−92	435	16.6	83.4	82.0	68.3	31.7	−2,739	293	−2,446	948	448	Estonia
80	12	20	15	−27	5,897	93.8	6.2	80.0	38.8	61.2	−3,081	1,295	−1,786	168	77	Ethiopia
. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Faroe Islands
78	16	20	56	−70	119.6	96.0	4.0	12.0	67.5	32.5	. .	. .	. .	436	106	Fiji
51	22	21	45	−38	. .	. .	. .	. .	. .	. .	11,553	795	12,348	2,147	2,968	Finland
57	23	21	28	−29	. .	. .	. .	. .	. .	. .	−37,690	9,390	−28,300	42,167	31,180	France
. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	45	.	French Guiana
49	44	13	21	−27	. .	. .	. .	. .	. .	. .	. .	. .	. .	550	303	French Polynesia
26	8	21	74	−30	3,582	93.7	6.3	82	53.7	46.3	2,856[1]	−1,932[1]	924.5[1]	101[1]	214[1]	Gabon
84	10	24	51	−70	626.4	100.0	—	25.9	63.3	36.7	−114.5[3]	64.1[3]	−50.4[3]	56	5	Gambia, The
98	31	24	12	−64	. .	. .	. .	. .	. .	. .	−2,366[1]	883[1]	−1,483[1]	56[1]	286[1]	Gaza Strip[10]
74	16	28	33	−51	1,494	99.9	0.1	103	77.7	22.3	−915.5	−327.5	−1,243	242	169	Georgia
59	19	18	45	−40	. .	. .	. .	. .	. .	. .	197,330	−49,510	147,820	29,151	80,276	Germany
76	14	27	35	−52	5,734	94.5	5.5	229	68.6	31.4	−2,543[3]	1,731[3]	−811.6[3]	796	303	Ghana
68	14	25	19	−27	. .	. .	. .	. .	. .	. .	−44,285	14,620	−29,665	13,578	3,039	Greece
32	54	30	24	−40	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Greenland
68	17	50	39	−75	390	44.2	55.8	10.7	67.3	32.7	−241.1[3]	111.7[3]	−129.4[3]	71	11	Grenada
. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	246	. .	Guadeloupe
. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Guam
86	9	20	26	−41	3,688	66.5	33.5	402	49.5	50.5	−5,044	3,452	−1,592	846	444	Guatemala
. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Guernsey[13]
85	4	22	26	−36	2,931	99.0	1.0	89	67.9	32.1	37.2[1]	−212[1]	−174.8[1]	30[1]	25[1]	Guinea
82	16	16	35	−50	671.3	100.0	—	29.4	70.7	29.3	−7.1[1]	−6.1[1]	−13.2[1]	1[1]	13[1]	Guinea-Bissau
65	25	46	80	−116	1,021	99.1	0.9	25	60.0	40.0	−174.3[3]	78.1[3]	−96.2[3]	35	40	Guyana
92	8	29	14	−43	1,276	100.0	—	52	63.5	36.5	−849.6[3]	903.7[3]	54.1[3]	110	54	Haiti
79	14	33	41	−66	4,152	98.6	1.4	200	68.5	31.5	−1,540[3]	1,454[3]	−85.6[3]	472	248	Honduras
58	8	22	206	−194	. .	. .	. .	. .	. .	. .	−14,033	34,608	20,575	10,179	13,307	Hong Kong
54	23	22	78	−77	21,216	11.9	88.1	4,215	80.0	20.0	−508	−5,704	−6,212	4,279	2,925	Hungary
60	24	30	34	−47	. .	. .	. .	. .	. .	. .	−2,239	−2,218	−4,457	409	975	Iceland
57	12	32	22	−23	80,281	63.5	36.5	17,140	72.1	27.9	−32,526[3]	24,691[3]	−7,835[3]	3,887[4]	3,510[4]	India
83	9	25	30	−26	72,335	81.6	18.4	7,193	73.7	22.7	22,323[3]	−21,394[3]	929[3]	4,522	3,584	Indonesia
46	12	28	37	−23	10,493	17.3	82.7	2,133	80.4	19.6	13,138[6]	−657[6]	12,481[6]	992	4,380	Iran
53	28	22	90	−93	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Iraq
45	16	28	81	−69	. .	. .	. .	. .	. .	. .	34,165	−41,373	−7,208	4,723	6,056	Ireland
. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Isle of Man
55	27	17	45	−44	. .	. .	. .	. .	. .	. .	−3,564	10,405	6,841	2,853	2,895	Israel
59	20	21	28	−28	. .	. .	. .	. .	. .	. .	−11,690	−35,622	−47,312	35,319	22,371	Italy
72	15	31	40	−58	5,508	38.7	61.3	902	60.0	40.0	−2,581	1,502	−1,079	1,545	250	Jamaica
57	18	24	16	−15	. .	. .	. .	. .	. .	. .	81,300	89,220	170,520	12,430	37,565	Japan
. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Jersey
97	20	26	51	−94	6,878	93.6	6.4	501	68.1	31.9	−5,056	3,084	−1,972	1,441	585	Jordan
49	10	31	54	−44	2,184	81.8	18.2	1,236	88.2	11.8	14,642	−16,439	−1,797	701	753	Kazakhstan
80	16	18	23	−38	5,520	93.3	6.7	199	72.4	27.6	−2,168[3]	1,673[3]	−495[3]	579	124	Kenya
62	36	44	30	−72	. .	. .	. .	. .	. .	. .	. .	. .	. .	3.2[8]	.	Kiribati
. .	. .	.	.	.	12,500[6]	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Korea, North
55	15	30	44	−44	. .	. .	. .	. .	. .	. .	29,214	23,122	6,092	5,660	15,314	Korea, South
. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Kosovo
28	13	17	68	−26	. .	. .	. .	. .	. .	. .	44,288	6,708	50,996	165	4,277	Kuwait
97	19	21	39	−76	1,670	100.0	—	28	57.1	42.9	−981.5	564.3	−417.2	73	58	Kyrgyzstan
59	8	31	32	−29	1,971	100.0	—	49	71.4	28.6	−216.8[8]	134.4[8]	−82.4[8]	146	.	Laos
65	17	38	44	−64	1,318	25.6	74.4	157	61.1	38.9	−3,018	−1,262	−4,280	341	584	Latvia
82	15	22	16	−35	17,912	9.1	90.9	2,996	61.2	38.8	−5,755	4,271	−1,484	5,432	2,878	Lebanon
83	19	41	42	−85	647	91.7	8.3	53.8	74.5	25.5	−609.8[3]	566.2[3]	−43.6[3]	30	36	Lesotho
91	9	12	34	−47	1,115	82.2	17.8	—	—	—	. .	. .	. .	. .	. .	Liberia
19	14	14	83	−31	3,900	. .	. .	. .	. .	. .	17,675[3]	−2,730[3]	14,945[3]	250	680	Libya
60	11	22	54	−47	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Liechtenstein
67	16	26	63	−72	1,511	29.7	70.3	873	91.5	8.5	−4,169	925	−3,244	921	744	Lithuania
39	17	19	180	−156	. .	. .	. .	. .	. .	. .	−4,290	8,677	4,387	3,614	2,976	Luxembourg
24	8	34	92	−58	. .	. .	. .	. .	. .	. .	−2,792	6,159	3,367	7,757	295	Macau
79	19	21	48	−68	1,613	73.2	26.8	122	66.4	33.6	−1,285	1,261	−23.7	84	60	Macedonia
83	8	22	27	−40	3,178	99.7	0.3	66	57.6	42.4	−592[3]	−33[3]	−625[3]	62	25	Madagascar
104	16	10	24	−55	3,040	99.4	0.6	79	64.6	35.4	−150.8[7]	−49.9[7]	−200.7[7]	23	47	Malawi
44	13	20	122	−99	22,449	29.1	70.9	5,974	79.5	20.5	36,827	−11,272	25,555	8,846	4,339	Malaysia
30	38	56	83	−106	307	70.8	29.2	32.9	73.6	26.4	−590.1	220.9	−369.2	287	70	Maldives
66	16	22	29	−33	2,843	100.0	—	70	67.1	32.9	−144.6[3]	−293.1[3]	−437.7[3]	148	77	Mali
67	22	21	72	−82	. .	. .	. .	. .	. .	. .	−1,222	810	−412	754	268	Malta
91	54	57	12	−114	. .	. .	. .	. .	. .	. .	. .	. .	. .	4[8]	.	Marshall Islands
. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	280[8]	306[8]	Martinique
59	17	29	55	−61	2,043	98.9	1.1	54	63.0	37.0	. .	. .	. .	28[6]	55[6]	Mauritania
72	14	23	62	−72	731	69.4	30.6	211	85.8	14.2	−794.6[3]	4,547[3]	−339.9[3]	871	275	Mauritius
. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Mayotte
68	11	21	33	−34	108,786	17.6	82.4	21,647	68.7	31.3	−6,133	4,266	−1,867	11,803	7,600	Mexico
84	58	38	3	−84	. .	. .	. .	. .	. .	. .	. .	. .	. .	17	5.7	Micronesia
95	18	34	47	−94	700	95.1	4.9	65	66.2	33.8	−1,591	1,187	−403.7	128	167	Moldova
57	23	21	28	−29	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	Monaco
29	27	41	81	−78	1,267	99.9	0.1	34	55.9	44.1	−28.8[3]	24.2[3]	−4.6[3]	201	205	Mongolia
74	28	16	39	−57	. .	. .	. .	. .	. .	. .	14.7[3]	−30.3[3]	−15.6[3]	. .	. .	Montenegro
61	17	30	33	−40	13,113	81.8	18.2	2,372	78.6	21.4	−8,204[3]	9,222[3]	1,018[3]	4,610	612	Morocco
61	12	25	42	−40	3,727	100.0	—	54	46.3	53.7	−267.7	−819.3	−1,087	130	176	Mozambique
—— 85 ——		15	0	0	5,196	84.4	15.6	91	89.0	11.0	927.9[1]	−816.4[1]	111.5[1]	84[1]	25[1]	Myanmar (Burma)

National product and accounts (continued)

country	gross national income (GNI), 2006			gross domestic product (GDP), 2000–05			origin of gross domestic product (GDP) by economic sector, 2005 (%)									
	nominal ('000,000 U.S.$)	per capita		average annual growth rates, 2000–05			primary		secondary			tertiary				other
		nominal (U.S.$)	purchasing power parity (PPP; U.S.$)	real GDP (%)	population (%)	real GDP per capita (%)	agriculture	mining	manufacturing	construction	public utilities	transp., communications	trade	financial svcs.	other svcs.	government
Namibia	6,428	3,140	8,110	4.6	1.3	3.3	11	9	11	3	4	7	12	13	1	20	9
Nauru	79	7,840	.	...	..	...	10	4	1	8	...	15	13	———	49	———	—
Nepal	7,476	270	1,630	2.8	2.1	0.7	37	—	7	10	2	10	10	11	———	9 ———	4
Netherlands, The	670,483	40,940	35,600	0.7	0.5	0.2	2	3	13	5	1	6	13	24	11	11	11
Netherlands Antilles	3,341	17,700	...	...	...	...	1[1]	—	6[1]	5[1]	5[1]	10[1]	16[1]	29[1]	14[1]	8[1]	6[1]
New Caledonia	4,743	19,930	15,000[4]	...	.	...	2[4]	10[4, 16]	6	6[4]	[4, 16]	6[4]	23[4]	———	48[4]	———	–14
New Zealand	98,383	23,770	26,470	3.7	1.2	2.5	7[1]	1[1]	15[1]	5[1]	2[1]	10[1]	16[1]	24[1]	12[1]	4[1]	4[1]
Nicaragua	5,233	950	4,010	3.0	2.0	1.0	17	1	17	6	2	6	13	12	7	11	8
Niger	3,361	250	830	3.7	3.0	0.7	41	2	6	3	1	7	13	8	3	10	6
Nigeria	116,374	800	1,050	5.9	2.3	3.6	30[1]	33[1]	4[1]	1[1]	—[1]	4[1]	15[1]	7[1]	2[1]	1[1]	3[1]
Northern Mariana Is.	1,000[3, 12]	13,400[3, 12]	..	...	..	..	..	..	...	...	...	...	..	..	..	..	..
Norway	335,314	71,800	43,920	2.0	0.6	1.4	1[17]	25[17]	8[17]	4[17]	2[17]	6[17]	8[17]	12[17]	18[17]	4[17]	12[17]
Oman	28,710	11,280	14,570[3]	3.0	1.6	1.4	3	49	9	3	3	3	11	6	7	7	–1
Pakistan	149,784	930	2,500	4.8	1.9	2.9	20	2	17	2	2	14	17	6	8	5	7
Palau	162	8,000	...	5.5	1.9	3.6	4	—	—	5	3	9	31	8	17	23	—
Panama	15,536	4,730	7,680	4.3	1.7	2.6	7	1	7	4	3	18	17	23	6	9	5
Papua New Guinea	5,523	890	2,410	1.6	2.1	–0.5	39[1]	21[1]	6[1]	8[1]	2[1]	2[1]	2[1]	6[1]	31	10[1]	1[1]
Paraguay	9,281	1,540	5,070	2.6	2.2	0.4	21	—	14	5	2	8	21	6	6	9	8
Peru	86,579	3,140	6,070	4.3	1.5	2.8	7	9	15	5	2	8	16	16	6	7	9
Philippines	127,832	1,480	5,980	4.7	1.9	2.8	14	1	23	4	4	8	1	5	8	8	1
Poland	324,482	8,510	14,530	3.2	–0.2	3.4	4	2	16	5	3	7	17	———	46	———	—
Portugal	188,263	17,800	20,850	0.5	0.3	0.2	2[17]	—	14[17]	5[17]	2[17]	6[17]	15[17]	13[17]	—— 29[17] ——		14[17]
Puerto Rico	58,418	14,700	19,300	0.5	0.5	0.0	1	—	40	2	—	7	13	17	16	2	2
Qatar	54,259	66,100	..	7.1	4.6	2.5	—	60	8	6	1	3	4	10	2	8	–2
Réunion	14,910[3, 12]	19,130[3, 12]	.	..	..	...	5[4]	[5]	[4, 5]	7[4]	1[4]	6[4]	12[4]	—— 57[4] ——		13[4]	–5[4]
Romania	118,368	5,500	9,820	5.8	–0.4	6.2	13[1]	[11]	25[1, 11]	6[1]	[11]	10[1]	11[1]	14[1]	5[1]	5[1]	11[1]
Russia	956,557	6,680	11,620	6.2	–0.5	6.7	4[17]	9[17]	17[17]	5[17]	3[17]	8[17]	18[17]	12[17]	7[17]	6[17]	11[17]
Rwanda	2,295	240	1,270	5.1	2.1	3.0	45[1]	—	9[1]	8[1]	1[1]	7[1]	9[1]	3[1]	11[1]	7[1]	7[1]
St. Kitts	453	9,110	12,680	4.9	0.4	4.5	2	—	8	12	2[1]	13	17	17	4	16	9
St. Lucia	872	5,350	6,960	5.1	0.9	4.2	3	—	4	6	4	16	22	15	4	12	14
St. Vincent	424	3,540	7,000	4.9	0.5	4.4	7	—	5	10	5	16	18	9	3	16	11
Samoa	409	2,210	6,400	5.5	0.9	4.6	13	—	15	9	4	12	23	9	7	9	–1
San Marino	1,257	41,040	..	4.6	2.4	2.2	—	—	42[4]	7[4]	—	2[4]	9[4]	16[4]	—— 24[4] ——		—
São Tomé and Príncipe	55	360	.	4.4	2.3	2.1	16[1]	—	4[1]	10[1]	—	——28[1] ——		11[1]	11[1]	30[1]	—
Saudi Arabia	365,786	15,130	13,600	4.2	2.9	1.3	3	48	10	5	1	3	5	8	2	14	1
Senegal	9,335	770	1,830	4.7	2.5	2.2	14[1]	1[1]	14[1]	4[1]	2[1]	9[1]	18[1]	13[1]	7[1]	7[1]	11[1]
Serbia	40,747	3,310	4,400[3]	5.1	–0.2	5.3	13	2	15	3	3	10	11	15	—— 11 ——		17
Seychelles	659	7,660	16,590	–1.0	0.4	–0.6	3	.	15	12	3	18	3	3	2	2	–1
Sierra Leone	1,791	310	850	13.7	1.9	11.8	48[4]	15[4]	3[4]	3[4]	—	7[4]	6[4]	7[4]	3[4]	4[4]	4[4]
Singapore	127,980	29,210	31,700	4.2	1.3	2.9	—	—	27	4	2	12	17	28	—— 11 ——		–1
Slovakia	52,921	9,820	16,910	4.9	–0.1	5.0	4[17]	—	20[17]	6[17]	5[17]	9[17]	17[17]	4[17]	9[17]	5[17]	21[17]
Slovenia	36,477	18,230	23,960	3.4	0.1	3.3	2	1	21	5	3	7	12	18	13	5	13
Solomon Islands	411	850	2,170	4.4	2.5	1.9	32[4]	—	4[4]	1[4]	4[4]	3[4]	18[4]	8[4]	——31[4] ——		–14[4]
Somalia	2,313	270	...	..	..	..	65[1]	—[1]	3[1]	6[1]	—[1]	7[1]	8[1]	———	9[1]	———	2[1]
South Africa	241,635	5,000	11,710	3.7	1.0	2.7	2	6	17	2	2	9	13	19	13	6	11
Spain	1,208,184	27,530	28,420	3.1	1.8	1.3	3	2	14	10	1	———		47	———		13	11
Sri Lanka	27,026	1,410	5,000	4.2	0.9	3.3	12	2	20	7	2	12	24	9	4	9	–1
Sudan, The	33,882	900	2,160	6.1	1.9	4.2	46[4]	10[4]	8[4]	5[4]	...	———		25[4]	———		6[4]	—
Suriname	2,039	4,480	8,120	..	.	.	5[17]	12[17]	13[17]	3[17]	5[17]	8[17]	11[17]	10[17]	1[17]	9[17]	23[17]
Swaziland	2,775	2,450	5,170	2.3	0.2	2.1	7[1]	—	21[1]	5[1]	1[1]	3[1]	6[1]	3[1]	2[1]	11[1]	41[1]
Sweden	381,786	42,100	34,780	2.3	0.3	2.0	1[17]	—	18[17]	4[17]	3[17]	6[17]	11[17]	20[17]	6[17]	18[17]	14[17]
Switzerland	394,522	52,900	40,630	0.9	0.8	0.1	1	—[11]	21[11]	6	[11]	——22 ——		25	—— 26 ——		–1
Syria	28,697	1,480	3,920	3.7	2.4	1.3	25[4]	19[4]	4[4]	3[4]	1[4]	13[4]	17[4]	3[4]	3[4]	10[4]	2[4]
Taiwan	333,422[1]	14,700[1]	.	..	..	.	2[1]	—	22[1]	2[1]	2[1]	7[1]	20[1]	11[1]	4[1]	12[1]	18[1]
Tajikistan	3,478	520	1,410	9.5	2.1	7.4	21	[11]	19[11]	4	[11]	6	22	1	4	2	11
Tanzania	13,098	330	740	6.9	2.1	4.8	41[4]	2[4]	7[4]	5[4]	2[4]	4[4]	11[4]	5[4]	9[4]	8[4]	6[4]
Thailand	202,098	3,190	9,140	5.4	0.7	4.7	11[17]	3[17]	35[17]	3[17]	3[17]	7[17]	19[17]	6[17]	8[17]	5[17]	—
Togo	2,254	350	1,490	2.7	2.8	–0.1	40[4]	3[4]	7[4]	3[4]	4[4]	6[4]	11[4]	7[4]	——11[4] ——		8[4]
Tonga	230	2,300	8,580	2.4	0.1	2.3	21[1]	—	4[1]	8[1]	2[1]	7[1]	14[1]	13[1]	5[1]	11[1]	15[1]
Trinidad and Tobago	17,542	13,210	16,250	8.3	0.5	7.8	1[17]	45[17]	6[17]	8[17]	1[17]	5[17]	12[17]	12[17]	4[17]	7[17]	–1[17]
Tunisia	28,905	2,830	8,490	4.5	1.0	3.5	12	1	18	5	5	10	6	22	—	13	8
Turkey	397,699	5,380	9,060	5.2	1.3	3.9	10	1	21	4	3	15	21	9	4	10	2
Turkmenistan	6,047	1,230	8,500	6.0	1.4	4.6	24[4]	[11]	35[4, 11]	7[4]	[11]	6[4]	4[4]	———	24[4]	———	—
Tuvalu	26	2,440	. .		. .		17[7]	17	4[7]	5[7]	5[7]	13[7]	14[7]	15[7]	7[7]	27[7]	–8[7]
Uganda	9,702	320	1,490	5.6	3.2	2.4	29[17]	1[17]	8[17]	10[17]	1[17]	9[17]	13[17]	6[17]	11[17]	4[17]	8[17]
Ukraine	105,253	2,260	7,510	8.0	–0.9	8.9	9	4	20	4	3	11	13	———	26	———	10
United Arab Emirates	174,536	41,080	. .	8.2	7.6	0.6	2	36	13	7	2	7	13	13	2	7	–2
United Kingdom	2,425,690	40,090	35,690	2.4	0.4	2.0	1[1]	3[1]	13[1]	6[1]	1[1]	7[1]	14[1]	28[1]	16[1]	5[1]	6[1]
United States	13,150,600	43,420	43,420	2.6	1.0	1.6	1[17]	2[17]	12[17]	5[17]	2[17]	3[17]	15[17]	25[17]	23[17]	12[17]	—
Uruguay	18,801	5,640	11,150	0.9	0.3	0.6	9[17]	—	23[17]	5[17]	4[17]	10[17]	13[17]	19[17]	9[17]	8[17]	—
Uzbekistan	16,108	600	2,240	5.3	1.5	3.8	25	[11]	21[11]	5	[11]	11	9	———	18	———	11
Vanuatu	344	1,560	3,200	2.9	2.0	0.9	15[4]	—	4[4]	3[4]	2[4]	13[4]	38[4]	14[4]	2[4]	15[4]	–6[4]
Venezuela	177,866	6,540	7,440	1.3	1.8	–0.5	[18]	15[17]	17[17]	7[17]	2[17]	4[17]	10[17, 18]	14[17]	5[17]	11[17]	15[17, 18]
Vietnam	56,583	660	3,300	7.5	1.3	6.2	21	11	21	6	3	4	17	6	8	3	—
Virgin Islands (U.S.)	3,080[19]	27,300[19]	. .	.	. .	...	...	..	...	...	...	.	..	.	...	...	...
West Bank[10]			.	.	.	..	.	..	...	...	...	.	.	...	...	...	...
Western Sahara			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yemen	17,083	790	920	3.3	3.1	0.2	13	32	6	4	1	11	13	8	2	10	—
Zambia	10,339	880	1,000	4.7	2.2	2.5	21	3	11	11	3	4	21	15	5	3	3
Zimbabwe	1,734	130	1,940[3]	–5.9	0.7	–6.6	15	8	17	1	—	8	12	———	39	———	—

gross domestic product (GDP) by type of expenditure, 2006 (%)					external public debt outstanding (long-term, disbursed only), 2005						balance of payments, 2006 (current external transactions, '000,000 U.S.$)			tourist trade, 2006 ('000,000 U.S.$)		country
consumption		gross domestic investment	foreign trade		total ('000,000 U.S.$)	creditors (%)		debt service			net transfers		current balance of payments	receipts from foreign nationals	expenditures by nationals abroad	
private	government		exports	imports		official	private	total ('000,000 U.S.$)	repayment (%) principal	repayment (%) interest	goods, merchandise	invisibles				
55	24	26	42	−47	.	.	.	..	.	.	−282.8[1]	855.4[1]	572.6[1]	348	108	Namibia
62	36	44	30	−72	.	.	.	.	.	.	.	.	.	.	.	Nauru
79	10	30	19	−38	3,217	99.9	0.1	115	73.9	26.1	−1,374[3]	1,375[3]	1.1[3]	131	163	Nepal
47	25	19	76	−67	.	.	.	.	.	.	47,972	9,476	57,448	10,383	16,082	Netherlands, The
55	22	25	92	−93	478[1]	.	.	.	.	.	−1,314[1]	1,462[3]	−148.3[3]	992[6]	339[6]	Netherlands Antilles
56	33	24	15	−29	.	.	.	.	.	.	.	.	.	253	171	New Caledonia
60	19	24	28	−31	.	.	.	.	.	.	−2,118	−7,255	−9,373	4,984	2,657	New Zealand
80	20	29	30	−59	4,113	92.5	7.5	107	58.9	41.1	−1,444	589.6	−854.4	207	90	Nicaragua
73	18	23	19	−32	1,771	100.0	—	24	50.0	50.0	−153[1]	−77.9[1]	−230.9[1]	34	32	Niger
68	7	12	32	−19	20,342	89.3	10.7	8,817	43.9	56.1	30,781[3]	−6,579[3]	24,202[3]	18	1,109	Nigeria
...	...	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Northern Mariana Is.
41	20	21	46	−27	.	..	..	.	.	.	59,721	−4,508	55,213	3,278	9,753	Norway
46	21	15	64	−45	842	100.0	—	473	89.0	11.0	10,663[3]	−5,946[3]	4,717[3]	481	643	Oman
82	6	20	17	−25	29,490	95.6	4.4	1,127	65.9	34.1	−9,702	2,907	−6,795	181	1,275	Pakistan
41	46	21	76	−84	.	.	.	.	.	.	.	.	.	97[1]	21	Palau
66	10	21	36	−33	7,514	17.7	82.3	1,720	67.0	33.0	−1,801	1,423	−378.2	780	271	Panama
63	12	18	40	−33	1,266	96.0	4.0	152	75.0	25.0	1,753[3]	−1,330[3]	422.7[3]	3.6	56	Papua New Guinea
66	10	20	34	−30	2,264	79.6	20.4	301	68.7	31.3	−492.3[3]	469.9[3]	−22.4[3]	76	79	Paraguay
63	10	18	28	−19	22,222	60.8	39.2	4,218	67.4	32.6	8,853	−6,397	2,456	1,241	680	Peru
70	10	15	47	−42	35,233	52.9	47.1	5,693	58.9	41.1	−7,546[3]	9,884[3]	2,338[3]	2,130	1,279	Philippines
63	18	20	41	−42	35,094	26.9	73.1	8,760	88.7	11.3	−4,953	−3,020	−7,973	853	4,341	Poland
66	21	21	31	−39	.	.	.	.	.	.	−4,898	−13,383	−18,281	7,893	3,073	Portugal
56	12	15	80	−63	.	.	.	.	.	.	.	.	.	3,239	1,143	Puerto Rico
17	13	35	65	−30	.	.	.	.	.	.	.	.	.	760	1,759	Qatar
...	...	...	...	.	.	.	.	.	.	.	.	.	.	384	.	Reunion
67	20	24	34	−46	13,341	46.2	53.8	2,372	71.6	28.4	−14,836	2,000	−12,836	1,044	878	Romania
49	18	20	34	−21	75,359	46.0	54.0	28,326	81.6	18.4	139,234	−43,911	95,323	5,466	17,804	Russia
90	14	21	10	−35	1,420	100.0	—	20	55.0	45.0	−343	163	−180	.	.	Rwanda
57	18	46	45	−67	299.3	54.7	45.3	47.8	57.1	42.9	−135.8[3]	28.8[3]	−107[3]	107	11	St. Kitts
52	18	41	62	−73	248.9	64.6	35.4	27.2	52.2	47.8	−345.3[3]	162.7[3]	−182.6[3]	345	40	St. Lucia
68	20	32	48	−68	248.3	46.2	53.8	22.6	63.7	36.3	−169.7[3]	59.6[3]	−110.1[3]	105	14	St. Vincent
92	22	10	30	−54	177	100.0	—	6.1	73.8	26.2	−175.2[3]	150.7[3]	−24.5[3]	77	9	Samoa
35	14	57	181	−188	.	.	.	.	.	.	.	.	.	.	.	San Marino
79	45	68	31	−123	326.7	100.0	—	9.6	62.5	37.5	−22.9[7]	0.1[7]	−22.8[7]	14[7]	0.8[7]	São Tomé and Príncipe
27	20	19	65	−31	.	.	.	.	.	.	123,308[3]	−36,177[3]	87,131[3]	5,181	4,764	Saudi Arabia
75	17	26	27	−44	3,467	99.7	0.3	119	63.9	36.1	−986.4[1]	473.3[1]	−513.1[1]	212[1]	57[1]	Senegal
70	21	28	27	−46	7,972	86.5	13.5	303	16.8	83.2	.	.	.	201[4]	.	Serbia
50	22	16	108	−96	401.7	57.1	42.9	48.2	77.6	22.4	−287.2	111.7	−175.5	192	39	Seychelles
91	15	17	16	−40	1,420	99.9	0.1	21	47.6	52.4	−176.6[3]	8.0[3]	−168.6[3]	64	34	Sierra Leone
40	11	18	253	−221	...	.	..	.	.	.	37,890[3]	4,678[3]	33,212[3]	5,736	9,853	Singapore
57	18	29	80	−84	3,340	29.4	70.6	1,593	86.3	13.7	−649[4]	367[4]	−282[4]	1,210	846	Slovakia
55	19	26	69	−69	.	.	..	.	.	.	−1,419	460	−959	1,795	950	Slovenia
48	32	20	59	−59	148.1	99.7	0.3	7.5	77.3	22.7	.	.	..	2	5	Solomon Islands
72	9	20	0	−2	1,882	98.1	1.9	—	—	—					.	Somalia
64	20	19	28	−31	11,662	2.7	97.3	1,051	54.0	46.0	−6,175	−10,101	−16,276	7,335	3,374	South Africa
58	18	31	26	−32	.	.	..	.	.	.	−100,729	−5,615	−106,344	47,681	15,046	Spain
70	13	27	33	−44	9,812	94.1	5.9	285	70.9	29.1	−1,630[3]	−110[3]	−740[3]	429	315	Sri Lanka
57	17	24	27	−24	11,163	80.4	19.6	359	81.1	18.9	−1,448	−3,662	−5,110	89	668	Sudan, The
18	5	85	54	−62	504.3	.	..	..	.	...	22.4[3]	−166[3]	−143.6[3]	45	17	Suriname
62	27	17	90	−97	450.5	85.4	14.6	40	53.3	46.7	73[3]	−27.1[3]	45.9[3]	69	15	Swaziland
48	27	18	51	−43	.	.	.	.	.	.	19,701[3]	3,942[3]	23,643[3]	7,361	10,776	Sweden
60	11	22	54	−47	.	.	..	.	.	.	4,663	58,831	63,494	11,063	9,262	Switzerland
65	13	19	40	−37	5,640	81.3	18.7	186	77.4	22.6	−1,940[3]	875[3]	−1,065[3]	2,175	550	Syria
83[1]	17[1]	27[1]	63[1]	−27[1]	.	.	.	.	.	.	16,128[1]	2,530[1]	18,658[1]	5,040	8,682	Taiwan
78	23	11	59	−72	785	98.7	1.3	47	83.9	16.1	−442.8	421.4	−21.4	1[1]	3[1]	Tajikistan
81	8	22	24	−35	6,183	98.4	1.6	66	42.4	57.6	−2,141	699	−1,442	824	554	Tanzania
56	12	28	74	−70	13,483	59.9	40.1	3,166	86.3	13.7	14,813	−11,583	3,230	10,104	4,995	Thailand
88	9	21	39	−56	1,469	100.0	—	5	60.0	40.0	−512.2[3]	9,729[3]	460.7[3]	19[1]	8[1]	Togo
117	13	11	21	−62	83.2	100.0	—	4.0	72.5	27.5	−55,247[7]	51,928[7]	−3,319[7]	11	3	Tonga
37	14	15	69	−35	1,197	47.7	52.3	340	71.5	28.5	1,509[1]	−62[1]	1,447[1]	453	222	Trinidad and Tobago
64	15	23	50	−52	12,982	64.9	35.1	1,747	66.1	33.9	−1,968[3]	1,665[3]	−303[3]	2,124	365	Tunisia
70	12	24	26	−32	62,580	19.9	80.1	12,686	65.5	34.5	−40,186	8,422	−31,764	18,152	2,872	Turkey
55	13	24	63	−55	912	71.2	28.8	226	84.1	15.9	.	.	.	.	.	Turkmenistan
91	54	56	13	−114	57	.	..	..	.	.	.	.	.	.	.	Tuvalu
78	14	25	14	−32	4,250	99.4	0.6	133	75.2	24.8	−1,245	1,114	−130.8	355	133	Uganda
60	19	24	47	−50	10,458	49.0	51.0	1,779	68.4	31.6	−5,194	3,557	−1,617	3,125	2,805	Ukraine
40	8	24	82	−55	.	.	.	.	.	.	.	.	.	2,200	5,300	United Arab Emirates
64	22	18	30	−34	.	.	..	.	.	.	−153,850	65,750	−88,100	30,577	59,593	United Kingdom
70	16	20	11	−17	.	.	.	.	.	.	−832,250	−24,430	−856,670	102,014	73,558	United States
73	12	15	30	−30	7,866	40.7	59.3	1,487	73.0	27.0	−473.7	17.1	−456.6	594	328	Uruguay
53	17	23	39	−31	3,639	67.7	36.3	628	81.4	18.6	...	.	.	28[1]	455[1]	Uzbekistan
61	23	20	43	−47	71.9[1]	100.0	—	1.8	61.1	38.9	−109.4	59.1	−50.3	74	11	Vanuatu
48	11	25	37	−21	29,317	10.8	89.2	4,256	49.2	50.8	32,984	−5,817	27,167	641	1,281	Venezuela
64	6	35	75	−79	16,513	87.3	12.7	784	58.9	41.1	−838[3]	1,055[3]	217[3]	1,880		Vietnam
...	..	.	..	..	...	..	...	.	.	.	.	.	.	1,493		Virgin Islands (U.S.)
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	West Bank[10]
..	.	.	.	.	.	.	.	...	.	.	.	.	.	.	.	Western Sahara
61	16	22	47	−45	4,717	99.3	0.7	148	62.8	37.2	2,256[3]	−1,041[3]	1,215[3]	181	157	Yemen
68	14	26	19	−27	4,085	90.6	9.4	114	71.1	28.9	−221[6]	−363.3[6]	−584.3[6]	164	94	Zambia
73	31	10	50	−64	3,222	86.7	13.3	22	86.3	13.7	.	.	.	99	.	Zimbabwe

[1]2004. [2]Government services include financial services. [3]2005. [4]2003. [5]Manufacturing includes mining. [6]2000. [7]2002. [8]2001. [9]Republic of Cyprus only. [10]Gaza Strip includes West Bank. [11]Manufacturing includes mining and public utilities. [12]GDP. [13]Excludes Alderney and Sark. [14]Gaming activities. [15]Manufacturing includes mining, construction, and public utilities. [16]Mining includes public utilities. [17]2006. [18]Other includes agriculture and hotels and restaurants. [19]Gross territorial income.

Employment and labour

This table provides international comparisons of the world's national labour forces—giving their size; composition by demographic component and employment status; and structure by industry.

The table focuses on the concept of "economically active population," which the International Labour Organisation (ILO) defines as persons of all ages who are either employed or looking for work. In general, the economically active population does not include students, persons occupied solely in domestic duties, retired persons, persons living entirely on their own means, and persons wholly dependent on others. Persons engaged in illegal economic activities—smugglers, prostitutes, drug dealers, bootleggers, black marketeers, and others—also fall outside the purview of the ILO definition. Countries differ markedly in their treatment, as part of the labour force, of such groups as members of the armed forces, inmates of institutions, the unemployed (both persons seeking their first job and those previously employed), seasonal and international migrant workers, and persons engaged in informal, subsistence, or part-time economic activities. Some countries include all or most of these groups among the economically active, while others may treat the same groups as inactive.

Three principal structural comparisons of the economically active total are given in the first part of the table: (1) participation rate, or the proportion of the economically active who possess some particular characteristic, is given for women and for those of working age (usually ages 15 to 64), (2) activity rate, the proportion of the total population who *are* economically active, is given for both sexes and as a total, and (3) employment status, grouped as employers and self-employed; employees; family workers (usually unpaid); and others (excluding unemployed).

Each of these measures indicates certain characteristics in a given national labour market; none should be interpreted in isolation, however, as the meaning of each is influenced by a variety of factors—demographic structure and change, social or religious customs, educational opportunity, sexual differentiation in employment patterns, degree of technological development, and the like. Participation and activity rates, for example, may be high in a particular country because it possesses an older population with few children, hence a higher proportion of working age, or because, despite a young population with many below working age, the economy attracts eligible immigrant workers, themselves almost exclusively of working age. At the same time, low activity and participation rates might be characteristic of a country having a young population with poor employment possibilities or of a country with a good job market distorted by the presence of large numbers of "guest" or contract workers who are not part of the domestic labour force. An illiterate woman in a strongly sex-differentiated labour force is likely to begin and end as a family or

Employment and labour

country	year	economically active population									distribution by economic sector			
		total ('000)	participation rate (%)		activity rate (%)			employment status (%)				agriculture, forestry, fishing		manufacturing; mining, quarrying; public utilities	
			female	ages 15–64	total	male	female	employers, self-employed	employees	unpaid family workers	other	number ('000)	% of econ. active	number ('000)	% of econ. active
Afghanistan	1994	5,557	9.0	49.1[1]	29.4	54.2[1]	4.9[1]	52.2[1]	33.8[1]	14.0[1]	—	4,276[2]	76.9[2]	299[2]	5.4[2]
Albania	2002	1,318	43.7	65.9	42.4	48.8	36.2	..	..	..	..	767[4, 5]	72.2[4, 5]	56[4, 5]	5.3[4, 5]
Algeria	2000	8,154	12.2	48.4[6, 7]	27.0	47.0	6.6	16.8[8]	61.7[8]	2.6[8]	18.9[8]	898	11.0	721	8.8
American Samoa	2000	17.7	41.5	52.0[10]	30.8	35.3	26.2	3.4	96.4	0.2	—	0.5	2.9	5.9	33.4
Andorra	2000	34	45.6[11]	72.6	..	..	..	..	..	.	.	0.1	0.4	1.0	3.0
Angola	1996	4,581	37.3	65.1[12]	40.0	50.8	29.5	..	..	..	..	3,170	69.2	528[13]	11.5[13]
Antigua and Barbuda	1991	26.8	45.6	69.7	45.1	50.9	39.6	12.1	82.8	0.7	4.4	1.0	3.9	1.9	7.3
Argentina	2001	15,265	40.9	57.2[16]	42.1	51.1	33.5	21.3	68.6	2.4	1.4	911	6.0	1,374	9.0
Armenia	2003	1,232	49.5	72.1[5]	49.5[5]	54.5[5]	44.9[5]	5.0	84.9	.	15.2	509	41.3	139[17]	11.3[17]
Aruba	2000	45.0	46.6	70.9	49.8	55.4	44.6	2.6[20]	96.8[20]	0.5[20]	0.1[20]	0.2	0.5	3.0	6.7
Australia	2003	10,067	44.8	74.2	50.6	56.3	45.0	13.1	86.5	0.4	..	395	3.9	1,282	12.7
Austria	2003	3,967	44.6	71.8	49.2	56.2	42.6	10.6	87.3	2.1	—	215	5.4	808	20.4
Azerbaijan	2003	3,801	47.8	.	46.0	48.9	43.2	..	..	.	.	1,500	39.5	252	6.6
Bahamas, The	2000	154	47.5	76.6	50.9	54.8	47.1	11.6[22]	85.1[22]	0.3[22]	3.0[22]	5.1	3.3	8.3	5.4
Bahrain	2001	308	21.7	65.7[23]	47.4	64.6	24.1	3.6	96.3	0.1	—	4	1.5	55	18.0
Bangladesh	1999–2000	60,291	37.8	73.8	47.3	56.3	37.5	35.3	12.6	33.7	18.4	36,217	60.1	4,799	8.0
Barbados	2002[24]	143	48.5	68.2[23]	52.7	56.5	49.2	14.0	85.6	0.1	0.5	5.2	3.6	10.9	7.6
Belarus	2003	4,446	53.4	69.7[25]	45.5	45.2	45.7	..	..	.	.	493	11.1	987	22.2
Belgium	2002	4,402	43.0	64.8	42.6	49.6	35.9	14.7[25]	82.1[25]	3.2[25]	.	72	1.6	823	18.7
Belize	2002	94.2	32.8	57.3	35.9	48.4	23.4	31.5[25]	65.0[25]	3.4[25]	0.1[25]	19.1	20.3	7.5	8.0
Benin	1992[26]	2,085	42.6	73.4	43.0	50.6	35.7	58.4	5.3	30.5	5.8	1,148	55.0	162	7.8
Bermuda	2000	37.9	48.3	84.8[27]	61.0	65.8	56.7	10.0	89.6	0.2	0.3	0.6[28]	1.5[28]	1.6[29]	4.2[29]
Bhutan	..	..	..	..	..	..	..	..	..	.	.	.	.	..	..
Bolivia	2000	3,637	44.6	71.8	46.2	52.1	40.5	42.2	49.6	7.8	0.4	1,415	38.9	436	12.0
Bosnia and Herzegovina	2001	1,038	.	..	57.6	71.8	43.1	..	..	.	.	21[25]	2.0[25]	224[25]	21.6[25]
Botswana	2001[24]	588	43.8	57.6	35.0	40.6	29.7	15.9	82.7	1.3	0.1	55	9.9	56	10.0
Brazil	2000	77,467	39.9	69.1[7]	45.6	55.7	35.8	26.3[22]	62.3[22]	7.7[22]	3.7[22]	12,119	15.8	9,320	12.0
Brunei	2001	158	41.2	66.6[30]	45.2	52.5	37.7	4.6[30]	95.0[30]	0.4[30]	..[30]	2.0	1.3	19.0	12.1
Bulgaria	2003[24, 31]	3,283	46.8	60.9	47.0	52.0	42.4	13.1	84.7	1.9	0.3	286	8.7	778	23.7
Burkina Faso	1996	5,076	48.2	70.0[32]	49.2	52.9	46.0	2.6[20]	96.8[20]	0.5[20]	0.1[20]	4,514	88.9	78	1.5
Burundi	1990	2,780	52.6	91.4	52.5	51.2	53.8	62.8	5.1	30.3	1.8	2,574	92.6	37	1.3
Cambodia	1998	5,119	51.6	79.0	44.8	44.9	44.6	41.2[33]	12.9[33]	45.7[33]	0.2[33]	4,480[34]	70.0[34]	572[34]	8.9[34]
Cameroon	1991	4,740	33.2	58.9[12]	40.0	53.9	26.3	60.2[22]	14.6[22]	18.0[22]	7.1[22]	..	..	..	..
Canada	2004	17,269	46.6	65.9[23]	54.1	58.3	49.9	15.1[35]	84.7[35]	0.2[35]	..[35]	334	1.9	2,712	15.7
Cape Verde	2000	175	39.0	75.7[36]	40.6	42.6	38.9	24.7[22]	53.7[22]	2.0[22]	19.6[22]	29.9[22]	24.8[22]	6.8[22]	5.7[22]
Central African Republic	1988	1,187	46.8	78.3	48.2	52.2	44.3	75.3	8.0	8.1	8.6	881	74.2	31	2.6
Chad	1993	2,294	48.4	71.1[23]	37.0	39.5	34.7	..	..	.	.	1,903	83.0	37	1.6
Chile	2003[24]	6,128	34.3	58.8	38.7	51.3	26.3	29.7	68.2	2.0	—	796	13.0	966	15.8
China	2002	753,600	37.8[5]	77.7[5, 10]	58.5	61.8[22]	53.7[22]	.	.	..	.	324,870	43.1	91,550	12.1
Colombia	2003[24]	20,408	42.6	48.1[38]	47.2	56.1	38.9	43.9	49.8	6.0	0.3	3,941[39]	19.4[39]	2,924[39]	14.4[39]
Comoros	1996	252	38.9	59.2	37.2	44.8	29.3	..	..	..	..	..	..	..	..
Congo, Dem. Rep. of the	1996	14,082	35.0	47.9[12]	31.1	40.9	21.6	..	..	..	..	..	..	..	..
Congo, Rep. of the	1984	563	45.6	54.0	29.5	33.0	26.2	64.3	31.4	1.2	3.1	294	52.2	50	8.8
Costa Rica	2003	1,758	35.4	59.4[40]	43.0	56.3	30.1	27.9	69.5	2.6	—	261	14.8	270	15.3
Côte d'Ivoire	1988	4,263	32.3	66.6	39.4	52.2	26.0	..	..	.	.	2,628	61.6	100	2.3
Croatia	2004	1,836	45.3	58.9	40.8	46.5	35.6	20.5[35]	75.9[35]	3.6[35]	—	269	14.7	339	18.5
Cuba	2002[4]	4,024	37.7	45.4[23]	35.8	44.7	27.0	..	..	..	..	1,065	26.5	644	16.0
Cyprus[41]	2003	341	44.7	70.6	49.6	56.7	42.9	20.2	76.3	3.5	—	17	5.0	40	11.7
Czech Republic	2004	5,138	44.1	70.9[34]	50.3	57.7	43.3	16.1	82.7	0.7	0.5	208	4.0	1,413	27.5
Denmark	2002	2,893	46.9	77.8[42]	53.9	57.9	49.9	8.2	91.0	0.8	—	102	3.5	468	16.2
Djibouti	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dominica	1997	33.4	45.8	65.6[23]	45.8	49.4	42.1	31.9	65.6	1.9	0.6	6.1	18.3	2.5	7.6
Dominican Republic	2002	3,702	38.7	55.1[2]	43.1	52.0	33.9	42.9[33]	55.2[33]	1.9[33]	—[33]	512	13.8	562	15.2
East Timor	2001	250[4, 23]	31.6[4, 23]	56.0[4, 23]	31.4[4, 23]	42.7[4, 23]	20.0[4, 23]	61.0	17.4	21.2	0.4	..	73.2[4]	..	4.8[4, 43]
Ecuador	2003[44]	3,992	41.1	70.4	46.6	55.4	37.9	34.3	61.3	4.4	—	349	8.7	578	14.5
Egypt	2001[24]	19,253	21.9	46.9	30.0	45.8	13.5	29.4[34]	60.2[34]	10.4[34]	—[34]	4,922[34]	24.8[34]	2,377[34]	12.0[34]
El Salvador	2003	2,707	40.3	64.4	40.8	51.1	31.4	32.6	53.5	8.7	5.2	516	19.1	477	17.6
Equatorial Guinea	1983	103	35.7	66.7	39.2	52.5	26.9	29.0	16.0	29.9	25.1	59.4	57.9	1.8	1.8
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	2003	661	49.0	69.8	48.7	53.9	44.3	8.5	91.1	0.4	—	37	5.6	150	22.7

traditional agricultural worker. Loss of working-age men to war, civil violence, or emigration for job opportunities may also affect the structure of a particular labour market.

The distribution of the economically active population by employment status reveals that a large percentage of economically active persons in some less developed countries falls under the heading "employers, self-employed." This occurs because the countries involved have poor, largely agrarian economies in which the average worker is a farmer who tills his own small plot of land. In countries with well-developed economies, "employees" will usually constitute the largest portion of the economically active.

Caution should be exercised when using the economically active data to make intercountry comparisons, as countries often differ in their choices of classification schemes, definitions, and coverage of groups and in their methods of collection and tabulation of data. The population base containing the economically active population, for example, may range, in developing countries, from age 9 or 10 with no upper limit to, in developed countries, age 18 or 19 upward to a usual retirement age of from 55 to 65, with sometimes a different range for each sex. Data on female labour-force participation, in particular, often lack comparability. In many less developed countries, particularly those dominated by the Islamic faith, a cultural bias favouring traditional roles for women results in the undercounting of economically active women. In other less developed countries, particularly those in which subsistence workers are deemed economically active, the role of women may be overstated.

The second major section of the table provides data on the distribution by economic (also conventionally called industrial) sector of the economically active population. The data usually include such groups as unpaid family workers, members of the armed forces, and the unemployed, the last distributed by industry as far as possible.

The categorization of industrial sectors is based on the divisions listed in the *International Standard Industrial Classification of All Economic Activities*. The "other" category includes persons whose activities were not adequately defined and the unemployed who were not distributable by industrial sector.

A substantial part of the data presented in this table is summarized from the online database of the ILO, which compiles its statistics both from official publications and from information submitted directly by national census and labour authorities. The editors have supplemented and updated ILO statistical data with information from Britannica's holdings of relevant official publications.

construction		transportation, communications		trade, hotels, restaurants		finance, real estate		public administration, defense		services		other		country
number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active	
81[2]	1.5[2]	140[2]	2.5[2]	421[2]	7.6[2]	3	3	3	3	929[2, 3]	16.7[2, 3]	214[2]	3.9[2]	Afghanistan
13[4, 5]	1.2[4, 5]	24[4, 5]	2.3[4, 5]	55[4, 5]	5.2[4, 5]	3	3	3	3	147[3, 4, 5]	15.9[3, 4, 5]	...[4, 5]	...[4, 5]	Albania
669	8.2	9	9	9	9	9	9	1,773	21.7	1,665[9]	20.5[9]	2,428	29.8	Algeria
1.1	6.0	1.0	5.9	1.8	10.1	0.3	1.8	1.6	8.8	4.6	25.7	0.9	5.4	American Samoa
5.7	16.6	...	...	12.5	36.2	1.4	4.1	4.4	12.7	6.6	19.1	2.7	7.9	Andorra
13	13	14	14	14	14	14	14	14	14	883[14]	19.3[14]	—	—	Angola
3.1	11.6	2.4	9.0	8.5	31.9	1.5	5.4	15	15	6.4[15]	23.9[15]	1.9	7.0	Antigua and Barbuda
639	4.1	718	4.7	2,213	14.5	898	5.9	969	6.3	2,762	18.1	4,781	31.3	Argentina
37	3.0	42	3.4	105	8.5	38[18]	3.1[18]	37	3.0	193	15.7	132[19]	10.7[19]	Armenia
3.9	8.7	2.9	6.5	14.8	33.0	5.2	11.7	3.5	7.9	8.0	18.0	3.2[19]	7.1[19]	Aruba
786	7.8	622	6.2	2,574	25.6	1,537	15.3	566	5.6	2,144	21.3	162	1.6	Australia
363	9.2	247	6.2	861	21.7	460	11.6	241	6.1	759	19.1	13	0.3	Austria
180	4.7	179	4.7	630	16.6	111	2.9	330	8.7	566	14.9	54[21]	1.4[21]	Azerbaijan
17.0	11.0	10.8	7.0	46.9	30.4	15.9	10.3	13.1	8.5	29.3	19.2	7.8[19]	5.0[19]	Bahamas, The
26	8.6	14	4.5	48	15.5	25	8.1	52	17.0	61	19.9	22[19]	7.0[19]	Bahrain
1,144	1.9	2,672	4.4	7,045	11.7	415	0.7	15	15	5,775[15]	9.6[15]	2,224[19]	3.7[19]	Bangladesh
13.2	9.3	4.7	3.3	33.8	23.7	10.9	7.6	15	15	49.5[15]	34.7[15]	14.5	10.2	Barbados
231	5.2	265	5.9	257	5.8	57	1.3	84	1.9	1,033	23.2	1,039	23.4	Belarus
276	6.3	327	7.4	777	17.7	553	12.6	406	9.2	1,038	23.6	130	3.0	Belgium
7.1	7.5	3.1	3.3	22.9	24.3	3.1	3.3	15	15	20.0[15]	21.3[15]	11.3[19]	12.0[19]	Belize
52	2.5	53	2.5	433	20.7	3	0.1	15	15	165[15]	7.9[15]	71	3.4	Benin
3.8	10.0	2.8	7.5	9.1	23.9	6.4	17.0	2.5	6.6	6.8	17.9	4.3	11.2	Bermuda
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Bhutan
240	6.6	156	4.3	724	19.9	120	3.3	80	2.2	324	8.9	142	3.9	Bolivia
36[25]	3.5[25]	45[25]	4.3[25]	91[25]	8.8[25]	42[25]	4.1[25]	73[25]	7.0[25]	96[25]	9.3[25]	409[21, 25]	39.4[21, 25]	Bosnia and Herzegovina
59	10.5	15	2.7	74	13.2	30	5.4	70	12.5	86	15.5	113[19]	20.3[19]	Botswana
4,568	5.9	3,319	4.3	13,971	18.0	4,586	5.9	3,523	4.6	13,383	17.3	12,676	16.4	Brazil
12.3	7.8	4.8	3.0	20.0	12.7	8.2	5.2	15	15	79.9[15]	50.7[15]	11.3[21]	7.2[21]	Brunei
151	4.6	215	6.6	552	16.8	146	4.5	230	7.0	474	14.4	451	13.7	Bulgaria
21	0.4	21	0.4	225	4.4	13	0.3	..		104	2.0	100	2.0	Burkina Faso
20	0.7	9	0.3	26	0.9	2.0	0.1	15	15	85[15]	3.1[15]	27[19]	1.0[19]	Burundi
100[34]	1.6[34]	175[34]	2.7[34]	661[34]	10.3[34]	16[34]	0.3[34]	144[34]	2.2[34]	252[34]	3.9[34]	—[34]	—[34]	Cambodia
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Cameroon
984	5.7	800	4.6	3,514	20.4	2,634	15.3	820	4.7	4,222	24.5	1,249[21]	7.2[21]	Canada
22.7[22]	18.8[22]	6.1[22]	5.1[22]	12.7[22]	10.6[22]	0.8[22]	0.7[22]	15	15	17.4[15, 22]	14.4[15, 22]	24.1[22]	20.0[22]	Cape Verde
6	0.5	7	0.6	92	7.8	0.7	0.1	15	15	70[15]	5.9[15]	100[19]	8.5[19]	Central African Republic
11	0.5	13	0.6	212	9.2	1	—	62	2.7	46	2.0	9	0.4	Chad
493	8.0	519	8.5	1,145	18.7	494	8.1	15	15	1,643[15]	26.8[15]	71[37]	1.2[37]	Chile
38,930	5.2	20,840	2.8	49,690	6.6	4,580	0.6	10,750	1.4	33,150	4.4	179,240	3.8	China
998[39]	4.9[39]	1,271[39]	6.2[39]	4,971[39]	24.4[39]	1,087[39]	5.3[39]	15	15	4,578[15, 39]	2.5[15, 39]	575[19, 39]	2.8[19, 39]	Colombia
..	.	...	..	...	..	...	.	.	.	.	.	.	.	Comoros
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Congo, Dem. Rep. of the
25	4.5	29	5.1	67	11.8	3	0.5	15	15	85[15]	15.1[15]	10	2.0	Congo, Rep. of the
122	6.9	97	5.5	439	25.0	145	8.3	79	4.5	312	17.8	33	1.9	Costa Rica
85	2.0	118	2.8	530	12.4	3	3	3	3	591[3]	13.9[3]	210[21]	4.9[21]	Côte d'Ivoire
130	7.1	104	5.7	301	16.4	98	5.3	106	5.8	234	12.7	253	13.8	Croatia
176	4.4	202	5.0	508	12.6	54	1.3	15	15	1,376[15]	34.2[15]	—	—	Cuba
35	10.2	17	5.1	88	25.8	39	11.4	24	7.2	64	18.7	17[19]	4.8[19]	Cyprus[41]
440	8.6	366	7.1	812	15.8	367	7.1	324	6.3	782	15.2	425[21]	8.3[21]	Czech Republic
173	6.0	179	6.2	495	17.1	376	13.0	15	15	974[15]	33.7[15]	125[19]	4.3[19]	Denmark
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Djibouti
2.2	6.4	1.5	4.5	5.0	15.1	1.4	4.2	1.5	4.6	4.4	13.1	8.8[19]	26.3[19]	Dominica
207	5.6	244	6.6	924	25.0	71	1.9	172	4.7	777	21.0	233	6.3	Dominican Republic
...	4.43	...	...	...	...	...	...	...	...	...	...	...	22.0[4]	East Timor
271	6.8	248	6.2	1,198	30.0	228	5.7	192	4.8	736	18.4	192[37]	4.8[37]	Ecuador
1,329[34]	6.7[34]	1,137[34]	5.7[34]	2,684[34]	13.5[34]	568[34]	2.9[34]	1,947[34]	9.8[34]	2,996[34]	15.1[34]	1,917[34]	9.6[34]	Egypt
195	7.2	121	4.5	747	27.6	116	4.3	107	4.0	400	14.8	27	1.0	El Salvador
1.9	1.9	1.8	1.7	3.1	3.0	0.4	0.4	15	15	8.4[15]	8.2[15]	25.8[19]	25.2[19]	Equatorial Guinea
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Eritrea
43	6.5	56	8.5	98	14.9	52	7.9	35	5.2	124	18.7	66[21]	10.0[21]	Estonia

Employment and labour (continued)

country	year	economically active population									distribution by economic sector			
		total ('000)	participation rate (%)		activity rate (%)			employment status (%)			agriculture, forestry, fishing		manufacturing; mining, quarrying; public utilities	
			female	ages 15–64	total	male	female	employers, self-employed	employees	unpaid family workers	other	number ('000)	% of econ. active	number ('000)	% of econ. active
Ethiopia	1999	27,272	45.5	68.4	49.7	54.9	44.7	.	.	.	.	21,605[11]	87.8[11]	419[11]	1.7[11]
Faroe Islands	2003	27	. .	.	56.0	.	.	. .	. .	. .	. .	. .	. .	. .	. .
Fiji	1996	298	32.8	60.6	38.4	50.8	25.6	. .	. .	. .	. .	133	44.6	34	11.3
Finland	2003	2,600	48.0	74.1	49.8	52.9	46.8	12.3	86.4	0.4	0.9	120	4.6	470	18.1
France	2003	27,125	45.9	69.3	45.3	50.4	40.5	10.2[45]	77.4[45]	—	12.4[45]	1,057[4]	4.3[4]	4,249[4]	17.4[4]
French Guiana	1999	62.6	43.8	65.0[7]	39.9	44.6	35.3	15.2[46]	84.8	[46]	—	2.9	4.6	3.5	5.6
French Polynesia	2002	99.5	40.0	61.7	40.6	47.5	33.4	. . .	.	.	.	10.9[47]	12.5[47]	6.9[47]	7.9[47]
Gabon	1993	376	44.5	52.5[32]	37.2	41.9	32.7	. .	. .	. .	.	128	34.1	26	6.9
Gambia, The	1993	345	40.0	48.9[32]	33.3	39.9	26.6	. .	. .	. .	.	182	52.6	24	6.9
Gaza Strip	2003	254	12.1	37.6[23]	19.0	33.0	4.7	26.7	61.8	11.5	—	30	11.7	16[48]	6.2[48]
Georgia	2002[49]	2,104	47.3	71.8[50]	48.3	54.1	43.1	64.4	35.4	.	0.2	989	46.9	117	5.6
Germany	2003	40,195	44.5	72.2	48.7	55.3	42.4	10.4	88.6	1.1	—	1,064	2.6	9,631	24.0
Ghana	1999	9,680	52.7	79.9	53.5	52.5	54.3	68.8	13.8	17.2	0.2	3,778[51]	50.5[51]	860[51]	11.5[51]
Greece	2002	4,369	40.4	63.1	42.1	51.9	33.0	32.0	60.2	7.8	—	624	14.3	593	13.6
Greenland	2002	31.5	45.7	83.2[52]	55.7	56.7	54.5	. . .	. .	.	. . .	2.0[4, 5]	7.3[4, 5]	3.5[4, 5]	12.9[4, 5]
Grenada	1998	41.0	43.5	78.0[53]	46.0[53]	50.0[53]	41.0[53]	22.9	71.3	1.1	4.7	4.8	11.7	3.1	7.7
Guadeloupe	1999	191	49.1	70.6[7]	45.3	47.9	42.9	18.2	80.5	1.3	—	8.2[6]	4.5[6]	7.9[6]	4.3[6]
Guam	2002[24]	62.1	45.9	62.4[10]	39.0[53]	41.0[53]	37.0[53]	4.2[54]	95.5[54]	0.3[54]	—[54]	0.3[55]	0.5[55]	1.6[55, 56]	2.8[55, 56]
Guatemala	1998–99	3,982	22.6	50.5	35.0	53.7	15.9	32.7[57]	47.6[57]	16.2[57]	3.5[57]	1,844[34]	38.7[34]	741[34]	15.5[34]
Guernsey	2001[58]	32.6	45.2	79.1	54.6	61.4	48.1	12.8	87.2	—	—	1.5	4.5	2.3	6.9
Guinea	1990	3,067	47.4	.	49.0[53]	52.0[53]	46.0[53]	. .	. .	. .	. .	. .	. .	. .	. .
Guinea-Bissau	1995	491	39.9	65.5[12]	45.8	55.9	36.0	.	. .	.	. .	373	76.0	20[13]	4.1[13]
Guyana	1997	263.8	35.2	61.8[2]	38.8[2]	51.9[2]	26.0[2]	.	.	. .	. .	66.8	25.3	37.7	14.3
Haiti	1990	2,679	40.0	64.8	41.1	50.3	32.3	59.1	16.5	10.4	14.0	1,535	57.3	178	6.6
Honduras	2001[24, 59]	2,438	35.7	64.5	38.5	50.6	26.8	39.7[25]	46.8[25]	13.0[25]	0.5[25]	775	31.8	391	16.0
Hong Kong	2003[24]	3,501	43.9	70.2	51.7	59.9	44.0	12.0	87.3	0.7	—	8	0.2	312	8.9
Hungary	2003	4,166	45.6	60.6	41.1	47.1	35.8	12.6	86.7	0.5	0.2	226	5.4	1,069	25.7
Iceland	2003	162.4	47.4	82.2[60]	56.1	59.1	53.2	16.3[34]	83.4[34]	0.3[34]	—[34]	10.8	6.7	23.3	14.3
India	2001	402,512	31.6	. .	39.1	51.8	24.3	48.0[61, 62]	10.3[61, 63]	31.6[61, 64]	10.1[61]	190,940[61]	52.6[61]	44,200[61]	12.2[61]
Indonesia	2002[4]	91,647	36.1	58.3[7]	39.6	50.7	28.5	46.3	27.3	17.6	8.8	40,633	44.3	12,920	14.1
Iran	1996	16,027	12.7	44.1	26.7	45.8	6.9	39.3	51.7	5.5	3.5	3,357	20.9	2,822	17.6
Iraq	1997	4,757[65]	10.5[65]	42.9[7, 65]	24.8[65]	44.7[65]	5.2[65]	.	. .	. .	. .	477[66]	11.6[66]	439[66]	10.6[66]
Ireland	2004	1,876	41.7	68.1	47.1	55.3	39.1	16.7	82.3	1.0	—	117	6.2	306	16.3
Isle of Man	2001	39.7	45.4	78.9[27]	52.0	58.0	46.3	14.6	85.4	—	—	0.5	1.4	3.7	9.3
Israel	2003[24]	2,610	46.3	61.7	39.0	42.4	35.7	11.4	86.2	0.4	2.0	42	1.6	398	15.2
Italy	2003	24,229	39.1	61.6	42.2	52.8	32.1	22.2	72.8	4.1	0.9	1,075	4.4	5,210	21.5
Jamaica	2003[24]	1,098	44.3	66.0[67]	41.6	47.4	36.1	35.7	62.3	1.3	0.4	188	17.1	78	7.1
Japan	2003	66,660	41.0	72.3	52.2	63.2	41.8	10.4	84.5	4.7	0.4	2,930	4.4	12,150	18.2
Jersey	2001	48.1	46.0	81.7[68]	55.2	61.2	49.5	11.9	88.1	—	—	2.1[35]	4.0[35]	2.7[35]	5.0[35]
Jordan	2003	1,293	14.9	37.9[23]	23.6	39.6	7.1	18.6	80.7	0.5	0.2	39	3.0	169	13.1
Kazakhstan	2003	7,657	49.1	76.9	51.2	. . .	. .	37.4	60.5	1.0	1.1	2,463	32.1	855	11.2
Kenya	1998–99	12,300	46.1[20]	73.6	42.1[5]	. . .	.	. .	. .	.	. . .	. .	. .	. .	. .
Kiribati	1995	40.6	47.8	84.0[23]	49.5	52.1	46.8	. .	. .	.	. . .	31.0[54, 69]	71.7[54, 69]	0.3[54]	0.8[54]
Korea, North	1985	9,084	46.0	75.3	44.6	48.6	40.6	.	. .	.	.	. .	. .	. .	. .
Korea, South	2003	22,846	41.0	65.3	48.3	56.5	39.9	27.1	66.2	6.7	—	1,955	8.6	4,409	19.3
Kosovo	. .	.	. .	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Kuwait	2002	1,364	25.7	74.4[23]	56.4	69.3	36.6	2.2[11]	97.8[11]	—[11]	—[11]	22	1.6	100	7.3
Kyrgyzstan	2002	2,116	44.0	68.7	42.5[3]	48.4[53]	36.8[53]	42.5	42.7	10.6	4.2	952[4]	52.7[4]	140[4]	7.7[4]
Laos	1995	2,166	56.4	83.3	47.3	46.2	52.8	. .	. .	. .	. .	. .	. .	. .	. .
Latvia	2003	1,126	48.6	69.2	48.3	53.9	43.5	9.3	87.0	3.7	—	139	12.3	198	17.6
Lebanon	1997	1,362	21.6	49.3	34.0	55.2	14.2	.	. .	.	. .	132[71]	19.1[71]	131[71]	18.9[71]
Lesotho	1996	573	33.5	49.9	29.2	39.5	19.3	.	.	.	. .	105	18.4	126	21.9
Liberia	1984	704	41.0	56.3	33.5	39.1	27.8	59.1	21.6	14.4	5.0	481	68.3	31	4.4
Libya	1996	1,224	9.8	37.1[12, 30]	26.1	42.9[30]	4.9[30]	. . .	. .	.	. .	219	17.9	195	15.9
Liechtenstein	2004	15.6[73]	41.4[73]	55.6[23, 73]	45.6[73]	54.3[73]	37.2[73]	. .	. .	.	. . .	0.4[74]	1.3[74]	10.6[74]	36.4[74]
Lithuania	2003[24]	1,642	49.3	65.7	47.5	51.6	44.0	16.9	79.6	3.5	—	257	15.6	298	18.1
Luxembourg	2003	195[75]	41.5[75]	64.1[75]	43.2[75]	51.2[75]	35.4[75]	8.6[5, 75]	85.6[5, 75]	1.7[5, 75]	4.1[5, 75]	4[76]	1.3[76]	35[76]	11.5[76]
Macau	2003[24]	215.5	46.6	66.2[67]	49.9	55.9	44.4	9.4	89.0	1.6	—	0.6	0.3	38.4	17.8
Macedonia	2003	861	39.7	61.3	42.3	51.1	33.6	15.8	72.7	11.4	—	120	13.9	149	17.3
Madagascar	2003	8,481	49.5	83.2	50.7	51.6	49.8	43.7	15.0	40.6	0.7	6,316	74.5	482	5.7
Malawi	1998	4,509	50.2	76.5	45.4	46.1	44.7	84.6	12.9	2.5	—	3,766	83.6	128	2.8
Malaysia	2000	9,616	34.7	65.5	41.3	52.7	29.4	21.1[77]	71.4[77]	7.5[77]	—	1,422[34]	14.4[34]	2,148[34]	21.7[34]
Maldives	2000	88.0	33.7	55.7	32.6	42.5	22.4	51.6	23.8	2.0	22.6	11.8	13.4	12.7	14.4
Mali	1987	3,438	37.4	67.4	44.7	57.2	32.7	35.4	5.2	57.6	1.8	2,803	81.5	191	5.6
Malta	2003	159.6	31.3	60.8[7]	39.9	55.3	24.8	14.2	85.1	. .	0.7	2.5	1.6	32.2	20.2
Marshall Islands	1999	14.7	34.1	52.1	28.9	37.2	20.1	28.8[78]	71.2[79]	. .	—	2.1	14.4	1.0	6.9
Martinique	1999	174.0	50.3	71.6[7]	45.6	47.8	43.7	14.4	84.9	0.7	—	8.4	4.8	9.1	5.2
Mauritania	2000[80]	652	28.0	38.1[32]	26.0	37.8	14.4	57.1	23.3	12.4	7.2	314	48.2	39	5.9
Mauritius	2000	514	33.6	62.7	43.3	58.0	28.9	15.8	83.0	0.9	0.3	53	10.3	139	27.1
Mayotte	2002	44.6	38.6	50.0[36, 53]	27.8	. .		26.1[20]	71.9[20]	2.0[20]	—[20]	3.2	7.2	1.6	3.6
Mexico	2003	41,516	34.3	61.2	40.4	54.8	26.9	28.6[34]	62.3[34]	9.1[34]	—[34]	7,074[5]	17.8[5]	7,695[5]	19.4[5]
Micronesia	2000	37.4	42.9	60.7	35.0	39.4	30.4	. . .	. .	. .	. .	15.2	40.7	1.5	4.1
Moldova	2003	1,474	50.4	61.3[34]	40.8	42.3	39.5	33.5	64.0	2.4	0.1	583	39.6	164	11.2
Monaco	2000[81]	12.7	39.8	61.1[82]	39.7	49.2	30.7	17.4[22]	75.1[22]	0.3[22]	7.2[22]	0.02	0.2	0.8	6.3
Mongolia	2004	960	49.6	63.8[84]	38.8	39.9	37.7	32.5[54]	41.3[54]	25.3[54]	0.9[54]	388	40.4	109	11.4
Montenegro[85]	. .	.	. .	.	. .	. .	. .	.	. .	. .	. .	. .	. .	. .	. .
Morocco	2002	10,482[53]	24.8[53]	54.5[7, 53]	35.4[53]	53.5[53]	17.5[53]	.	. .	. .	. .	3,951	38.1	1,231	11.9
Mozambique	1996	9,318	46.3	83.2[12]	56.3	61.1	51.5	.	.	.	. .	7,360	79.0	98[43]	10.6[43]
Myanmar (Burma)	1997–98[4, 24]	18,337	. .	.	. .	. .	. .	. .	. .	. .	. .	12,093	65.9	1,831	9.9
Namibia	2000	652	51.5[53]	59.7[53, 84]	34.2[53]	33.2[53]	35.3[53]	32.5	62.2	3.3	2.0	134	20.6	31	4.7
Nauru	1992[86]	2.5	43.5	67.9[23]	35.9	40.1	31.5	. .	. .	. .	. .	. .	. .	0.5[4, 20]	24.7[4, 20]
Nepal	1998–99[87]	11,628	50.9	85.8[23]	60.9	61.2	60.5	40.7	16.0	43.3	—	7,203	61.9	585	5.0
Netherlands, The	2003	8,370	44.1	75.9	51.7[3]	58.4[53]	45.1[53]	10.7	88.7	0.6	—	230[34, 88]	2.8[34, 88]	1,136[34, 88]	13.8[34, 88]
Netherlands Antilles	2001	81.6	49.0	68.7	46.5	50.4	42.9	9.0[54]	87.8[54]	0.5[54]	2.7[54]	0.4	0.5	5.9	7.2
New Caledonia	1996	80.6	39.7	68.2[89]	40.9	48.2	33.3	15.9	83.8	0.3	—	4.7	5.8	8.2	10.1

construction		transportation, communications		trade, hotels, restaurants		finance, real estate		public administration, defense		services		other		country
number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ active	number ('000)	% of econ active	number ('000)	% of econ active	number ('000)	% of econ active	number ('000)	% of econ active	
61[11]	0.2[11]	103[11]	0.4[11]	936[11]	3.8[11]	19[11]	0.1[11]	[11, 15]	[11, 15]	1,252[11, 15]	5.1[11, 15]	210[11, 37]	0.9[11, 37]	Ethiopia
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Faroe Islands
11	3.6	17	5.6	32	10.8	8	2.6	16	5.3	29	9.7			Fiji
151	5.8	173	6.7	363	14.0	313	12.0	118	4.5	649	25.0	243[19]	9.3[19]	Finland
1,576[4]	6.4[4]	1,051[4]	4.3[4]	3,234[4]	13.2[4]	4,088[4]	16.7[4]	2,581[4]	10.5[4]	6,530[4]	26.7[4]	117[4]	0.5[4]	France
3.3	5.3	1.6	2.6	4.6	7.3	5.0	8.0	10.3	16.4	12.2	19.5	19.2	30.7	French Guiana
4.8[47]	5.5[47]	3.8[47]	4.4[47]	9.4[47]	10.7[47]	1.9[47]	2.1[47]	13.5[47]	15.5[47]	23.5[47]	27.0[47]	12.6[19, 47]	14.4[19, 47]	French Polynesia
10	2.6	16	4.2	40	10.8	5	1.3	48	12.8	33	8.8	70[19]	18.5[19]	Gabon
10	2.8	14	4.1	55	15.8	2	0.7	[15]	[15]	41[15]	11.9[15]	17	5.0	Gambia, The
18	7.0	9	3.5	29	11.4	[3]	[3]	[3]	[3]	70[3, 48]	27.5[3, 48]	83[19]	32.7[19]	Gaza Strip
34	1.6	78	3.7	231	11.0	28	1.3	109	5.2	253	12.0	265	12.6	Georgia
3,230	8.0	2,192	5.5	7,029	17.5	4,957	12.3	[15]	[15]	11,835[15]	29.4[15]	258[37]	0.6[37]	Germany
97[51]	1.3[51]	150[51]	2.0[51]	1,257[51]	16.8[51]	52[51]	0.7[51]	[15]	[15]	673[15, 51]	9.0[15, 51]	613[21, 51]	8.2[21, 51]	Ghana
294	6.7	244	5.6	947	21.7	324	7.4	294	6.7	628	14.4	421	9.6	Greece
1.9[4, 5]	7.0[4, 5]	2.2[4, 5]	8.1[4, 5]	2.5[4, 5]	9.0[4, 5]	1.3[4, 5]	4.7[4, 5]	12.9[4, 5]	47.0[4, 5]	1.1[4, 5]	3.9[4, 5]	—[4, 5]	0.1[4, 5]	Greenland
5.2	12.6	2.0	5.0	8.3	20.2	1.3	3.2	1.9	4.6	6.9	16.7	7.5[19]	18.4[19]	Grenada
13.0[6]	7.1[6]	4.2[6]	2.3[6]	20.7[6]	11.4[6]	3.5[6]	1.9[6]	43.4[6]	23.8[6]	24.4[6]	13.4[6]	56.9[6, 19]	31.2[6, 19]	Guadeloupe
3.4[55]	6.1[55]	4.6[55, 56]	8.2[55, 56]	12.7[55]	22.7[55]	2.5[55]	4.4[55]	16.5[55]	29.5[55]	14.5[55]	25.9[55]	—	—	Guam
213[34]	4.5[34]	104[34]	2.2[34]	1,050[34]	22.0[34]	32[34]	0.7[34]	[15]	[15]	602[15, 34]	12.6[15, 34]	184[34]	3.9[34]	Guatemala
2.9	9.0	1.2	3.8	7.5	22.8	8.6	26.4	1.9	5.8	6.2	19.1	0.5[19]	1.7[19]	Guernsey
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Guinea
[13]	[13]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	98[14]	20.0[14]	—	—	Guinea-Bissau
16.5	6.3	20.2	7.6	44.7	16.9	12.2	4.6	15.2	5.8	22.6	8.6	28.0[19]	10.6[19]	Guyana
28	1.0	21	0.8	353	13.2	5	0.2	[15]	[15]	155[15]	5.8[15]	404[19]	15.1[19]	Haiti
135	5.5	79	3.2	574	23.6	69	2.8	[15]	[15]	395[15]	16.2[15]	21[37]	0.9[37]	Honduras
328	9.4	371	10.6	1,082	30.9	496	14.2	[15]	[15]	881[15]	25.2[15]	23[37]	0.7[37]	Hong Kong
318	7.6	311	7.5	729	17.5	350	8.4	314	7.5	789	18.9	60	1.4	Hungary
10.8	6.7	9.7	6.0	26.0	16.0	20.5	12.6	8.2	5.0	47.6	29.3	5.5[21]	3.4[21]	Iceland
14,950[61]	4.1[61]	13,650[61]	3.8[61]	37,540[61]	10.3[61]	4,620[61]	1.3[61]	[15]	[15]	30,840[15, 61]	8.5[15, 61]	26,580[21, 61]	7.3[21, 61]	India
4,274	4.7	4,673	5.1	17,795	19.4	992	1.1	[15]	[15]	10,360[15]	11.3[15]	—	—	Indonesia
1,650	10.3	973	6.1	1,927	12.0	302	1.9	1,618	10.1	1,631	10.2	1,747[19]	10.9[19]	Iran
461[66]	11.2[66]	266[66]	6.4[66]	282[66]	6.8[66]	42[66]	1.0[66]	[15, 66]	[15, 66]	2,160[15, 66]	52.3[15, 66]	—	—	Iraq
191	10.2	112	6.0	366	19.5	227	12.1	92	4.9	382	20.4	82[21]	4.4[21]	Ireland
2.5	6.3	3.3	8.4	7.2	18.2	9.0	22.6	3.1	7.8	9.7	24.4	0.6[21]	1.6[21]	Isle of Man
129	4.9	152	5.8	406	15.6	375	14.4	127	4.8	684	26.2	297[19]	11.4[19]	Israel
1,809	7.5	1,162	4.8	4,483	18.5	2,393	9.9	1,934	8.0	4,050	16.7	2,113[19]	8.7[19]	Italy
90	8.2	64	5.9	210	19.1	66	6.0	[15]	[15]	257[15]	23.4[15]	145[19]	13.2[19]	Jamaica
6,040	9.1	4,960	7.4	14,830	22.2	2,320	3.5	2,270	3.4	17,050	25.6	4,110	6.2	Japan
4.7[35]	8.8[35]	1.4[35]	2.7[35]	14.7[35]	27.5[35]	[3]	[3]	[3]	[3]	27.8[3, 35]	52.0[3, 35]	—	—	Jersey
71	5.5	110	8.5	224	17.3	59	4.5	184	14.2	246	19.1	191[19]	14.8[19]	Jordan
329	4.3	504	6.6	1,085	14.2	261	3.4	318	4.1	1,170	15.3	672[21]	8.8[21]	Kazakhstan
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Kenya
0.3[54]	0.8[54]	0.9[64]	2.2[54]	1.2[54]	2.7[54]	0.3[54]	0.7[54]	5.8[54]	13.5[54]	2.6[54]	6.1[54]	0.6[21, 54]	1.5[21, 54]	Kiribati
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Korea, North
1,898	8.3	1,358	5.9	6,046	26.5	2,535	11.1	802	3.5	3,724	16.3	119	0.5	Korea, South
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Kosovo
108	7.9	43	3.2	220	16.1	59	4.3	[15]	[15]	720[15]	52.8[15]	92[70]	6.7[70]	Kuwait
46[4]	2.5[4]	68[4]	3.7[4]	217[4]	12.1[4]	38[4]	2.1[4]	66[4]	3.7[4]	280[4]	15.5[4]	—	—	Kyrgyzstan
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Laos
74	6.6	95	8.4	177	15.7	58	5.1	67	6.0	199	17.7	119[21]	10.6[21]	Latvia
43[71]	6.2[71]	48[71]	7.0[71]	115[71]	16.5[71]	24[71]	3.5[71]	[15]	[15]	200[15, 71]	28.8[15, 71]	—	—	Lebanon
19	3.4	15	2.6	15	2.6	4	0.7	[15]	[15]	131[15]	22.8[15]	159[72]	27.7[72]	Lesotho
4	0.6	14	2.0	47	6.7	[3]	[3]	[3]	[3]	63[3]	9.0[3]	64[19]	9.1[19]	Liberia
171	14.0	104	8.5	73	6.0	22	1.8	[15]	[15]	440[15]	35.9[15]	—	—	Libya
2.5[74]	8.6[74]	1.0[74]	3.5[74]	3.1[74]	10.7[74]	4.4[74]	15.3[74]	1.5[74]	5.0[74]	3.4[74]	11.8[74]	2.1[74]	7.3[74]	Liechtenstein
107	6.5	92	5.6	244	14.9	70	4.3	75	4.6	295	18.0	204[21]	12.4[21]	Lithuania
29[76]	9.5[76]	24[76]	8.1[76]	55[76]	18.2[76]	8.2[76]	27.1[76]	15[76]	5.1[76]	50[76]	16.7[76]	8[76]	2.5[76]	Luxembourg
16.3	7.6	14.2	6.6	54.9	25.5	18.1	8.4	17.8	8.3	42.0	19.5	13.2[19]	6.1[19]	Macau
36	4.2	31	3.6	75	8.7	18	2.1	35	4.0	80	9.3	317[19]	36.9[19]	Macedonia
61	0.7	117	1.4	468	5.5	6	0.1	206	2.4	443	5.2	383[21]	4.5[21]	Madagascar
73	1.6	33	0.7	257	5.7	14	0.3	101	2.2	86	1.9	50	1.1	Malawi
90[734]	9.2[34]	496[34]	5.0[34]	2,118[34]	21.4[34]	639[34]	6.5[34]	[15]	[15]	1,822[15, 34]	18.4[15, 34]	334[21, 34]	3.4[21, 34]	Malaysia
3.7	4.2	7.9	8.9	15.6	17.7	1.7	1.9	[15]	[15]	18.1[15]	20.6[15]	16.6[21]	18.8[21]	Maldives
13	0.4	6	0.2	159	4.6	0.3	—	75	2.2	84	2.4	107	3.1	Mali
11.2	7.0	11.3	7.1	34.0	21.3	12.6	7.9	13.2	8.3	27.8	17.4	14.7[19]	9.2[19]	Malta
0.8	5.8	0.8	5.2	0.8	5.4	0.6	3.8	[15]	[15]	3.8[15]	25.9[15]	4.8[21]	32.6[21]	Marshall Islands
7.1	4.1	4.8	2.7	16.5	9.5	12.3	7.1	19.9	11.5	38.0	21.8	57.9[19]	33.3[19]	Martinique
16	2.4	18	2.7	109	16.7	2	0.3	[15]	[15]	99[15]	15.1[15]	56	8.6	Mauritania
44	8.5	31	6.0	82	16.0	21	4.2	30	5.8	65	12.6	49[19]	9.5[19]	Mauritius
5.6	12.6	2.0	4.5	5.4	12.2	0.1	0.3	[15]	[15]	13.5[15]	30.2[15]	13.1[21]	29.3[21]	Mayotte
2,397[5]	6.0[5]	1,777[5]	4.5[5]	10,821[5]	27.3[5]	1,505[5]	3.8[5]	1,682[5]	4.2[5]	5,910[5]	14.9[5]	821[5]	2.1[5]	Mexico
0.8	2.1	0.8	2.2	2.6	6.8	0.7	1.9	6.1	16.4	1.5	3.9	8.2[21]	22.0[21]	Micronesia
53	3.6	68	4.6	176	11.9	36	2.5	66	4.5	210	14.2	117[21]	7.9[21]	Moldova
[83]	[83]	0.5	3.9	2.6	20.4	2.0[83]	15.7[83]	1.8	14.3	4.3	33.8	0.7	5.5	Monaco
35	3.7	40	4.1	153	15.9	22	2.3	45	4.7	135	14.1	33[21]	3.5[21]	Mongolia
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Montenegro[85]
646	6.2	332	3.2	1,180	11.4	..	..	503	4.8	1,330	12.8	1,206[19]	11.6[19]	Morocco
[43]	[43]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	971[14]	10.4[14]	—	—	Mozambique
400	2.2	495	2.7	1,781	9.7	..	..	[15]	[15]	1,485[15]	8.1[15]	270	1.5	Myanmar (Burma)
22	3.3	14	2.2	47	7.1	44	6.8	24	3.7	112	17.2	224[19]	34.3[19]	Namibia
..	..	..	..	0.1[4, 20]	6.4[4, 20]	—[4, 20]	1.6[4, 20]	1.2[4, 20]	58.0[4, 20]	..	..	0.2[4, 20]	9.3[4, 20]	Nauru
344	3.0	135	1.2	522	4.5	51	0.4	70	0.6	544	4.7	2,173	18.7	Nepal
485[34, 88]	5.9[34, 88]	458[34, 88]	5.6[34, 88]	1,580[34, 88]	19.2[34, 88]	1,268[34, 88]	15.4[34, 88]	559[34, 88]	6.8[34, 88]	2,042[34, 88]	24.9[34, 88]	453[19, 34, 88]	5.5[19, 34, 88]	Netherlands, The
5.3	6.5	5.4	6.6	19.0	23.3	10.1	12.4	6.0	7.4	16.0	19.6	13.4[19]	16.5[19]	Netherlands Antilles
6.9	8.5	3.7	4.6	11.3	14.0	4.8	6.0	9.6	12.0	14.3	17.8	17.1[19]	21.2[19]	New Caledonia

Employment and labour (continued)

country	year	economically active population			activity rate (%)			employment status (%)				distribution by economic sector			
		total ('000)	participation rate (%)									agriculture, forestry, fishing		manufacturing, mining, quarrying; public utilities	
			female	ages 15–64	total	male	female	employers, self-employed	employees	unpaid family workers	other	number ('000)	% of econ. active	number ('000)	% of econ. active
New Zealand	2003[24]	2,015	45.7	74.5	50.3	55.5	45.2	18.6	80.7	0.7	—	157	7.8	290	14.4
Nicaragua	2001	1,900	30.8	61.7[25]	36.5	50.8	22.4	.	.	.	.	596[35]	28.1[35]	277[35]	13.1[35]
Niger	1988[90]	2,316	20.4	55.2	31.9	51.1	13.0	51.4	5.0	40.3	3.3	1,764	76.2	73	3.1
Nigeria	1986[24]	30,766	33.3	58.8	31.1	41.1	20.9	64.6	18.8	10.7	5.9	13,259	43.1	1,401	4.6
Northern Mariana Islands	2000	44.5	54.2	84.1[10]	64.2	63.7	64.7	1.0	98.9	0.1	—	0.6	1.4	17.4[55]	39.1[55]
Norway	2003	2,373	47.0	79.3	52.0	55.6	48.4	7.0	92.5	0.3	0.2	83	3.5	327	13.8
Oman	2003[4]	737	15.4	.	31.5	47.4	11.1	11.4[54, 91]	87.8[54, 91]	[54, 91]	0.8[54, 91]	58	7.9	84	11.4
Pakistan	2001–02[24]	42,388	16.1	51.6	29.6	48.0	9.9	39.3	39.9	20.8	—	16,366	38.6	5,719	13.5
Palau	2000	9.6	38.1	67.5[10]	50.2	56.9	42.2	1.1	98.5	0.4	—	0.7[28]	7.0[28]	0.1[17, 29]	0.7[17, 29]
Panama	2003[92]	1,251	37.1	67.1	40.1[53]	50.0[53]	30.1[53]	31.7	64.9	3.4	—	189	15.1	106	8.5
Papua New Guinea	2000[93]	2,413	47.9	73.2	46.5	46.7	46.3	.	.	.	.	1,696	70.3	37	1.5
Paraguay	2002	1,980	32.1	61.4	38.4	51.7	24.8	44.6	47.6	5.4	1.4	532	26.8	224	11.3
Peru	2002	12,892[53]	42.0[53]	72.6[53]	48.2[53]	56.2[53]	40.2[53]	38.8[35, 94, 95]	51.1[35, 94, 95]	3.8[35, 94, 95]	6.3[35, 94, 95]	2,693[77]	32.5[77]	1,091[77]	13.2[77]
Philippines	2004	35,830	37.4[53]	67.1[23]	41.5[53]	52.0[53]	31.0[53]	36.0	52.8	11.2	—	11,444	31.9	3,280	9.2
Poland	2003	16,945	46.0	64.4	44.4	49.5	39.6	21.7	73.0	5.3	—	2,508	14.8	3,089	18.2
Portugal	2003[24]	5,470	45.9	73.0	52.4	58.5	46.6	24.9	73.1	1.6	0.4	642	11.7	1,069	19.5
Puerto Rico	2002	1,356	42.6	54.3[27]	35.1[53]	42.0[53]	28.8[53]	14.3	85.1	0.6	—	23	1.7	152	11.2
Qatar	1997	280	13.5	73.6	53.7	70.8	21.0	1.2	98.7	—	0.1	7.1[5]	2.2[5]	59.1[5]	18.3[5]
Reunion	1999	298	44.8	63.9	42.2	47.3	37.2	.	.	.	.	10	3.2	13[17]	4.5[17]
Romania	2003	9,914	44.9	62.4	45.6	51.5	40.0	22.5	62.5	14.8	0.2	3,292	33.2	2,324	23.4
Russia	2003	72,212	48.6	69.6	50.1	55.3	45.5	6.9	92.6	0.1	0.4	6,651	9.2	16,468	22.8
Rwanda	2002	3,418	55.2	52.1[98]	42.0	39.4	44.4	75.6	7.4	14.9	2.1	2,951	86.3	51	1.5
St Kitts and Nevis	1991	16.9[4]	44.4[4]	70.5[4]	41.6[4]	47.1[4]	36.3[4]	14.8[4]	81.9[4]	1.0[4]	2.3[4]	2.4[4, 45]	14.7[4, 45]	1.7[4, 45]	10.5[4, 45]
St Lucia	2000	76.0	47.2	74.0[53]	48.6[53]	52.3[53]	45.1[53]	33.1	64.1	0.9	1.9	13.2	17.4	6.9	9.1
St Vincent	1991	41.7	35.9	67.5	39.1	50.3	28.0	18.2	59.6	2.1	20.1	8.4	20.1	3.5	8.4
Samoa	2001	52.9	30.6	50.7[23]	30.0	39.9	19.1	.	.	.	.	26.8[4, 30]	63.0[4, 30]	1.9[4, 30]	4.5[4, 30]
San Marino	2003	20.0[99]	41.6	78.3[25]	66.2	79.2	53.8	11.5	88.5	—	—	0.1	0.4	6.3	31.5
São Tomé and Principe	2001	42.9[4]	33.8	43.7[32]	31.2	41.7	20.9	47.5	49.3	2.2	1.0	13.5	31.5	2.9	6.7
Saudi Arabia	2003	7,437	.	54.3	32.8	.	.	.	.	.	.	577	7.8	860	11.6
Senegal	1995	3,508	38.3	62.1[12]	42.2	52.0	32	.	.	.	.	2,719	77.5	259[13]	7.4[13]
Serbia[85, 100]	2002	2,241[4]	41.8	33.8[10]	27.8	33.2	22.6	.	.	.	.	160	7.1	684	30.5
Seychelles	1997	37.4	47.6	77.8[52]	49.3	52.2	46.5	13.7	79.1	3.1	4.1	1.9	5.0	3.4	9.2
Sierra Leone	1995	1,648	31.7	54.1[12]	36.5	50.9	22.7	.	.	.	.	964	58.5	319[13]	19.4[13]
Singapore	2000	2,192	39.6	73.4	54.6	60.8[6]	42.6[6]	12.8[35, 101]	86.5[35, 101]	0.7[35, 101]	—[35, 101]	[35, 101]	0.2[35, 101]	376[35, 101]	17.5[35, 101]
Slovakia	2003[24]	2,629	45.8	69.9	48.7	54.2	43.4	9.6	90.0	0.1	0.3	125	4.8	634	24.2
Slovenia	2003	959	45.9	66.9	48.1	53.2	43.1	9.8	86.0	4.2	—	75	7.8	279	29.1
Solomon Islands	1999	57.5[102]	27.1[102]	23.0[16, 102]	14.1[102]	19.8[102]	7.9[102]	—	33.9[103]	66.1[104]	—	7.4[77, 105]	21.8[77, 105]	4.7[77, 105]	13.9[77, 105]
Somalia	2001–02	3,906	.	56.4	52.6	.	.	.	.	.	.	2,617[28]	67.0[28]	469[29, 106]	12.0[29, 106]
South Africa	2003	16,192	46.7	54.4	36.4[53]	40.0[53]	33.0[53]	18.2	80.7	1.0	0.1	1,197	7.4	2,223	13.7
Spain	2003	18,815[24]	40.5[24]	68.5[24, 27]	46.4[24]	56.3[24]	36.9[24]	16.3[24]	81.4[24]	1.6[24]	0.7[24]	942	5.0	3,123	16.6
Sri Lanka	2000	6,709[107]	33.8[107]	60.6[7, 107]	42.0[107]	56.7[107]	27.8[107]	32.3[35]	58.2[35]	9.5[35]	—[35]	2,381[35]	31.2[35]	1,227[35]	16.1[35]
Sudan, The	1996	7,983[108]	30.6[108]	51.4[108]	33.7[108]	47.2[108]	20.4[108]	.	.	.	.	.	.	.	.
Suriname	1999[109]	85.9	36.9	55.0[7]	34.6	43.9	25.3	16.3[6]	71.7[6]	1.2[6]	1.8[6]	4.4	5.3	10.0	11.9
Swaziland	2001	392.0	39.3	60.5[12, 47]	42.3[47]	55.0[47]	30.6[47]	9.3	90.3	0.3	0.1	195.1	49.8[110]	21.9	8.2
Sweden	2003	4,450	48.0	78.1[27]	49.6	52.0	47.2	.	.	.	.	89	2.0	723	16.2
Switzerland	2002	4,180	44.5	81.3	56.2	62.9	49.7	15.1[35]	82.5[35]	2.4[35]	—[35]	165[35]	4.0[35]	662[35]	16.1[35]
Syria	2002[24]	5,460	21.4	54.9	31.9	48.9	14.0	27.7[54]	55.5[54]	16.8[54]	—[54]	1,462	26.8	661	12.1
Taiwan	2003[24]	10,076	41.4	63.9	44.8	51.5	37.8	20.7	72.1	7.2	—	696	6.9	2,633	26.1
Tajikistan	2003	1,932	46.5[47]	51.7[112]	29.1	32.5[47]	28.2[47]	.	.	.	.	1,275	66.0	115	6.0
Tanzania	2001	17,828	51.0	77.7[32]	53.0[53]	52.7[53]	53.3[53]	8.3	6.9	3.8	81.0	13,890	77.9	289	1.6
Thailand	2003	35,311	45.0	73.0[23]	55.1	60.9	49.4	34.8	40.5	24.6	0.1	15,561[4, 113]	44.9[4, 113]	5,231[4, 113]	15.1[4, 113]
Togo	1995	1,575	35.4	57.1[12]	38.1	49.7	26.7	.	.	.	.	1,059	67.2	183[13]	11.6[13]
Tonga	1996	33.9	36.0	60.4	35.3	44.6	25.8	33.7[22]	45.4[22]	16.8[22]	4.1[22]	10.0	29.3	7.3	21.4
Trinidad and Tobago	2002	586	39.1	66.9	45.3[53]	55.8[53]	35.1[53]	20.8	77.3	1.0	0.9	36	6.2	80	13.7
Tunisia	2003	3,460	25.5	48.2[23]	35.2	52.3	18.0	.	.	.	.	510[57]	21.6[57]	418[57]	17.7[57]
Turkey	2003	23,641	27.7	51.1	33.2[53]	47.6[53]	18.6[53]	29.8	50.6	19.6	—	7,165	30.3	3,847	16.3
Turkmenistan	1996	1,680	40.0	71.9[114]	36.1	43.9	28.5	.	.	.	.	892[4, 6]	48.5[4, 6]	227[4, 6]	12.3[4, 6]
Tuvalu	2002	3.2[115]	42.4	53.0[23]	33.9	39.4	28.4	.	.	.	.	.	.	.	.
Uganda	1996	9,636	39.9	68.9[12]	44.0	53.2	34.8	42.0[34]	15.0[34]	39.0[34]	4.0[34]	7,440	77.2	637[13]	6.6[13]
Ukraine	2003	22,614	48.9	65.8	47.4[53]	52.5[53]	43.1[53]	10.9	87.6	1.5	—	3,883	17.2	5,101	22.6
United Arab Emirates	2003	2,191	11.7[11]	72.6[23]	54.2	73.4[11]	19.4[11]	.	.	.	.	168	7.7	364	16.6
United Kingdom	2003	29,595	45.5	78.8[68]	49.7	55.5	44.2	11.9	87.5	0.3	0.3	420[116]	1.4[116]	3,857[116]	12.8[116]
United States	2003[24]	146,510	46.6	74.6[27]	50.4	54.7	46.2	7.5	92.4	0.1	—	2,275	1.6	18,620	12.7
Uruguay	2003[117]	1,269	45.0	72.4[67]	46.9	54.4	40.1	28.5[24]	70.2[24]	1.3[24]	—[24]	47[24]	3.8[24]	152[24]	12.3[24]
Uzbekistan	2001	9,136	.	70.4[114]	36.5	.	.	.	.	.	.	3,083	34.3	1,145	12.7
Vanuatu	1999	76.4	44.9	75.1	40.9	44.0	37.7	.	.	.	.	58.7[118]	76.8[118]	0.9	1.2
Venezuela	2002	11,674	39.6	72.1	46.4	55.7	37.0	28.0[5]	68.0[5]	0.5[5]	3.5[5]	949[24]	8.2[24]	1,249[24]	10.8[24]
Vietnam	2003	41,900	48.5[53]	.	51.8	53.9	49.7	41.4	21.9	35.9	0.8	23,100	55.1	4,900	11.7
Virgin Islands (U.S.)	2000	51.0	49.9	65.2[10]	47.0	49.3	44.8	10.8	88.7	0.5	—	0.3	0.6	2.8[55]	5.4[55]
West Bank	2003	555	16.2[121]	42.3[23]	23.6	36.3[121]	7.2[121]	33.3	55.3	11.4	—	93[121]	11.6[121]	75[121]	9.5[121]
Western Sahara	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Yemen	1999	4,091	23.7	47.8	24.2[53]	36.2[53]	11.7[53]	33.2	41.6	0.3	24.9	1,959	48.0	165	4.0
Zambia	1996	3,507	30.3	54.5	36.1	50.9	21.7	.	.	.	.	2,322	66.2	428[43]	12.2[43]
Zimbabwe	1999	4,963	48.2	72.2[23]	42.6	44.6	40.6	45.0	40.0	15.0	—	2,800	56.4	438	8.8

[1]1979 [2]1992–93 [3]Services includes finance, real estate and public administration, defense. [4]Employed persons only [5]2001 [6]1998 [7]Ages 15–59. [8]1987. [9]Services includes transportation, communications; trade, hotels, restaurants, and finance, real estate [10]Over age 15. [11]1995. [12]Over age 10. [13]Manufacturing, mining, quarrying; public utilities includes construction. [14]Services includes transportation, communications; trade, hotels, restaurants; finance, real estate; and public administration, defense [15]Services includes public administration, defense. [16]Over age 13. [17]Excludes public utilities [18]Includes public utilities [19]Mostly unemployed [20]1997. [21]Unemployed. [22]1990. [23]Over age 14 [24]Excludes some or all classes or elements of the military [25]1999 [26]Based on census [27]Ages 16–64 [28]Includes mining, quarrying [29]Excludes mining, quarrying [30]1991 [31]Based on July labour force survey. [32]Over age 9. [33]2004 [34]2002. [35]2003. [36]Ages 15–60. [37]Unemployed, not previously employed. [38]Ages 12–55. [39]Excludes ages 11 and under. [40]Ages 12–59. [41]Republic of Cyprus only [42]Ages 16–66. [43]Manufacturing; mining, quarrying; public utilities includes construction [44]Urban population only. [45]1994 [46]Employers, self-employed includes unpaid family workers. [47]1996. [48]Services includes public utilities. [49]Excludes Abkhazia and South Ossetia. [50]Ages 15–64 (male) and 15–59 (female). [51]Based on economically active population age 15–64 of 7,480,000. [52]Ages 15–62. [53]Estimate calculated in part from a secondary source (often for total population calculated from the U.S. Bureau of the Census International Database). [54]2000. [55]Payroll employment only; excludes proprietors, the self-employed, and unpaid family workers. [56]Transportation, communications includes public utilities. [57]1989 [58]Excludes Alderney and Sark [59]Excludes the departments of Islas de la Bahia and Gracias a Dios. [60]Ages 16–74. [61]1999–2000. [62]Self-employed only. [63]Workers receiving periodic wages or salaries. [64]Not self-employed agricultural/other labourers in rural areas and casual labourers in urban areas [65]Excludes Kurdish Autonomous Region. [66]1988. [67]Ages 14–64. [68]Ages 16–64 (male) and 16–59 (female). [69]Nearly all "village work" (subsistence fishing and

construction		transportation, communications		trade, hotels, restaurants		finance, real estate		public administration, defense		services		other		country
number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ active	number ('000)	% of econ. active	number ('000)	% of econ. active	
139	6.9	111	5.5	442	22.0	251	12.4	111	5.5	417	20.7	97[19]	4.8[19]	New Zealand
74[35]	3.5[35]	75[35]	3.5[35]	457[35]	21.6[35]	52[35]	2.5[35]	[15]	[15]	422[15, 35]	19.9[15, 35]	165[21, 35]	7.8[21, 35]	Nicaragua
14	0.6	15	0.6	209	9.0	2	0.1	[15]	[15]	123[15]	5.3[15]	117	5.0	Niger
546	1.8	1,112	3.6	7,417	24.1	120	0.4	[15]	[15]	4,902[15]	15.9[15]	2,009[19]	6.5[19]	Nigeria
2.8	6.3	1.4[55]	3.3[55]	9.6	21.5	1.0	2.3	2.6	5.8	7.3	16.5	1.7[19]	3.9[19]	Northern Mariana Islands
159	6.7	149	6.3	407	17.2	272	11.5	149	6.3	720	30.3	107	4.5	Norway
118	16.0	28	3.8	109	14.8	25	3.4	163	22.1	137	18.6	14	2.0	Oman
2,353	5.6	2,295	5.4	5,776	13.6	346	0.8	[15]	[15]	6,027[15]	14.2[15]	3,506[21]	8.3[21]	Pakistan
1.2	12.8	0.5[18]	5.2[18]	2.9	29.9	0.4	3.7	1.2	12.1	2.5	26.3	0.2[21]	2.3[21]	Palau
80	6.4	86	6.9	248	19.8	66	5.3	74	5.9	231	18.5	171[19]	13.7[19]	Panama
48	2.0	25	1.0	358	14.8	31	1.3	32	1.3	86	3.6	100[19]	4.1[19]	Papua New Guinea
142	7.2	86	4.3	417	21.1	68	3.4	87	4.4	370	18.7	55	2.8	Paraguay
308[77]	3.7[77]	364[77]	4.4[77]	1,352[77]	16.3[77]	197[77]	2.4[77]	[15]	[15]	2,287[15, 77]	27.6[15, 77]	—	—	Peru
1,654	4.6	2,464	6.9	6,706	18.7	1,039	2.9	1,414	3.9	3,621	10.1	4,209[19]	11.8[19]	Philippines
803	4.7	823	4.9	2,191	12.9	975	5.8	853	5.0	2,373	14.0	3,329[21]	19.6[21]	Poland
584	10.7	214	3.9	1,034	18.9	349	6.4	339	6.2	895	16.4	342[21]	6.3[21]	Portugal
85	6.3	42	3.1	250[96]	18.4[96]	44	3.2	[15]	[15]	595[15, 97]	43.9[15, 97]	166[21]	12.2[21]	Puerto Rico
59.3[5]	18.4[5]	9.9[5]	3.1[5]	42.6[5]	13.2[5]	10.1[5]	3.1[5]	43.8[5]	13.6[5]	76.1[5]	23.6[5]	14.9[5, 19]	4.6[5, 19]	Qatar
11[18]	3.7[18]	.5	1.8	25	8.3	16	5.4	39	13.1	54	18.3	124[21]	41.7[21]	Reunion
426	4.3	461	4.7	981	9.9	233	2.3	530	5.3	975	9.8	692[21]	7.0[21]	Romania
4,316	6.0	5,957	8.3	11,024	15.3	4,530	6.3	4,622	6.4	12,915	17.9	5,729[19]	7.9[19]	Russia
42	1.2	30	0.9	94	2.8	11	0.3	26	0.7	156	4.6	57[19]	1.7[19]	Rwanda
1.7[4, 45]	10.5[4, 45]	0.5[4, 45]	3.2[4, 45]	3.4[4, 45]	20.3[4, 45]			2.7[4, 45]	16.5[4, 45]	3.7[4, 45]	22.4[4, 45]	0.3[4, 45]	2.1[4, 45]	St. Kitts and Nevis
6.0	7.9	4.1	5.4	17.9	23.6	2.3	3.0	7.5	9.9	4.7	6.2	13.4[19]	17.6[19]	St. Lucia
3.5	8.5	2.3	5.5	6.5	15.7	1.4	3.4	[15]	[15]	7.7[15]	18.5[15]	8.3[21]	20.0[21]	St. Vincent
2.0[4, 30]	4.8[4, 30]	1.9[4, 30]	4.5[4, 30]	1.9[4, 30]	4.4[4, 30]	1.4	3.2	[15]	[15]	6.6[4, 15, 30]	15.6[4, 15, 30]	—	—	Samoa
1.7	8.4	0.5	2.4	3.2	16.1	0.7	3.4	2.1	10.6	4.8	24.0	0.7[21]	3.2[21]	San Marino
4.4	10.2	0.8	1.8	8.8	20.5			3.3	7.7	9.2	21.5	—	—	São Tomé and Príncipe
1,084	14.6	308	4.1	1,064	14.3	367	4.9	929	12.5	2,248	30.2	—	—	Saudi Arabia
[13]	[13]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	530[14]	15.1[14]	—	—	Senegal
140	6.3	138	6.2	418	18.7	72	3.2	184	8.2	426	19.0	18	0.8	Serbia[85, 100]
2.4	6.4	3.6	9.5	6.0	16.0	1.0	2.6	[15]	[15]	12.8[15]	34.3[15]	6.4[19]	17.0[19]	Seychelles
[13]	[13]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	365[14]	22.1[14]	—	—	Sierra Leone
115[35, 101]	5.3[35, 101]	216[35, 101]	10.0[35, 101]	425[35, 101]	19.8[35, 101]	348[35, 101]	16.2[35, 101]	148[35, 101]	6.9[35, 101]	400[35, 101]	18.6[35, 101]	116[19, 35, 101]	5.4[19, 35, 101]	Singapore
195	7.4	149	5.7	349	13.3	152	5.8	160	6.1	397	15.1	462[19]	17.6[19]	Slovakia
52	5.4	59	6.2	154	16.1	75	7.8	50	5.2	146	15.2	69[19]	7.2[19]	Slovenia
1.2[77, 105]	3.5[77, 105]	1.9[77, 105]	5.5[77, 105]	4.6[77, 105]	13.6[77, 105]	1.2[77, 105]	3.5[77, 105]	4.3[77, 105]	12.5[77, 105]	8.8[77, 105]	25.7[77, 105]	—	—	Solomon Islands
…	…	[14]	[14]	[15]	[14]	[14]	[14]	[14]	[14]	820[14]	21.0[14]	—	—	Somalia
626	3.9	563	3.5	2,451	15.1	1,079	6.7	[15]	[15]	3,469[15]	21.4[15]	4,581[19]	28.3[19]	South Africa
1,985	10.5	1,027	5.5	3,681	19.6	1,769	9.4	1,097	5.8	3,069	16.3	2,128[19]	11.3[19]	Spain
397[35]	5.2[35]	376[35]	4.9[35]	988[35]	12.9[35]	217[35]	2.8[35]	560[35]	7.3[35]	544[35]	7.1[35]	954[19, 35]	12.5[19, 35]	Sri Lanka
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Sudan, The
5.0	5.9	5.8	6.9	17.3	20.4	4.5	5.4	[15]	[15]	27.3[15]	32.3[15]	14.7[19]	17.4[19]	Suriname
5.8	1.5	[111]	[111]	12.5[111]	3.2[111]	7.5	1.9	[15]	[15]	25.3[15]	6.5[15]	123.9	31.6	Swaziland
239	5.4	[111]	[111]	802[111]	18.0[111]	593	13.3	243	5.5	1,541	34.6	221	5.0	Sweden
247[35]	6.0[35]	241[35]	5.9[35]	718[35]	17.4[35]	675[35]	16.4[35]	218[35]	5.3[35]	1,019[35]	24.7[35]	175[35]	4.2[35]	Switzerland
634	11.6	265	4.9	724	13.3	61	1.1	[15]	[15]	1,014[15]	18.6[15]	638[21]	11.7[21]	Syria
702	7.0	484	4.8	2,283	22.7	727	7.2	369	3.7	1,680	16.7	503[21]	5.0[21]	Taiwan
31	1.6	45	2.3	88	4.6	.	.	28	1.4	296	15.3	54[19]	2.8[19]	Tajikistan
152	0.9	112	0.6	1,263	7.1	26	0.1	[15]	[15]	1,183[15]	6.6[15]	913[21]	5.1[21]	Tanzania
1,614[4, 113]	4.7[4, 113]	988[4, 113]	2.8[4, 113]	7,160[4, 113]	20.6[4, 113]	846[4, 113]	2.4[4, 113]	903[4, 113]	2.6[4, 113]	2,351[4, 113]	6.8[4, 113]	23[4, 113]	0.1[4, 113]	Thailand
[13]	[13]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	331[14]	21.0[14]	—	—	Togo
0.5	1.5	1.2	3.6	2.5	7.4	0.7	1.9	3.7	10.9	3.6	10.7	4.5	13.3	Tonga
69	11.8	42	7.1	95	16.1	44	7.5	[15]	[15]	158[15]	27.0[15]	62[19]	10.6[19]	Trinidad and Tobago
248[57]	10.5[57]	96[57]	4.1[57]	217[57]	9.2[57]	15[57]	0.7[57]	[15]	[15]	444[15, 57]	18.8[15, 57]	412[19, 57]	17.5[19, 57]	Tunisia
965	4.1	1,022	4.3	4,052	17.1	738	3.1	1,177	5.0	2,181	9.2	2,496[19]	10.6[19]	Turkey
108[4, 6]	5.9[4, 6]	91[4, 6]	4.9[4, 6]	116[4, 6]	6.3[4, 6]	13[4, 6]	0.7[4, 6]	29[4, 6]	1.6[4, 6]	33[4, 6]	18.2[4, 6]	29	1.6	Turkmenistan
…	…	…	…	…	…	…	…	…	…	…	…	…	…	Tuvalu
[13]	[13]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	1,559[14]	16.2[14]	—	—	Uganda
1,047	4.6	1,494	6.6	3,071	13.6	855	3.8	1,188	5.3	3,915	17.3	2,060	9.1	Ukraine
362	16.5	134	6.1	528	24.1	89	4.1	248	11.3	298	13.6	—	—	United Arab Emirates
2,111[116]	7.0[116]	1,813[116]	6.0[116]	7,040[116]	23.2[116]	5,928[116]	19.2[116]	[15]	[15]	9,255[15, 116]	30.5[15, 116]	—	—	United Kingdom
10,138	6.9	9,445	6.4	29,727	20.3	23,627	16.1	6,243	4.3	37,662	25.7	8,774[21]	6.0[21]	United States
70[24]	5.6[24]	61[24]	4.9[24]	225[24]	18.2[24]	91[24]	7.3[24]	91[24]	7.4[24]	294[24]	23.7[24]	209[21, 24]	16.8[21, 24]	Uruguay
676	7.5	382	4.3	754	8.4	[3]	[3]	[3]	[3]	2,042[3]	22.7[3]	901	10.0	Uzbekistan
1.5	2.0	1.6	2.1	4.1	5.3	0.7	1.0	2.5	3.3	5.1	6.7	1.3[21]	1.6[21]	Vanuatu
776[24]	6.7[24]	704[24]	6.1[24]	2,585[24]	22.4[24]	482[24]	4.2[24]	[15]	[15]	2,933[15, 24]	25.5[15, 24]	1,844[19, 24]	16.0[19, 24]	Venezuela
[119]	[119]	[119]	[119]	[119]	[119]	[119]	[119]	[119]	[119]	13,200[119]	31.5[119]	700[21]	1.7[21]	Vietnam
4.9	9.6	4.2[55]	8.3[55]	[120]	[120]	2.3	4.6	4.9	9.7	27.1[120]	53.0[120]	4.5[19]	8.8[19]	Virgin Islands (U.S.)
78[121]	9.8[121]	34[121]	4.3[121]	119[121]	14.9[121]	13[121]	1.7[121]	71[121]	9.0[121]	101[121]	12.8[121]	210[19, 121]	26.4[19, 121]	West Bank
…	…	…	…	…	…	…	…	…	…	…	…	…	…	Western Sahara
238	5.8	123	3.0	437	10.7	30	0.7	358	8.7	310	7.6	470[19]	11.5[19]	Yemen
[43]	[43]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	[14]	757[14]	21.6[14]	—	—	Zambia
106	2.1	102	2.1	333	6.7	121	2.4	[15]	[15]	579[15]	11.7[15]	485[19]	9.8[19]	Zimbabwe

agriculture). [70]Unspecified [71]1986. [72]Includes not adequately defined, military personnel, and unemployed not previously employed. [73]Employed within Liechtenstein only, excluding inward commuters. [74]Employed within Liechtenstein only, including inward commuters. [75]Includes resident foreigners; excludes workers from neighbouring countries. [76]Includes resident foreigners and workers from neighbouring countries. [77]1993. [78]Self-employed and unpaid family workers. [79]Includes employers. [80]Excludes 123,000 unemployed, not previously employed. [81]Includes resident foreign workers, excludes *c.* 25,000 nonresident foreign workers (mostly French). [82]Ages 17–64. [83]Finance, real estate includes construction. [84]Ages 16–59. [85]Serbia includes Montenegro. [86]Nauruan population only. [87]Includes 1,987,000 workers age 5–14. [88]Ages 15–64 only. [89]Ages 20–69. [90]Excludes nomadic population. [91]Omanis only. [92]August labour force survey. [93]De facto population. [94]Metropolitan Lima only. [95]Third quarter. [96]Excludes hotels. [97]Includes hotels. [98]Over age 5. [99]All data include cross border workers. [100]Excludes Kosovo. [101]De jure population. [102]Paid workers only. [103]Paid workers as percent of all workers. [104]Unpaid workers as percent of all workers. [105]Employees of monetary sector only. [106]Includes construction. [107]Excludes Northern and Eastern provinces. [108]Official estimate. [109]Paramaribo only. [110]Represents informally employed (mostly in agriculture). [111]Trade, hotels, restaurants includes transportation, communications. [112]Ages 15–62 (male) and 15–57 (female). [113]Over age 12. [114]Ages 16–59 (male) and 16–54 (female). [115]Total of wage earners, unpaid workers, and subsistence workers. [116]March 2004; number of workforce jobs in sector. [117]Urban areas only. [118]Includes not stated (mostly subsistence workers). [119]Services includes construction, transportation, communications; trade, hotels, restaurants; finance, real estate; and public administration, defense. [120]Services includes trade, hotels, restaurants. [121]Includes the Gaza Strip

Crops and livestock

This table provides comparative data for selected categories of agricultural production for the countries of the world. The data are taken mainly from the United Nations Food and Agriculture Organization's (FAO's) annual *Production Yearbook* and the online FAOSTAT statistics database (http://apps.fao.org/default.htm).

The FAO depends largely on questionnaires supplied to each country for its statistics, but, where no official or semiofficial responses are returned, the FAO makes estimates, using incomplete, unofficial, or other similarly limited data. And, although the FAO provides standardized guidelines upon which many nations have organized their data collection systems and methods, persistent, often traditional, variations in standards of coverage, methodology, and reporting periods reduce the comparability of statistics that *can* be supplied on such forms. FAO data are based on calendar-year periods; that is, data for any particular crop refer to the calendar year in which the harvest (or the bulk of the harvest) occurred.

In spite of the often tragic food shortages in a number of countries in recent years, worldwide agricultural production is probably more often underreported than overreported. Many countries do not report complete domestic production. Some countries, for example, report only crops that are sold commercially and ignore subsistence crops produced for family or communal consumption, or barter; others may limit reporting to production for export only, to holdings above a certain size, or represent a sampling only.

Methodological problems attach to much smaller elements of the agricultural whole, however. The FAO's cereals statistics relate, ideally, to weight or volume of crops harvested for dry grain (excluding cereal crops used for grazing, harvested for hay, or harvested green for food, feed, or silage). Some countries, however, collect the basic data they report to the FAO on sown or cultivated areas instead and calculate production statistics from estimates of yield. Millet and sorghum, which in many European and North American countries are used primarily as livestock or poultry feed, may be reportable by such countries as animal fodder only, while elsewhere many nations use the same grains for human consumption and report them as cereals. Statistics for tropical fruits are frequently not compiled by producing countries, and coverage is not uniform, with some countries reporting only commercial fruits and others including those consumed for

Crops and livestock

country	crops															
	cereals				roots and tubers[a]				pulses[b]				fruits[c]		vegetables[d]	
	production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		production ('000 metric tons)	
	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007
Afghanistan	2,379	4,840	1,009	1,721	233	.	16,667	15,000	50	42	1,351	1,071	...	514	...	663
Albania	522	494	3,001	3,731	162	155	14,402	18,890	27	23	925	1,062	145	207	627	723
Algeria	1,872	4,133	1,020	1,391	1,057	1,900	15,556	21,111	33	50	513	731	1,490	2,030	2,781	3,761
American Samoa	...	...	...	...	2	10	3,361	3,575	.	...	...	...	1	1	0.5	2
Andorra	...	.	..	..	.	..	...	...	.	.	.	..	...	...	...	...
Angola	555	731	606	490	4,596	1,012	7,503	9,868	77	110	381	289	440	418	259	271
Antigua and Barbuda	...	0.1	1,602	1,625	.	0.4	4,650	4,588	..	.	...	...	10	2	3	3
Argentina	36,570	41,961	3,336	4,270	3,001	2,465	22,681	22,511	354	376	1,113	1,341	7,413	8,096	3,160	3,177
Armenia	298	267	1,588	1,490	356	540	11,086	16,364	4	4	1,331	1,839	222	386	492	808
Aruba	..	..	..	..	..	.	..	.	.	..	..	..	..	...	..	...
Australia	36,455	22,145	2,107	1,179	1,265	1,155	30,006	35,743	2,581	1,216	1,187	867	3,157	3,341	1,940	1,865
Austria	4,708	4,595	5,746	5,664	700	614	30,002	27,057	81	74	2,439	2,055	1,052	1,150	522	547
Azerbaijan	1,514	1,978	2,353	2,719	490	1,178	10,098	17,557	15	23	2,318	2,209	556	607	1,042	1,632
Bahamas, The	—	0.4	2,017	2,222	1	1	4,117	3,849		0.1	677	675	28	26	20	26
Bahrain	...	...	...			0.04	10,444	20,000		0.01	1,091	1,010	22	17	10	9
Bangladesh	37,985	44,669	3,263	3,828	3,343	4,627	11,681	13,373	379	302	772	807	1,369	1,413	1,794	2,491
Barbados	—	0.3	2,604	2,590	5	4	12,650	13,771	1	1	1,183	1,788	3	1	12	16
Belarus	4,283	7,016	1,819	2,890	7,992	8,744	12,245	21,198	268	202	1,309	1,249	268	542	1,370	2,160
Belgium	816[1]	2,519	2,709[1]	7,887	1,002[1]	2,878	15,045[1]	42,253	5[1]	5	1,551[1]	3,419	420	604	1,124	1,801
Belize	56	56	2,776	2,568	3	4	9,723	11,351	8	7	1,277	954	357	445	9	10
Benin	970	1,221	1,111	1,258	4,153	4,821	10,779	12,629	97	91	710	848	206	120	332	373
Bermuda	...	..	..	..	1	1	20,088	22,222	.	.	...		0.3	0.3	3	3
Bhutan	150	196	1,483	2,338	56	79	10,750	8,876	2	8	800	2,012	56	79	7	26
Bolivia	1,221	1,332	1,579	1,754	1,417	1,233	7,041	6,101	33	56	1,008	1,225	1,238	818	538	328
Bosnia and Herzegovina	1,146	1,001	3,169	3,223	374	387	8,107	9,378	17	21	1,162	1,516	83	275	700	759
Botswana	22	48	146	555	13	93	7,193	7,750	16	18	502	522	10	600	17	16
Brazil	50,148	68,832	2,843	3,518	25,743	31,475	13,674	14,558	2,788	3,347	696	848	35,602	36,818	7,265	9,313
Brunei	—	1	1,613	1,200	2	2	4,279	4,411		.			6	2	8	10
Bulgaria	5,526	3,180	2,883	2,072	521	291	10,249	12,956	28	16	664	1,690	687	489	1,488	610
Burkina Faso	2,698	3,736	913	1,148	88	95	7,338	7,293	328	521	3,550	655	73	11	231	241
Burundi	261	279	1,288	1,289	1,518	1,643	6,943	7,030	255	255	904	880	1,609	1,600	240	250
Cambodia	4,201	6,375	2,053	2,404	227	2,078	9,344	19,099	16	60	629	784	321	249	471	487
Cameroon	1,313	1,567	1,863	1,338	3,524	3,840	9,062	5,942	254	295	1,034	1,068	2,000	2,215	1,259	1,349
Canada	49,476	48,773	2,782	2,988	4,352	4,971	27,086	31,278	3,747	4,175	1,771	1,804	819	564	2,340	2,386
Cape Verde	27	12	865	800	10	12	8,477	9,111	4	5	108	128	15	13	15	19
Cayman Islands	.	..	...	...	...	2,950		6			..	..	.	0.4	...	0.1
Central African Republic	184	201	1,086	1,092	1,038	1,008	3,711	3,570	31	27	968	900	258	244	65	64
Chad	1,161	3,083	609	1,211	654	697	6,983	7,283	92	122	624	589	113	51	95	99
Chile	2,624	3,694	4,453	6,409	1,072	1,455	17,190	22,305	85	108	1,428	2,046	4,007	5,309	2,607	2,873
China	420,306	460,353	4,835	5,433	187,063	180,312	17,472	17,813	4,841	6,198	1,401	1,752	66,086	94,418	321,830	448,983
Colombia	3,631	3,851	3,248	3,797	4,995	4,450	13,046	13,355	155	146	1,060	1,179	6,553	7,439	1,776	1,593
Comoros	21	21	1,324	1,313	72	77	5,142	5,390	13	14	992	992	63	65	6	4
Congo, Dem. Rep. of the	1,624	1,522	782	773	16,681	15,538	7,948	7,931	192	178	581	503	2,426	2,384	440	467
Congo, Rep. of the	8	10	782	798	884	974	8,846	8,992	8	9	773	769	219	198	40	98
Costa Rica	288	167	3,857	2,982	217	409	13,703	13,703	16	11	557	750	3,921	4,027	368	469
Côte d'Ivoire	2,019	1,396	1,460	1,710	5,041	7,415	5,549	6,719	8	9	668	692	2,026	2,252	585	643
Croatia	3,017	2,607	4,436	4,648	651	215	9,892	16,814	17	8	1,457	2,344	533	376	472	300
Cuba	841	895	2,720	2,881	1,224	1,356	7,001	7,330	94	71	932	922	2,304	1,932	2,217	2,793
Cyprus	101	70	1,788	1,102	136	138	21,254	24,510	1	0.9	1,377	1,065	277	220	147	138
Czech Republic	6,914	7,066	4,256	4,526	1,338	785	20,597	24,589	99	64	2,341	2,378	486	446	476	298
Denmark	9,211	8,220	6,058	5,676	1,563	1,626	40,807	39,456	148	25	3,378	3,192	42	69	258	257
Djibouti	1,625	0.01	..	1,667		..	..	.		2	...	273	3	2	24	26
Dominica	—	0.2	1,308	1,448	26	27	9,197	9,291	.	0.1	417	421	66	64	6	7
Dominican Republic	662	750	4,146	4,310	266	236	7,709	7,488	53	54	840	910	1,129	1,450	443	542
East Timor	137	105	1,941	1,103	117	111	4,457	4,054	4	5	826	750	6	7	17	18
Ecuador	1,800	2,226	2,086	2,698	504	482	6,690	5,872	37	49	518	461	7,763	7,198	303	373
Egypt	19,605	22,059	7,277	7,663	2,148	3,041	23,923	25,277	440	412	2,727	3,058	7,037	7,701	14,367	16,041
El Salvador	798	1,050	2,105	2,926	88	31	16,896	6,641	70	99	879	1,049	262	376	146	323
Equatorial Guinea	..	..	.	..	105	105	2,848	2,853	.	.	.	.	51	51	...	...
Eritrea	216	177	594	454	127	101	3,211	2,623	51	36	587	455	4	2	28	23

subsistence as well. Figures on wild fruits and herries are seldom included in national reports at all. FAO vegetable statistics include vegetahles and melons grown for human consumption only. Some countries do not make this distinction in their reports, and some exclude the production of kitchen gardens and small family plots, although in certain countries, such small-scale production may account for 20 to 40 percent of total output.

Livestock statistics may he distorted by the timing of country reports. Ireland, for example, takes a livestock enumeration in December that is reported the following year and that appears low against data for otherwise comparable countries because of the slaughter and export of animals at the close of the grazing season. It balances this, however, with a June enumeration, when numhers tend to he high. Milk production as defined by the FAO includes whole fresh milk, excluding milk sucked by young animals but including amounts fed hy farmers or ranchers to livestock, but national practices vary. Certain countries do not distinguish between milk cows and other cattle, so that yield per dairy cow must be estimated. Some countries do not report egg production statistics (here given of metric tons), and external estimates must be based on the numbers of chickens and reported or assumed egg-laying rates. Other countries report egg production by number, and this must be converted to weight, using conversion factors specific to the makeup by species of national poultry flocks.

Metric system units used in the tahle may be converted to English system units as follow:

metric tons × 1.1023 = short tons
kilograms × 2.2046 = pounds
kilograms per hectare × 0.8922 = pounds per acre.

The notes that follow, keyed hy references in the tahle headings, provide further definitional information.

a. Includes such crops as potatoes and cassava.
h. Includes heans and peas harvested for dry grain only. Does not include green heans and green peas.
c. Excludes melons.
d. Includes melons, green heans, and green peas.
e. From cows only.
f. From chickens only.

livestock														country
cattle		sheep		hogs		chickens		milk[e]				eggs[f]		
stock ('000 head)		stock ('000 head)		stock ('000 head)		stock ('000 head)		production ('000 metric tons)		yield (kg/animal)		production (metric tons)		
1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	
2,959	4,500	15,563	10,000	—	.	7,000	8,400	1,633	2,035	1,103	904	18,000	18,300	Afghanistan
719	663	1,929	1,826	97	150	4,000	4,600	803	917	1,823	2,120	22,000	26,700	Albania
1,596	1,588	17,634	19,500	6	6	108,000	124,000	1,173	1,243	1,300	1,300	101,000	170,000	Algeria
...	0.1	—	..	10	11		40		22	800	733		0.03	American Samoa
...	...	.	.	.	..	..			..		.	.		Andorra
4,014	4,160	345	340	800	782	7,000	6,900	194	195	485	481	4,000	4,300	Angola
13	15	18	19	5	3	.	110	5	5	964	973		0.3	Antigua and Barbuda
48,861	50,750	13,588	12,450	4,200	2,270	109,000	96,000	10,212	11,000	4,139	4,773	316,000	480,000	Argentina
478	620	501	587	75	153	4,000	3,870	446	613	1,730	1,996	21,000	29,960	Armenia
...	...	.	—		—		—							Aruba
27,296	28,400	114,969	100,000	2,628	2,430	89,000	75,000	10,850	10,350	5,006	5,133	144,000	166,000	Australia
2,166	1,998	357	312	3,556	3,213	13,000	15,000	3,330	3,145	5,029	5,955	88,000	90,000	Austria
1,965	2,217	5,321	7,481	21	20	14,000	18,000	1,033	1,301	1,073	1,069	30,000	51,574	Azerbaijan
1	0.8	6	7	5	5	3,000	3,000	1	0.7	1,000	1,000	1,000	0.9	Bahamas, The
12	9	17	41	—		..	470	14	11	1,970	1,615	3,000	2,450	Bahrain
23,884	25,300	1,132	1,560	—		140,000	142,000	777	818	206	205	133,000	134,500	Bangladesh
20	11	13	11	19	20	3,000	3,500	8	7	1,766	1,792	1,000	2,050	Barbados
4,411	3,989	96	52	3,565	3,642	30,000	27,900	4,688	5,882	2,479	3,907	182,000	179,000	Belarus
1,132[1]	2,640	53[1]	156	2,544[1]	6,270	16,000[1]	30,370	1,216[1]	3,000	1,791[1]	5,981	75,000[1]	223,620	Belgium
56	59	4	6	25	22	1,000	1,600	1	4	627	1,014	2,000	2,850	Belize
1,482	1,900	660	811	315	344	10,000	15,050	23	30	130	130	7,000	10,845	Benin
1	0.6	—		1	600		45	1	1	3,787	3,857		280	Bermuda
355	385	28	18	49	35	.	230	41	41	257	249		240	Bhutan
6,579	7,515	8,743	8,990	2,786	2,490	78,000	80,600	211	320	1,579	1,616	40,000	59,300	Bolivia
448	515	645	1,000	345	712	2,000	13,300	536	587,000	1,828	2,003	15,000	16,100	Bosnia and Herzegovina
1,570	3,100	370	300	6	8	4,000	4,000	100	102	350	352	3,000	3,150	Botswana
170,295	207,170	14,608	15,600	31,669	34,080	843,000	999,100	20,396	25,327	1,144	1,224	1 505,000	1,690,000	Brazil
2	1	2	3	1	2	10,000	15,500		0 4		412	5,000	7,350	Brunei
664	628	2,536	1,635	1,459	1,013	15,000	18,000	1,341	1,148	3,170	3,280	84,000	99,000	Bulgaria
4,767	8,764	6,722	7,321	621	2,763	22,000	27,150	169	193	176	110	18,000	47,530	Burkina Faso
321	400	215	250	67	70	4,000	4,350	20	17	350	303	3,000	3,000	Burundi
2,896	3,500	—	..	2,079	2,790	15,000	15,200	20	24	170	170	12,000	13,300	Cambodia
5,761	6,000	3,734	3,800	1.232	1,350	28,000	31,000	125	130	500	500	13,000	13,400	Cameroon
13,340	14,155	819	879	12,970	13,810	157,000	165,000	8,120	8,000	7,273	7,962	372,000	392,199	Canada
22	24	9	11	195	217	...	505	5	6	647	631	2,000	1,950	Cape Verde
..	1	.	.	.	0 4	..	0.6						5	Cayman Islands
3,130	3,378	222	260	678	805	4,000	4,750	63	65	265	262	1,000	1,480	Central African Republic
5,852	6,820	2,374	2,982	22	27	5,000	5,240	158	184	270	270	4,000	4,725	Chad
4,061	4,350	4,117	3,420	2,479	3,480	76,000	98,000	2,077	2,450	1,380	1,369	110,000	124,500	Chile
104,154	116,861	130,536	171,961	440,384	501,583	3,605,000	4,511,613	8.916	32,820	1,807	3,109	19,391,000	25,846,300	China
24,412	26,000	2,247	3,400	2,147	1,800	104,000	150,000	5,791	6,800	1,016	1,007	339,000	500,000	Colombia
51	45	20	21	—			500	5	5	500	500	1,000	776	Comoros
823	758	925	900	1,050	957	21,000	19,800	5	5	825	833	7,000	6,000	Congo, Dem. Rep. of the
87	110	102	99	46	46	2,000	2,400	1	1	500	500	1,000	1,200	Congo, Rep. of the
1,358	1,000	3	3	463	550	17,000	19,500	737	790	1,404	1,386	42,000	49,000	Costa Rica
1,409	1,500	1,451	1,523	336	345	30,000	33,000	25	25	143	127	32,000	35,000	Côte d'Ivoire
435	483	519	680	1,276	1,489	11,000	7,050	628	860	2,426	3,209	48,000	48,200	Croatia
4.185	3,750	2,786	2,765	1,549	1,765	28,000	30,000	618	420	1,174	1,200	73,000	105,000	Cuba
55	58	240	270	419	460	3,000	3,100	140	153	5,854	5,885	11,000	9,500	Cyprus
1,604	1,390	87	150	3,761	2,741	19,000	14,500	2,797	2,700	5,447	6,470	194,000	87,000	Czech Republic
1,887	1,579	147	210	12,052	13,599	20,000	16,500	4,643	4,600	7,333	8,288	78,000	78,000	Denmark
297	297	466	466	—	.		..	8	8	350	349			Djibouti
13	14	8	8	5	5	..	190	6	6	910	904	.	225	Dominica
2,026	2,210	106	123	548	580	45,000	47,500	410	755	1,355	1,423	64,000	80,219	Dominican Republic
174	171	26	25	331	346	1,000	2,200		.			1,000	1,600	East Timor
4,750	5,050	2,214	1,050	2,801	1,300	125,000	110,000	2,124	2,600	1,916	2,600	67,000	77,500	Ecuador
3,583	4,550	4,510	5,180	29	30	89,000	96,000	1,702	2,250	1,195	1,275	177,000	240,000	Egypt
1,136	1,380	5	5	195	451	8,000	14,748	377	495	1,327	1,271	58,000	70,000	El Salvador
5	5	37	38	6	6	..	320	..	..	.	..		190	Equatorial Guinea
2,150	1,960	2,100	2,120	—		1,000	1,380	50	39	195	196	2,000	2,000	Eritrea

Crops and livestock (continued)

country	crops															
	cereals				roots and tubers[a]				pulses[b]				fruits[c]		vegetables[d]	
	production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		production ('000 metric tons)	
	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007
Estonia	552	860	1,801	3,029	406	176	14,590	23,840	5	9	1,510	1,898	23	6	58	62
Ethiopia	8,654	13,666	1,146	1,720	4,436	5,600	7,509	7,977	978	1,315	827	1,027	656	647	773	1,010
Faroe Islands	.	.	.	.	2	1	13,636	14,000	.	.	.	.	.	.	.	.
Fiji	16	16	2,541	2,673	75	87	10,875	10,655	1	1	1,200	1,200	14	13	20	22
Finland	3,548	4,181	3,061	3,695	770	702	24,435	25,700	10	11	1,960	2,432	18	15	234	245
France	63,423	58,707	7,082	6,422	6,386	6,521	38,665	42,649	2,220	931	4,548	3,711	11,275	9,577	8,749	5,819
French Guiana	21	23	2,619	2,864	14	14	5,906	5,854		.	.	.	15	13	25	25
French Polynesia	.	.	.	.	12	10	12,256	12,011		.	.	.	9	6	7	7
Gabon	29	34	1,651	1,663	442	457	5,712	5,811		0 2	667	733	292	290	35	35
Gambia, The	176	281	1,337	1,300	7	8	3,000	3,000	3	3	247	244	4	700	9	10
Gaza Strip[2]	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Georgia	631	226	1,743	1,381	389	175	11,150	5,797	7	9	770	1,073	494	240	480	199
Germany	46,473	42,295	6,734	6,419	12,547	11,605	42,057	42,000	606	331	3,398	2,829	5,346	2,484	3,798	2,605
Ghana	1,674	1,852	1,264	1,328	13,456	14,953	10,713	10,490	15	15	116	83	2,454	3,592	656	647
Greece	4,692	3,808	3,681	3,601	898	838	19,244	23,343	42	41	1,708	1,630	4,219	3,474	4,302	3,595
Greenland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Grenada	—	0.3	1,000	1,000	4	4	5,274	5,307	1	0.6	983	969	17	15	3	3
Guadeloupe		—	.	—	20	12	11,681	10,311		0 1	2,600	2,667	143	96	32	41
Guam		0.03	2,000	2,333	2	3	14,904	14,611	.	.	.	.	2	620	5	6
Guatemala	1,165	1,195	1,778	1,660	235	317	13,922	19,543	126	137	839	833	1,783	2,124	937	1,015
Guernsey	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guinea	1,015	2,601	1,369	1,437	1,204	1,410	5,735	6,472	58	62	853	873	1,008	1,087	479	507
Guinea-Bissau	161	203	1,052	1,472	98	116	7,731	7,607	2	2	622	640	74	63	25	28
Guyana	505	479	3,843	4,435	48	41	10,243	8,182	1	1	1,137	715	57	66	47	42
Haiti	423	380	909	874	756	750	3,924	3,849	74	66	665	641	992	940	214	200
Honduras	589	615	1,325	1,513	37	48	7,345	6,655	66	75	653	708	1,004	1,699	293	652
Hong Kong	.	.	.	.	.	.	33,333	.	.	.	.	.	.	.	.	.
Hungary	12,158	14,047	4,408	4,781	990	531	21,589	20,917	81	53	1,943	2,530	1,614	1,375	1,792	1,754
Iceland	.	.	.	.	10	13	13,846	‡8,571	.	.	.	.	—	—	3	4
India	238,070	252,121	2,374	2,523	31,438	34,860	18,719	17,868	13,161	14,500	608	622	43,371	51,142	73,993	72,545
Indonesia	60,484	69,430	3,989	4,446	19,536	22,803	11,989	15,141	286	321	896	1,029	8,638	11,615	6,765	8,678
Iran	14,002	23,097	1,937	2,580	3,526	5,240	20,854	24,952	530	1,066	515	604	12,341	12,102	11,893	15,993
Iraq	1,382	2,710	530	723	633	740	15,652	16,444	77	103	621	558	.	934	.	2,691
Ireland	2,117	1,969	7,547	7,076	497	455	33,024	36,976	12	12	4,891	4,920	25	18	220	225
Isle of Man	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	184	273	2,237	3,222	403	603	35,354	35,119	12	31	1,943	3,030	1,293	1,310	1,643	1,560
Italy	20,588	20,500	4,963	5,256	2,058	1,858	24,632	25,322	121	172	1,545	1,898	18,087	17,891	15,788	13,587
Jamaica	2	2	1,186	1,177	237	210	16,600	16,117	4	2	1,058	1,084	446	415	191	208
Japan	12,444	12,029	6,121	6,033	4,488	4,113	26,227	26,882	101	86	1,733	1,933	4,034	3,290	12,647	11,938
Jersey	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Jordan	44	81	2,042	1,298	98	170	26,417	34,000	4	4	1,273	1,000	232	293	828	1,301
Kazakhstan	13,887	20,495	1,155	1,332	1,857	2,415	11,601	15,579	25	56	1,166	1,037	201	224	1,985	2,865
Kenya	2,893	3,755	1,469	1,857	2,063	2,481	8,430	9,061	462	737	435	509	2,238	2,255	1,611	1,664
Kiribati	.	.	.	.	9	10	8,117	7,704	.	.	.	.	6	6	6	6
Korea, North	3,554	4,244	2,754	3,355	2,237	2,190	10,396	10,092	290	265	853	757	1,360	880	3,756	3,756
Korea, South	7,606	6,269	6,455	6,106	1,011	885	23,211	22,692	30	13	1,091	1,245	2,608	2,578	11,938	11,222
Kosovo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Kuwait	3	4	2,260	2,690	25	24	31,873	27,647	.	.	.	.	11	15	170	205
Kyrgyzstan	1,653	1,419	2,674	2,500	1,057	1,374	15,309	15,701	20	72	1,749	1,576	165	185	832	909
Laos	2,321	3,320	3,000	3,551	204	331	7,869	9,324	15	18	979	1,034	191	168	539	782
Latvia	888	1,535	2,036	2,940	719	642	13,870	15,891	4	2	1,574	1,600	49	37	132	157
Lebanon	123	168	2,355	2,635	272	491	20,655	25,784	13	12	1,368	1,361	892	753	924	753
Lesotho	198	73	930	463	88	96	16,560	17,143	15	8	706	497	13	13	18	20
Liberia	175	155	1,224	1,290	488	613	6,797	5,713	3	4	591	617	161	178	76	89
Libya	217	209	643	637	174	196	21,497	19,600	20	20	1,401	1,397	321	366	862	906
Liechtenstein	.	.	.	.	.	.	.	.	.	.	.	.	0.2	0.2	.	.
Lithuania	2,350	3,017	2,433	3,007	1,518	576	13,604	10,911	63	56	1,540	1,386	132	55	326	250
Luxembourg	...[1]	151	. [1]	5,162	. [1]	20	.. [1]	33,667	...[1]	1	...[1]	2,233	19	23	11	0.8
Macau	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Macedonia	559	364	2,596	2,365	167	193	12,677	14,051	28	24	1,977	2,344	361	360	535	530
Madagascar	2,756	4,109	1,958	2,511	3,472	3,695	6,662	7,203	96	118	952	1,056	883	769	348	344
Malawi	2,336	3,637	1,506	1,953	4,566	4,050	12,243	13,967	226	260	520	496	518	720	259	310
Malaysia	2,153	2,314	3,028	3,373	467	502	9,333	9,526	.	.	.	.	1,193	1,013	479	511
Maldives	—	0 4	933	3,917	8	8	4,475	4,442	.	0.1	778	750	14	13	30	29
Mali	2,596	3,510	1,056	1,114	103	427	11,174	19,234	126	88	423	373	31	370	303	531
Malta	11	11	4,015	4,500	32	25	18,056	35,714	1	2	2,556	2,612	7	9	61	59
Marshall Islands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Martinique	.	.	.	.	22	29	11,101	11,098	1	0.9	.	354	336	338	31	31
Mauritania	166	155	788	844	6	7	2,240	2,367	35	34	450	441	24	22	6	4
Mauritius		0 5	7,002	7,667	16	14	21,413	21,774	.	.	.		14	17	84	81
Mayotte	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mexico	28,822	32,362	2,782	3,091	1,733	1,694	23,117	24,366	1,363	1,689	749	897	13,378	15,041	9,698	11,699
Micronesia	.	0.2	.	1,193	.	15	.	8,686	.	.	.	.	.	2	.	3
Moldova	2,197	885	2,322	1,007	348	199	6,345	563	55	37	1,036	460	787	866	467	318
Monaco	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mongolia	151	115	716	943	60	114	7,132	9,989	1	1	838	964	0.2	0.1	43	77
Montenegro	..	14	..	2,979	..	130	..	13,000	..	..	..	..	..	70	..	115
Morocco	3,485	2,541	669	521	1,137	1,459	18,341	24,072	149	270	406	649	2,495	2,653	3,369	4,867
Mozambique	1,591	2,173	887	942	5,716	7,502	6,238	7,454	202	205	479	477	326	199	135	117
Myanmar (Burma)	21,818	33,720	3,160	3,805	402	778	9,749	13,076	1,800	2,704	733	982	1,455	630	3,382	4,068
Namibia	101	114	335	412	258	290	8,519	8,286	8	9	1,121	1,125	16	9	17	15
Nauru	.	.	.	.	.	.	.	.	.	.	.	.	0.3	0.3	0.5	0.5
Nepal	7,055	7,329	2,140	2,218	1,297	2,053	9,030	11,500	219	252	768	845	567	494	1,508	2,374
Netherlands, The	1,576	1,506	7,491	6,940	7,788	7,200	45,176	44,721	15	13	4,320	4,063	667	642	3,632	4,157
Netherlands Antilles																

livestock														country
cattle		sheep		hogs		chickens		milk[e]				eggs[f]		
stock ('000 head)		stock ('000 head)		stock ('000 head)		stock ('000 head)		production ('000 metric tons)		yield (kg/animal)		production (metric tons)		
1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	
276	245	29	63	304	346	2,000	1,609	646	605	4,682	5,589	17,000	10,810	Estonia
34,518	43,000	11,541	23,700	25	28	32,000	36,000	1,235	1,580	201	201	32,000	38,000	Ethiopia
2	2	68	68	—	..	.	.	.	..	.	..	..	..	Faroe Islands
335	315	7	6	139	145	4,000	4,300	56	58	1,990	1,966	3,000	3,600	Fiji
1,060	929	101	110	1,303	1,435	6,000	5,400	2,436	2,300	6,702	7,706	58,000	57,000	Finland
20,346	19,359	9,754	8,499	14,998	14,736	231,000	161,500	24,931	23,705	5,849	6,240	1,036,000	765,000	France
9	9	3	3	10	11		190	—	270	583	587		460	French Guiana
10	12	—	0.4	34	27		200	1	1	1,998	2,077	2,000	1,960	French Polynesia
36	36	197	196	213	213	3,000	3,100	2	2	250	250	2,000	2,000	Gabon
350	334	115	150	12	22	1,000	710	8	8	175	175	1,000	830	Gambia, The
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Gaza Strip[2]
1,117	1,319	541	816	407	510	8,000	5,920	647	734	1,046	991	21,000	15,600	Georgia
14,723	12,601	2,746	2,444	26,021	26,530	108,000	108,000	28,285	27,900	6,081	6,923	887,000	800,000	Germany
1,302	1,427	2,724	3,420	323	239	20,000	31,000	34	37	130	130	21,000	26,370	Ghana
588	625	9,050	8,803	969	950	29,000	31,200	780	780	3,247	3,647	114,000	100,000	Greece
..	0.02	21	20	—				.						Greenland
4	4	13	13	6	3		270	1	0.5	800	800	1,000	920	Grenada
85	73	3	3	19	30		475	—	0.07	500	500	2,000	1,650	Guadeloupe
..	0.1	—	..	5	5		210			.		1,000	750	Guam
2,500	2,800	270	265	732	212	24,000	27,000	263	292	712	749	81,000	85,000	Guatemala
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Guernsey
2,836	4,181	835	1,331	56	82	12,000	17,830	71	93	185	185	12,000	20,895	Guinea
509	550	283	321	347	391	1,000	1,700	13	15	170	170	1,000	1,300	Guinea-Bissau
117	110	130	130	15	14	11,000	21,500	30	30	1,000	1,000	1,000	465	Guyana
1,390	1,450	147	153	934	1,000	5,000	5,500	40	45	250	250	4,000	4,450	Haiti
1,790	2,510	14	15	494	490	17,000	19,000	576	1,800	1,001	3,482	42,000	41,000	Honduras
2	.	—	.	100	.	1,000	.	—	.	2,273	.	.	.	Hong Kong
845	702	991	1,298	5,216	3,987	29,000	30,303	2,131	1,800	5,740	6,691	178,000	164,000	Hungary
72	65	477	450	44	42		210	106	115	3,893	4,600	2,000	2,800	Iceland
217,773	177,840	57,900	64,269	17,000	14,000	553,000	505,000	33,733	42,140	943	1,109	1,767,000	2,670,000	India
11,140	11,366	7,351	9,860	6,089	6,756	814,000	1,345,213	471	637	1,370	1,686	620,000	1,095,320	Indonesia
8,273	9,776	53,900	52,220	—	—	250,000	420,000	4,676	6,450	1,248	1,500	577,000	880,000	Iran
1,350	1,500	6,067	6,200	—		23,000	33,000	297	400	727	666	12,000	50,000	Iraq
6,853	6,710	5,311	5,471	1,768	1,588	12,000	13,000	5,221	5,200	4,402	4,751	32,000	33,000	Ireland
..														Isle of Man
393	440	373	455	139	205	28,000	37,500	1,203	1,180	9,761	9,833	88,000	94,650	Israel
7,010	6,110	10,074	8,227	8,538	9,281	102,000	100,000	11,827	11,000	5,534	6,064	713,000	670,000	Italy
400	430	1	1	180	85	12,000	12,500	28	22	998	957	7,000	7,300	Jamaica
4,592	4,398	11	10	9,824	9,759	295,000	288,511	8,419	8,140	6,737	7,454	2,530,000	2,525,000	Japan
.					.									Jersey
66	70	1,666	2,100	—		23,000	25,000	155	205	3,461	5,857	49,000	45,100	Jordan
4,021	5,660	8,785	13,047	984	1,305	18,000	28,100	3,686	5,007	1,958	1,949	94,000	147,700	Kazakhstan
12,080	12,500	8,023	9,300	320	325	25,000	30,000	2,485	3,500	565	565	60,000	53,000	Kenya
..	..	—	..	10	13		480						270	Kiribati
575	577	186	173	3,076	3,300	15,000	22,000	89	90	2,311	2,195	108,490	142,000	Korea, North
2,191	2,580	1	1	8,266	9,850	100,000	121,000	2,279	2,140	8,410	9,345	490,000	545,000	Korea, South
..	..	..	.							.	..	.	.	Kosovo
21	28	574	900	—		30,000	32,500	35	40	5,414	5,333	21,000	22,000	Kuwait
930	1,117	3,257	3,198	104	79	3,000	4,300	1,077	1,192	2,135	2,038	12,000	20,830	Kyrgyzstan
1,106	1,337	—	.	1,390	2,260	13,000	21,900	6	7	200	200	10,000	12,800	Laos
393	377	28	41	407	417	3,000	3,830	822	839	3,943	4,598	25,000	39,000	Latvia
77	77	354	340	26	15	31,000	35,000	158	180	4,063	4,091	44,000	47,000	Lebanon
557	695	879	1,025	64	66	2,000	1,850	24	25	250	245	1,000	1,600	Lesotho
36	38	210	230	127	173	4,000	5,920	1	0.7	130	130	4,000	4,750	Liberia
133	130	4,466	4,500	—		25,000	25,000	136	130	1,208	1,204	56,000	60,000	Libya
6	6	3	3	3	3			12	12	4,444	4,259			Liechtenstein
856	839	14	36	988	1,127	6,000	9,243	1,723	1,997	3,541	5,005	41,000	52,900	Lithuania
...[1]	192	[1]	9	[1]	97	. [1]	79,150	[1]	313	[1]	6,914	. [1]	1,230	Luxembourg
..	..	..	..	.		1,000						1,000		Macau
267	254	1,285	818	209	255	3,000	2,264	210	385	2,218	2,968	23,000	17,980	Macedonia
10,406	9,600	602	715	1,517	1,610	22,000	25,000	533	520	281	306	15,000	14,900	Madagascar
741	752	110	116	450	458	15,000	15,300	35	36	458	461	19,000	19,500	Malawi
727	829	146	103	1,912	2,290	129,000	190,000	31	39	367	430	397,000	465,000	Malaysia
..	..	..	..	.	..	.	.	..				.		Maldives
6,580	7,917	6,563	8,595	66	71	24,000	33,000	162	194	245	245	12,000	10,500	Mali
19	19	14	12	77	74	1,000	1,000	48	41	5,374	5,334	6,000	7,000	Malta
..	..	..	..	.	.			.						Marshall Islands
25	25	34	15	35	20	.	590	2	2	764	777	2,000	1,500	Martinique
1,520	1,692	8,040	8,850	—	..	4,000	4,200	115	121	350	345	5,000	5,270	Mauritania
27	29	12	12	11	13	8,000	10,000	5	4	1,201	1,000	5,000	5,250	Mauritius
..	..	.	..	..	.	.	.	.	.	.	.	.	.	Mayotte
30,446	29,000	6,053	7,500	16,473	15,500	475,000	290,000	9,220	9,599	1,362	5,962	1,772,000	2,300,000	Mexico
14	14	—	.	32	33	...	190	...					175	Micronesia
423	299,105	929	835	646	532	13,000	22,390	561	573	2,221	2,774	32,000	39,300	Moldova
..	..	..	..	..	.			...	.			..	..	Monaco
3,549	2,168	14,587	14,815	17	7		31	378	335	390	386	—	520	Mongolia
..	10	.	5	..	13		449	.	180		1,958		2,300	Montenegro
2,629	2,700	17,016	17,250	8	8	137,000	140,000	1,160	1,500	913	1,095	238,000	168,000	Morocco
1,317	1,330	125	126	179	182	28,000	28,500	60	61	170	168	14,000	14,000	Mozambique
10,988	12,500	390	570	3,983	6,300	46,000	94,500	499	900	392	600	78,000	212,000	Myanmar (Burma)
2,436	2,500	2,330	2,700	21	25	2,000	3,500	88	110	401	458	2,000	1,900	Namibia
..	..	—	.	3	3	.	5	.	.	.	.	.	16	Nauru
7,012	7,044	852	814	872	989	19,000	23,925	336	386	400	427	23,000	26,600	Nepal
4,108	3,730	1,335	1,388	13,253	11,600	103,000	91,000	11,207	10,750	7,252	7,450	659,000	610,000	Netherlands, The
1	0.7	8	9	2	3		140	—	0.5	1,271	1,286	1,000	530	Netherlands Antilles

Crops and livestock (continued)

country	crops															
	cereals				roots and tubers[a]				pulses[b]				fruits[c]		vegetables[d]	
	production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		production ('000 metric tons)	
	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007
New Caledonia	4	7	3,732	4,121	21	22	5,739	6,729	..	0 023	644	719	3	1	4	7
New Zealand	888	945	6,309	6,841	517	524	40,468	38,778	52	38	3,036	2,880	1,016	1,002	985	1,176
Nicaragua	693	963	1,646	1,959	83	155	10,200	9,602	162	189	733	821	226	212	28	36
Niger	2,714	3,840	357	424	165	169	18,765	18,969	370	1,023	117	212	49	8	644	710
Nigeria	21,296	30,850	1,123	1,453	65,512	92,718	9,298	10,365	2,193	3,203	421	692	8,962	8,524	7,855	9,869
Northern Mariana Islands	.	.	...	...	..	..	..	..	..	..	..	..	..	...	...	...
Norway	1,234	1,250	3,751	3,919	351	380	23,218	27,143	...	—	.	—	27	29	145	169
Oman	6	14	2,300	3,131	16	6	29,573	27,500	...		...		343	300	185	207
Pakistan	28,421	35,553	2,286	2,756	2,227	3,122	16,625	19,190	931	1,189	588	728	5,120	6,137	4,693	5,509
Palau	.	..	.	.	..	.	.	..	...	..	...	...	..	...	...	..
Panama	303	364	2,262	1,976	69	95	9,652	10,096	8	9	395	365	837	642	111	274
Papua New Guinea	11	12	4,052	3,727	1,360	1,502	7,485	7,694	3	3	500	500	1,669	890	474	501
Paraguay	1,205	1,845	2,034	2,215	3,422	5,267	13,969	15,438	56	95	784	826	501	445	306	342
Peru	3,568	4,252	3,154	3,643	4,463	4,960	10,568	11,575	170	218	1,032	1,110	3,260	3,814	1,933	2,326
Philippines	16,917	22,730	2,571	3,261	2,576	2,713	6,625	7,179	57	58	737	786	10,694	10,340	4,895	5,879
Poland	25,017	27,365	2,850	3,256	21,179	11,221	17,107	19,700	264	239	1,975	1,972	2,682	1,682	5,695	5,567
Portugal	1,528	1,103	2,747	3,496	1,297	668	15,277	14,881	22	23	589	673	1,902	1,893	2,337	2,342
Puerto Rico	1	0 6	1,737	1,897	10	11	4,156	8,523	1	0 3	1,395	806	185	197	36	46
Qatar	6	7	3,722	3,562		0.05	8,667	9,000	..	.	...	...	17	22	50	25
Réunion	17	14	6,724	6,902	7	7	21,486	22,586	1	1	759	759	53	31	57	54
Romania	15,462	7,461	2,717	1,604	3,808	3,498	13,767	12,370	58	27	1,452	718	2,375	1,510	3,465	3,813
Russia	67,190	80,495	1,651	1,839	33,429	36,784	10,369	12,850	1,203	1,301	1,416	1,151	2,944	4,091	13,342	16,516
Rwanda	234	341	861	1,049	2,477	3,104	5,709	6,967	213	247	635	662	2,369	2,580	225	267
St. Kitts and Nevis	.	.			1	1	2,864	2,809	.	0.2	1,000	1,000	1	1	0.7	0 8
St. Lucia	.	—	..	—	11	7	3,987	3,939	..	0.05	2,000	2,000	127	38	1	1
St. Vincent and the Grenadines	1	0 1	3,000	3,190	12	14	5,584	5,777		0.4	1,000	1,000	52	61	4	4
Samoa		..	.	.	21	24	4,782	5,090		..	...	.	42	38	0.9	1
San Marino			...	...	..	..	..	..		.	.	.	...	...	...	
São Tomé and Principe	2	3	2,285	2,308	33	37	8,902	9,080	.		...	..	28	27	6	7
Saudi Arabia	2,343	3,089	3,635	4,526	376	570	25,980	23,750	8	8	1,835	1,822	1,184	1,277	1,604	2,103
Senegal	1,040	885	839	823	133	228	5,203	7,808	49	60	358	355	130	158	332	508
Serbia		6,125		3,218	.	743	..	9,133	..	99		2,897	..	1,603	...	1,124
Seychelles	.	...	..	.	.	0.2	5,000	5,000	..	..	..	.	2	2	2	2
Sierra Leone	254	739	1,137	1,014	287	398	4,803	4,909	53	63	673	734	166	125	197	235
Singapore		..		.		0.01	10,000	10,000	...		..		—	—	5	21
Slovakia	2,814	2,950	3,555	3,736	376	382	14,047	20,986	53	23	2,280	1,484	238	79	449	329
Slovenia	490	532	4,919	5,358	176	131	19,859	22,847	1	5	2,237	2,005	241	271	67	66
Solomon Islands	5	6	3,999	3,931	138	159	16,760	16,772	4	4	1,301	1,250	17	0.33	7	8
Somalia	384	196	697	417	79	89	10,000	9,519	15	18	260	277	...	74	..	84
South Africa	11,737	9,547	2,512	2,796	1,700	1,947	23,964	26,490	121	91	1,186	1,061	4,912	5,765	2,229	2,033
Spain	20,198	24,135	3,043	3,896	3,173	2,537	25,454	27,882	318	356	677	935	15,571	15,293	12,277	12,676
Sri Lanka	2,839	3,193	3,318	3,822	340	346	8,438	10,066	23	19	907	965	833	668	567	714
Sudan, The	3,973	6,572	532	708	168	476	2,589	5,687	234	257	1,448	1,614	1,117	754	1,834	2,139
Suriname	179	195	3,807	3,749	5	5	13,816	12,929		0.2	727	720	76	75	21	22
Swaziland	97	69	1,347	1,146	8	54	1,921	4,936	4	3	591	455	102	108	11	11
Sweden	5,331	5,059	4,493	5,150	965	790	29,559	27,701	76	39	2,525	2,797	35	35	269	323
Switzerland	1,123	1,049	6,210	6,648	534	490	38,414	41,525	10	19	3,582	3,527	565	497	298	293
Syria	4,576	5,453	1,496	1,724	478	640	20,887	21,333	188	307	699	1,026	1,809	1,824	1,806	2,853
Taiwan	.	.	..	..	..	..	...	...	.	.	...	...	...	...	...	.
Tajikistan	499	896	1,265	2,198	287	660	12,283	22,144	6	32	568	3,278	222	261	471	1,083
Tanzania	4,211	5,895	1,371	1,193	8,102	7,809	7,106	6,408	436	479	569	605	1,313	1,102	1,169	1,243
Thailand	30,130	31,702	2,661	2,752	18,199	26,676	16,560	22,758	292	193	840	865	7,785	7,426	3,090	3,339
Togo	737	820	1,043	1,187	1,302	1,417	6,796	6,698	49	55	327	297	49	33	132	142
Tonga	..	...			27	27	11,713	11,037	..	..	...	...	9	8	23	28
Trinidad and Tobago	7	5	2,785	2,659	6	10	9,504	9,813	2	2	2,252	1,652	61	31	23	19
Tunisia	1,425	2,020	1,329	1,434	313	350	15,378	14,257	67	116	738	1,121	983	1,003	2,008	2,504
Turkey	30,235	30,212	2,171	2,307	5,457	4,281	26,148	27,006	1,377	1,493	882	1,180	10,743	12,390	24,492	24,454
Turkmenistan	1,536	2,886	2,018	2,974	29	159	5,151	5,933	8	11	1,797	1,806	215	274	548	755
Tuvalu						0.2	..	..		..	..	..	0.7	0.3	0.4	0.5
Uganda	2,200	2,631	1,605	1,525	7,936	7,708	7,839	7,397	606	618	689	583	10,028	9,848	543	556
Ukraine	28,878	28,035	2,226	2,127	16,635	19,102	10,391	13,152	702	519	1,661	1,263	1,449	1,539	5,684	7,605
United Arab Emirates	—	0.04	4,730	2,000	11	8	20,033	25,484	.		..	..	723	779	1,597	483
United Kingdom	21,691	19,369	6,833	6,771	6,805	5,635	40,141	40,540	832	740	3,597	3,410	329	364	2,911	2,801
United States	334,614	414,066	5,826	6,683	22,235	18,493	39,435	37,312	1,540	2,124	1,897	1,908	30,331	24,962	37,802	38,075
Uruguay	1,949	2,565	3,528	4,275	191	180	12,666	15,385	7	7	978	968	525	524	153	187
Uzbekistan	4,084	6,372	2,603	4,046	708	890	14,016	17,626	17	12	1,704	1,156	1,208	1,539	3,180	4,068
Vanuatu	1	0 8	538	552	39	43	7,959	8,431	.	..	..	..	20	15	10	11,500
Venezuela	2,782	3,402	3,307	3,327	1,135	1,176	13,554	13,262	27	25	796	887	3,018	2,081	1,264	1,413
Vietnam	33,984	39,881	4,084	4,716	4,422	10,720	8,197	13,832	248	255	730	754	4,278	2,848	6,645	7,991
Virgin Islands (U S)			...	...	..	.	..	..	.	.	...		...	...	.	..
West Bank[e]	61	62	1,855	1,930	63	48	29,880	29,166	6	6	906	977	246	176	541	599
Western Sahara	2	..	778	.	..	..	..	..	.	..	..	..	..	..	..	.
Yemen	689	774	1,087	977	210	232	12,355	12,664	64	83	1,233	1,770	597	826	588	712
Zambia	934	1,537	1,421	1,542	975	1,022	5,687	5,109	16	24	516	480	100	4	265	267
Zimbabwe	2,143	1,251	1,229	649	207	231	4,872	4,831	52	34	765	541	219	222	154	162

livestock														country
cattle		sheep		hogs		chickens		milk[e]				eggs[f]		
stock ('000 head)		stock ('000 head)		stock ('000 head)		stock ('000 head)		production ('000 metric tons)		yield (kg/animal)		production (metric tons)		
1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	
110	115	3	2	26	29	1,000	600	4	0.8	600	593	2,000	2,000	New Caledonia
9,025	9,650	42,153	40,000	364	360	13,000	18,000	12,079	15,842	3,532	3,817	43,000	51,500	New Zealand
3,254	3,600	4	5	404	123	13,000	18,000	234	646	749	702	19,000	21,456	Nicaragua
2,217	2,360	4,386	4,750	39	40	24,000	25,000	180	195	400	402	10,000	10,500	Niger
15,118	16,259	21,000	23,994	5,259	6,730	121,000	166,500	409	468	241	240	425,000	552,800	Nigeria
..	..	..	..	..	..	..	..	..	..	..	..	..	..	Northern Mariana Islands
1,001	930	2,367	2,400	425	830	3,000	3,350	1,657	1,550	5,461	5,962	49,000	50,500	Norway
299	310	342	360	—	.	3,000	4,200	24	47	420	553	7,000	9,000	Oman
22,007	29,600	24,067	26,500	—	.	151,000	182,000	8,040	11,000	1,157	1,200	340,000	452,000	Pakistan
..	.	..	.											Palau
1,412	1,650	—	.	289	300	13,000	15,000	170	187	1,210	1,191	15,000	21,000	Panama
87	94	6	7	1,600	1,800	4,000	4,000	—	0.2	100	99	4,000	4,800	Papua New Guinea
9,758	10,000	402	500	2,917	1,600	15,000	17,000	369	375	2,401	2,344	61,000	100,000	Paraguay
4,931	5,300	14,412	15,000	2,796	3,000	86,000	100,000	1,065	1,500	2,037	2,069	149,000	205,000	Peru
2,467	2,650	30	30	10,724	13,250	115,000	136,000	10	13	2,305	1,923	443,000	530,000	Philippines
6,124	5,696	366	332	17,588	18,129	49,000	125,000	12,019	11,800	4,190	4,327	429,000	537,500	Poland
1,415	1,407	5,671	3,549	2,346	2,295	35,000	37,000	1,966	1,924	5,620	6,264	117,000	119,119	Portugal
390	380	16	6	118	50	12,000	13,000	377	350	3,660	3,888	15,000	11,500	Puerto Rico
15	8	192	120	—	.	4,000	4,500	10	5	1,448	1,378	4,000	4,200	Qatar
28	33	2	1	77	82	12,000	13,500	21	24	951	970	6,000	6,000	Reunion
3,021	2,934	8,062	7,678	5,946	6,815	70,000	84,991	4,373	5,441	2,608	3,260	276,000	320,932	Romania
27,936	21,466	12,859	17,508	17,076	15,980	341,000	358,249	32,200	31,950	2,528	3,399	1,900,000	2,093,100	Russia
766	950	264	470	172	180	1,000	1,800	133	120	725	504	2,000	2,300	Rwanda
4	5	14	13	4	4		70			..	..		220	St. Kitts and Nevis
12	12	12	13	15	15	.	280	1	1	1,336	1,400	1,000	1,100	St. Lucia
6	5	13	12	9	9		130	1	1	1,371	1,383	1,000	650	St. Vincent and the Grenadines
28	29	—	.	179	201		450	1	2	1,000	1,000	.	260	Samoa
..	.	..	.	..	.		..	..	..	..	..	..	..	San Marino
4	5	3	3	2	3		350	—	0.1	170	171		385	São Tome and Principe
291	372	7,848	7,000	—	.	117,000	145,000	684	993	8,189	8,898	130,000	174,000	Saudi Arabia
2,991	3,181	4,572	5,131	263	327	45,000	31,700	102	101	342	3,530	33,000	31,500	Senegal
..	1,106		1,556		3,999	..	16,595	.	1,700		2,521		72,800	Serbia
2	1	—	..	18	19	1,000	575	—	0.3	564	564	2,000	2,200	Seychelles
413	300	367	470	53	52	6,000	7,500	21	17	250	270	8,000	8,300	Sierra Leone
—	0.2	—	—	283	260	2,000	2,700			.	.	16,000	21,300	Singapore
671	508	341	333	1,548	1 105	6,000	13,038	1,126	1,000	4,522	5,407	63,000	70,000	Slovakia
473	451	80	132	585	575	5,000	2,930	633	654	4,066	5,813	23,000	17,100	Slovenia
13	14	—	..	63	54	.	235	1	1	650	636	...	510	Solomon Islands
5,176	5,350	13,810	13,100	4	4	3,000	3,400	536	435	399	373	2,000	2,540	Somalia
13,633	13,500	28,677	25,000	1,559	1,650	119,000	126,000	2,636	3,000	2,943	3,093	328,000	385,000	South Africa
6,198	6,456	24,185	21,847	22,079	26,034	128,000	137,000	6,184	6,717	5,057	6,850	658,000	883,600	Spain
1,442	1,223	12	16	71	94	10,000	13,779	222	143	661	601	52,000	51,910	Sri Lanka
37,081	39,500	45,980	49,000	—	.	37,000	35,000	3,120	5,300	480	384	45,000	47,000	Sudan, The
128	137	8	8	22	25	3,000	3,800	10	9	1,966	1,700	3,000	2,500	Suriname
577	585	25	28	30	30	3,000	3,200	36	39	292	289	1,000	1,050	Swaziland
1,683	1,561	440	505	1,975	1,695	8,000	6,500	3,295	3,000	7,642	8,162	102,000	102,000	Sweden
1,603	1,565	421	450	1,499	1,650	7,000	8,000	3,898	4,000	5,417	5,692	37,000	39,000	Switzerland
933	1,150	13,288	21,000	—	—	21,000	24,500	1,111	1,300	2,488	2,600	128,000	170,000	Syria
					..							..	..	Taiwan
1,045	1,480	1,481	1,922	1	0 6	1,000	2,500	286	529	564	710	1,000	6,180	Tajikistan
17,000	18,000	3,499	3,550	450	455	28,000	30,000	737	850	174	173	34,000	35,100	Tanzania
4,666	6,481	40	52	6,539	8,381	223,000	209,105	516	684	2,531	2,973	505,000	531,537	Thailand
277	282	1,528	1,950	289	340	8,000	11,000	9	10	225	225	6,000	8,050	Togo
11	11	—		81	81		330	—	0.4	1,484	1,480	..	30	Tonga
32	30	4	4	48	45	20,000	28,500	10	11	715	629	3,000	3,850	Trinidad and Tobago
760	710	6,788	7,618	6	6	62,000	64,000	869	982	1,600	1,637	83,000	82,000	Tunisia
10,949	10,871	29,394	25,400	4	1	245,000	344,820	8,729	11,000	1,647	2,529	636,000	744,000	Turkey
863	1,948	5,750	15,500	46	30	4,000	7,000	842	1,333	2,075	3,507	15,000	33,900	Turkmenistan
..	.	—		13	14		45						22	Tuvalu
5,976	7,182	1,102	1,697	1,579	2,000	26,000	23,750	510	795	350	331	20,000	21,000	Uganda
10,591	6,175	1,074	925	9,270	8,055	118,000	145,600	12,915	12,300	2,475	3,675	511,000	779,600	Ukraine
96	125	496	615	—	..	12,000	15,500	10	12	192	207	15,000	17,200	United Arab Emirates
11,052	9,988	41,211	33,582	6,537	4,882	159,000	157,265	14,736	14,450	6,296	7,187	606,000	590,000	United Kingdom
98,197	97,003	7,071	6,165	60,229	61,860	1,848,000	2,050,000	74,936	84,189	8,108	9,219	4 998,000	5,308,000	United States
10,446	12,000	13,257	11,000	312	255	13,000	14,000	1,465	1,650	1,739	1,787	35,000	43,000	Uruguay
5,279	7,043	7,980	10,450	83	92	14,000	24,220	3,614	5,121	1,558	1,737	70,000	37,500	Uzbekistan
144	156	—	.	62	63		360	3	3	206	219		370	Vanuatu
14,445	16,700	779	536	2,823	3,305	128,000	120,000	1,375	1,390	1,315	1,103	150,000	160,000	Venezuela
4,030	6,840	—		20,293	26,500	138,000	150,000	53	243	821	1,666	186,000	225,000	Vietnam
8	8	3	3	3	3		40	2	2	2,703			160	Virgin Islands (U.S.)
27	32	647	812	—		7,000	12,700	79	95	3,450	3,340	34,000	41,480	West Bank[2]
—		33		—										Western Sahara
1,284	1,480	4,833	8,420	—	..	31,000	51,000	182	232	601	600	31,000	51,600	Yemen
2,709	2,610	137	152	324	340	29,000	30,000	63	65	300	302	46,000	46,900	Zambia
5,840	5,400	623	610	444	630	18,000	23,000	307	250	308	313	21,000	22,000	Zimbabwe

[1]Belgium includes Luxembourg. [2]West Bank includes Gaza Strip.

Energy

This table provides data about the commercial energy supplies (reserves, production, consumption, and trade) of the various countries of the world, together with data about petroleum and gas pipeline networks and traffic. Most of the data and concepts used in this table are adapted from the United Nations' *Energy Statistics Yearbook*.

Electricity. Total installed electrical power capacity comprises the sum of the rated power capacities of all main and auxiliary generators in a country. "Total installed capacity" (kW) is multiplied by 8,760 hours per year to yield "Total production capacity" (kW-hr).

Production of electricity comprises the total gross production of electricity by publicly or privately owned enterprises and also that generated by industrial establishments for their own use, but it usually excludes consumption by the utility itself. Measured in millions of kilowatt-hours (kW-hr), annual production of electricity ranges generally between 50% and 60% of total production capacity. The data are further analyzed by type of generation: fossil fuels, hydroelectric power, and nuclear fuel.

The great majority of the world's electrical and other energy needs are met by the burning of fossil hydrocarbon solids, liquids, and gases, either for thermal generation of electricity or in internal combustion engines. Many renewable and nontraditional sources of energy are being developed worldwide (wood, biogenic gases and liquids, tidal, wave, and wind power, geothermal and photothermal [solar] energy, and so on), but collectively these sources are still negligible in the world's total energy consumption. For this reason only hydroelectric and nuclear generation are considered here separately with fossil fuels.

Trade in electrical energy refers to the transfer of generated electrical output via an international grid. Total electricity consumption (residential and nonresidential) is equal to total electricity requirements less transformation and distribution losses.

Coal. In this table, coal comprises all grades of anthracite, bituminous, subbituminous, and lignite that have acquired or may in the future, by reason of new technology or changed market prices, acquire an economic value. These types of coal may be differentiated according to heat content (density) and content of impurities. Most coal reserve data are based on proven recoverable reserves only, of all grades of coal. Exceptions are footnoted, with proven in-place reserves reported only when recoverable reserves are unknown. Production figures include deposits removed from both surface and underground workings as well as quantities used by the producers themselves or issued to the miners. Wastes recovered from mines or nearby preparation plants are excluded from production figures.

Energy

country	electricity												coal		
	installed capacity, 2004 ('000 kW)	production		power source, 2004			trade, 2004		consumption				reserves, 2005 ('000,000 metric tons)	production, 2004 ('000 metric tons)	consumption, 2004 ('000 metric tons)
		capacity, 2002 ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	fossil fuel (%)	hydropower (%)	nuclear fuel (%)	exports ('000,000 kW-hr)	imports ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	per capita, 2004 (kW-hr)	residential, latest (%)	nonresidential, latest (%)			
Afghanistan	323	5,790	779	27.6	72.4	—	—	100	879	38	.	.	66	34	34
Albania	1,684	16,574	5,559	1.7	98.3	—	274	477	5,762	1,847	.	.	794	109	118
Algeria	6,468	59,830	31,250	99.2	0.8	—	197 [5]	211	31,264	889	28.4	71.6	40	—	615
American Samoa	58	508	138	100.0	—	—	—	—	138	2,226	.	.	.	.	.
Andorra	.	.	.	.	.	.	—	—	.	.	.	.	.	.	.
Angola	665	4,030	2,339	25.1	74.9	—	—	—	2,339	205	.	.	.	.	.
Antigua and Barbuda	27	237	109	100.0	—	—	—	—	109	1,595	.	.	.	.	.
Argentina	30,599	244,089	100,260	64.6	32.0	3.4[1]	4,143	7,612	103,729	2,714	47.3	52.7	423	51	937
Armenia	3,341	29,162	6,030	30.4	33.1	36.5	1,012	260	5,278	1,744	.	.	.	—	—
Aruba	150	1,314	816	100.0	—	—	—	—	816	11,458	.	.	.	.	.
Australia	48,630	387,507	239,497	92.8	7.2	—	—	—	239,497	11,849	.	.	78,456	354,461	133,516
Austria	16,712	160,632	64,125	37.8	62.2	—[1]	13,548	16,629	67,208	8,256	.	.	16	235	5,480
Azerbaijan	5,476	47,216	21,643	87.2	12.8	—	1,008	2,373	23,008	2,770	.	.	.	.	—
Bahamas, The	401	3,513	2,087	100.0	—	—	—	—	2,087	6,964	.	.	.	.	.
Bahrain	1,709	11,966	8,448	100.0	—	—	—	—	8,448	11,932	.	.	.	.	.
Bangladesh	4,680	30,572	21,466	94.3	5.7	—	—	—	21,466	154	37.7	62.3	.	.	700
Barbados	210	1,454	895	100.0	—	—	—	—	895	3,304	78.4	21.6	.	.	.
Belarus	7,847	66,748	31,211	99.9	0.1	—	4,723	7,975	34,463	3,508	.	.	.	.	234
Belgium	14,305	137,716	85,643	42.7	1.9	55.4	6,790	14,567	93,420	8,988	.	.	.	147	8,391
Belize	52	377	169	51.9	48.1	—	—	25	194	707	71	29	.	.	.
Benin	122	491	81	98.8	1.2	—	—	578	659	81	64.1	35.9	.	.	.
Bermuda	160	1,279	661	100.0	—	—	—	—	661	10,179	.	.	.	.	.
Bhutan	457	3,171	1,952	—	100.0	—	1,470	18	500	229	.	.	.	51	65
Bolivia	1,353	11,160	4,542	64.5	35.5	—	—	5	4,547	493	49.0	51.0	0.9	.	.
Bosnia and Herzegovina	4,368	23,924	12,599	53.0	47.0	—	3,079	997	10,517	2,690	.	.	.	8,578	8,953
Botswana	132	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	26.3	73.7	40	[2]	[2]
Brazil	86,504	722,332	387,451	13.5	78.4	8.1	7	37,392	424,836	2,340	26.7	73.3	10,113	5,406	19,830
Brunei	860	4,459	3,236	100.0	—	—	—	—	3,236	8,842	53.7	46.3	.	.	.
Bulgaria	11,206	111,217	41,621	51.5	8.1	40.4	6,620	741	35,742	4,582	53.1	46.9	2,181	26,485	26,526
Burkina Faso	177	683	400	75.0	25.0	—	—	—	400	31	.	.	.	.	.
Burundi	58	385	136	1.5	98.5	—	—	34	169	22	73.8	26.2	.	.	.
Cambodia	37	307	130	73.1	26.9	—	—	—	130	10	.	.	.	.	.
Cameroon	902	7,927	4,110	4.6	95.4	—	—	—	4,110	256	.	.	.	1	1
Canada	118,094	990,896	598,514	29.5	59.4	11.1[3]	33,249	22,785	588,050	18,408	.	.	6,578	65,999	58,861
Cape Verde	7	61	220	100.0	—	—	—	—	220	529	.	.	.	.	.
Cayman Islands	.	.	400	.	.	.	—	—	372	.	.	.	.	.	.
Central African Republic	40	377	110	23.6	76.4	—	—	—	110	26	69.3	30.7	2.7	.	.
Chad	29	254	99	100.0	—	—	—	—	99	11	.	.	.	.	.
Chile	10,737	97,639	51,984	60.1	39.9	—	—	—	53,887	3,347	30	70	1,181	188	4,435
China	391,420	2,095,129	2,193,736	81.7	16.0	2.3	9,476	3,400	2,187,660	1,684	25.3	74.7	114,500	1,992,234	1,922,654
Colombia	13,653	120,783	50,291	23.7	76.3	—	1,682	48	48,657	1,074	70.9	29.1	6,611	53,693	3,144
Comoros	6	53	20	90.0	10.0	—	—	—	20	31	.	.	.	.	.
Congo, Dem. Rep. of the	2,502	28,120	6,852	0.3	99.7	—	1,456	6	5,402	92	.	.	88	108	153
Congo, Rep. of the	121	1,060	399	0.5	98.5	—	—	404	803	229	.	.	.	.	.
Costa Rica	1,939	16,177	8,210	21.0	79.0	—	440	202	7,972	1,876	71.1	28.9	.	.	.
Côte d'Ivoire	909	10,538	5,411	67.7	32.3	—	1,409	—	4,002	224	26.1	73.9	.	.	.
Croatia	3,792	34,436	13,295	47.0	53.0	—	1,633	5,298	16,960	3,818	68	32	39	—	1,189
Cuba	3,959	34,681	15,652	99.4	0.6	—	—	—	15,652	1,380	52.8	47.2	.	.	13
Cyprus	988	8,804	4,176	100.0	—	—	—	—	4,176	5,718	82.4	17.6	.	.	58
Czech Republic	16,193	134,308	84,333	65.7	3.0	31.3	25,493	9,776	68,616	6,720	.	.	5,552	64,076	57,290
Denmark	13,315	116,464	40,477	83.7	0.1	16.2[5]	11,545	8,873	37,605	6,967	.	.	.	—	7,327
Djibouti	90	771	200	100.0	—	—	—	—	200	260	.	.	.	.	.
Dominica	22	123	79	57.0	43.0	—	—	—	79	1,129	.	.	.	.	.
Dominican Republic	5,530	44,781	13,759	85.6	14.4	—	—	—	13,759	1,536	72.3	27.7	.	.	777
East Timor	.	.	300	100.0	.	.	—	—	300	254	.	.	.	.	.
Ecuador	3,463	28,321	11,702	20.8	79.2	—	—	1,542	13,344	1,024	56.8	43.2	24	.	.
Egypt	17,058	148,578	101,299	87.0	13.0	—	873	174	100,800	1,465	74.4	25.6	21	33	1,850
El Salvador	1,219	9,207	4,564	48.9	30.3	20.8[6]	84	488	4,946	732	67.4	32.6	.	.	.
Equatorial Guinea	18	158	27	88.9	11.1	—	—	—	27	52	.	.	.	.	.
Eritrea	88	1,507	283	100.0	—	—	—	—	283	67	.	.	.	.	.

Natural gas. This term refers to any combustible gas (usually chiefly methane) of natural origin from underground sources. The data for production cover, to the extent possible, gas obtained from gas fields, petroleum fields, or coal mines that is actually collected and marketed. (Much natural gas in Middle Eastern and North African oil fields is flared [burned] because it is often not economical to capture and market it.) Manufactured gas is generally a by-product of industrial operations such as refineries, gasworks, coke ovens, and blast furnaces. It is usually burned at the point of production and rarely enters the marketplace.

Crude petroleum. Crude petroleum is the liquid product obtained from oil wells; the term also includes shale oil, tar sand extract, and field or lease condensate. Production and consumption and consumption per capita data in the table refer, so far as possible, to the same year so that the relationship between national production and consumption patterns can be clearly seen; data are given in barrels.

Proven reserves are that oil remaining underground in known fields whose existence has been "proved" by the evaluation of nearby producing wells or by seismic tests in sedimentary strata known to contain crude petroleum, and that is judged recoverable within the limits of present technology and economic conditions (prices). The published proven reserve figures do not necessarily reflect the true reserves of a country, because government authorities or corporations often have political or economic motives for withholding or altering such data.

The estimated exhaustion rate of petroleum reserves is an extrapolated ratio of published proven reserves to the current rate of withdrawal/production. Present world published proven reserves will last about 40 to 45 years at the present rate of withdrawal, but there are large country-to-country variations above or below the average.

Data on petroleum and gas pipelines are provided because of the great importance to both domestic and international energy markets of this means of bringing these energy sources from their production or transportation points to refineries, intermediate consumption and distribution points, and final consumers. The pipeline length for petroleum includes the combined total length for both crude and refined petroleum pipelines, whereas the pipeline length for gas includes the combined total length for natural gas, condensate, and liquefied petroleum gas pipelines. The source for these data was the latest edition of the *CIA World Factbook*.

A secondary source reviewed in the overall compilation of this table was the Energy Information Administration website of the U.S. government.

natural gas					crude petroleum								country
published proven reserves, 2007 ('000,000,000 cu m)	production		consumption		reserves		production, 2004 ('000,000 barrels)	consumption, 2004 ('000,000 barrels)	consumption per capita (barrels)	refining capacity, 2007 ('000 barrels per day)	pipelines (2006) length (km)		
	natural gas, 2004 ('000,000 cu m)	manufactured gas, 2004 ('000,000 cu m)	natural gas, 2004 ('000,000 cu m)	natural gas per capita (cu m)	published proven, 2007 ('000,000 barrels)	years to exhaust proven reserves, 2004					petroleum	gas	
50	3		3	0.1			—	—	—	—	387	466	Afghanistan
2.0	16	9.8	16	5.2	165	190	2.8	2.8	0.9	25	207	339	Albania
4,580	81,291	11,266	21,173	602	12,270	15	471	146	4.1	450	6,498	8,953	Algeria
...							—	—	—	—	—	—	American Samoa
...											—	—	Andorra
57	730	80	730	64	8,000	24	366	11.5	1.0	39	867	357	Angola
...							—	—	—	—	—	—	Antigua and Barbuda
456	52,390	7,561	43,459	1,137	2,468	10	254	194	5.1	625	10,373	29,845	Argentina
176			1,289	426			—	—	—	—	—	2,002	Armenia
...							—	3.3	46.8	271	—	—	Aruba
2,520	39,954	4,767	28,399	1,405	4,015	9	203	252	12.5	702	4,408	32,109	Australia
16	2,142	1,627	9,792	1,203	50	11	6.9	60	7.3	209	812	2,722	Austria
850	4,995	314	9,702	1,168	7,000	62	113	46	5.6	399	2,436	3,190	Azerbaijan
...							—	—	—	—	—	—	Bahamas, The
92	7,030	510	7,030	9,930	125	2	68	93	131	255	52	20	Bahrain
436	13,339	67	13,339	95.8	28	89	—	10	0.1	33	—	2,604	Bangladesh
0.2	25	1.1	25	92.0	3.0	12	0.6	—	—	—	—	—	Barbados
2.8	255	944	19,817	2,017	198	15	13	135	13.8	493	4,007	5,223	Belarus
—	—	2,357	14,522	1,397	7		—	252	24.3	858	693	1,561	Belgium
..							—	—	—	—	—	—	Belize
1.1					8.0	50	0.1	—	—	—	—	—	Benin
..							—	—	—	—	—	—	Bermuda
...							—	—	—	—	—	—	Bhutan
680	9,544	479	1,734	188	440	27	15	11	1.2	47	4,064	4,907	Bolivia
...			366	94.0			—	—	—	—	174	—	Bosnia and Herzegovina
1.1	.	[2]			—	—		[2]		—	—	—	Botswana
306	9,603	12,952	16,762	92.3	11,773	17	548	623	3.4	1,908	9,967	12,254	Brazil
391	10,556	59	1,458	3,982	1,100	17	71	0.6	1.8	9	463	672	Brunei
5.7	353	729	3,301	423	15	67	0.2	39	5.0	115	495	2,505	Bulgaria
...							—	—	—	—	—	—	Burkina Faso
.							—	—	—	—	—	—	Burundi
.							—	—	—	—	—	—	Cambodia
110	.	32	.	.	400	8	48	14	0.9	42	1,107	79	Cameroon
1,641	180,093	32,757	93,277	2,920	179,210[4]		764	610	19.1	2,017	23,564[5]	74,980[5]	Canada
...							—	—	—	—	—	—	Cape Verde
—	—	—	—	—	—	—	—	—	—	—	—	—	Cayman Islands
.							—	—	—	—	—	—	Central African Republic
...					1,500		—	—	—	—	205	—	Chad
98	1,967	1,444	8,436	524	150	48	1.3	75	4.7	227	1,760	3,148	Chile
2,265	39,589	45,746	37,259	28.7	16,000	19	1,287	2,124	1.6	6,246	21,362	22,664	China
113	7,843	1,489	7,843	173	1,453	9	189	112	2.5	286	9,298	4,360	Colombia
...				..			—	—	—	—	—	—	Comoros
1.0		5.0			180	25	7.5	—	—	—	78	54	Congo, Dem. Rep. of the
91	141	5.8	141	40.1	1,600	18	84	5.5	1.7	21	744	93	Congo, Rep. of the
..		16		—			—	3.0	0.9	24	242	—	Costa Rica
28	1,016	124	1,016	56.9	100	29	9.5	26	1.5	65	112	349	Côte d'Ivoire
30	2,414	735	3,305	744	74	8	6.5	37	8.4	250	583	1,340	Croatia
71	704	191	704	62.1	558	36	21	31	2.8	301	230	49	Cuba
—	—	20	.	—			—	2.0	2.8	—	—	—	Cyprus
4.0	229	2,540	10,969	1,074	15	39	2.1	45	4.5	198	641	7,010	Czech Republic
72	10,124	632	5,524	1,023	1,277	9	148	62	11	176	626	3,943	Denmark
..							—	—	—	—	—	—	Djibouti
.				.	—	—	—	—		—	—	—	Dominica
—		39	0.7	0.6			—	16	1.8	48	104	—	Dominican Republic
.		2,568	..	..			1.0	—	—	—	—	—	East Timor
90	352	133	352	27.0	4,517	24	195	66	5.0	176	3,122	71	Ecuador
1,657	32,967	2,830	29,378	428	3,700	13	253	240	3.5	726	6,017	7,476	Egypt
—	.	34	.	—			—	7.1	1.0	22	—	—	El Salvador
37	480	.	480	927	1,100	20	55	2.6	5.0	—	31	98	Equatorial Guinea
.	.	.	.	.			—	—	—	15	—	—	Eritrea

Energy (continued)

country	electricity												coal		
	installed capacity, 2004 ('000 kW)	production		power source, 2004			trade, 2004		consumption				reserves, 2005 ('000,000 metric tons)	production, 2004 ('000 metric tons)	consumption, 2004 ('000 metric tons)
		capacity, 2002 ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	fossil fuel (%)	hydro-power (%)	nuclear fuel (%)	exports ('000,000 kW-hr)	imports ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	per capita, 2004 (kW-hr)	residential, latest (%)	non-residential, latest (%)			
Estonia	2,554	22,294	10,128	99.7	0.3	—	2,141	347	8,334	6,168	55.4	44.6	...	13,993	15,561
Ethiopia	726	4,765	2,547	1.0	99.0	—	—	—	2,547	36	35.65	64.45	...	...	...
Faroe Islands	87	815	290	69.0	31.0	—	—	—	290	6,215	...	...	...	...	...
Fiji	199	1,752	540	19.4	80.6	—	—	—	540	613	22	78	...	...	13
Finland	16,569	145,144	85,817	55.8	17.6	26.9[1]	6,797	11,677	90,687	17,374	...	...	...	...	8,082
France	112,151	1,018,919[7]	572,241[7]	10.1[7]	11.3[7]	78.6[7]	68,588[7]	6,548[7]	510,201[7]	8,231[7]	...	...	15	872[7]	20,820[7]
French Guiana	140	1,226	430	100.0	—	—	—	—	430	2,248	55.42	44.62	...	...	...
French Polynesia	133	964	485	81.0	19.0	—	—	—	485	1,821	...	...	...	...	...
Gabon	414	3,635	1,537	41.9	58.1	—	—	—	1,537	1,128	41.9	58.1	...	...	...
Gambia, The	29	254	151	100.0	—	—	—	—	151	96	...	...	...	...	...
Gaza Strip	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Georgia	4,388	39,035	6,924	12.6	87.4	—	—	1,281	8,205	1,577	...	...	...	8	12
Germany	118,850	1,100,825	616,785	64.2	4.5	27.1[8]	50,808	48,187	614,164	7,442	...	...	6,739	211,077	249,280
Ghana	1,432	10,985	6,044	12.6	87.4	—	878	665	6,257	289	7.2	92.8	...	...	4
Greece	11,320	99,163	59,344	89.2	8.8	2.0[6]	2,034	4,854	62,164	5,630	...	...	3,900	70,041	71,631
Greenland	106	929	270	100.0	—	—	—	—	270	4,789	...	...	183	...	...
Grenada	32	237	157	100.0	—	—	—	—	157	1,963	72.9	27.1	...	...	...
Guadeloupe	423	3,679	1,165	100.0	—	—	—	—	1,165	2,621	...	...	...	...	...
Guam	552	3,504	1,589	100.0	—	—	—	—	1,589	9,587	...	...	...	...	...
Guatemala	2,009	13,254	7,009	65.3	34.7	—	464	41	6,586	532	67.3	32.7	...	...	481
Guernsey	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Guinea	284	1,726	801	45.2	54.8	—	—	—	801	87	...	...	...	...	...
Guinea-Bissau	21	184	61	100.0	—	—	—	—	61	44	...	...	...	...	...
Guyana	313	2,707	835	100.0	—	—	—	—	835	1,080	...	...	...	...	...
Haiti	244	2,278	547	51.9	48.1	—	—	—	547	81	44.1	55.9	...	...	...
Honduras	1,044	7,989	4,877	51.9	48.1	—	—	357	5,234	730	69.5	30.5	...	...	174
Hong Kong	11,683	103,368	37,129	100.0	—	—	3,087	9,837	43,879	6,401	...	...	...	...	10,012
Hungary	8,272	74,670	33,708	64.0	0.6	35.4	3,056	10,524	41,176	4,070	65.5	34.5	3,357	11,242	13,472
Iceland	1,507	13,219	8,623	0.1	82.7	17.2[6]	—	—	8,623	29,430	...	...	...	...	104
India	131,434	1,105,862	665,873	84.0	12.7	2.6[9]	40	1,735	667,568	618	53.5	46.5	92,445	412,952	434,719
Indonesia	25,034	221,488	103,536	85.3	14.5	0.2[10]	—	—	103,536	476	46.9	...	4,968	119,700	14,167
Iran	34,310	310,104	164,481	93.5	6.5	—	—	—	164,481	2,460	...	...	419	1,246	1,707
Iraq	2,760	83,220	33,410	98.5	1.5	—	—	1,318	34,728	1,280	...	...	...	...	...
Ireland	5,163	47,646	25,627	93.4	4.0	2.6[6]	10	1,574	27,191	6,751	...	...	14	—	2,671
Isle of Man	...	...	...	...	...	...	...	...	337	4,610	...	...	...	...	...
Israel	9,981	87,924	49,025	100.0	—	—	1,459	—	47,566	6,924	61.6	38.4	...	439	13,314
Italy	71,355	751,398[11]	303,347[11]	81.1[11]	16.4[11]	2.5[6 11]	791[11]	46,426[11]	348,982[11]	6,029[11]	...	...	34[11]	98[11]	24,289[11]
Jamaica	1,469	11,808	7,217	98.3	1.7	—	—	—	7,217	2,697	36.2	63.8	...	...	66
Japan	243,512	2,285,353	1,080,124	63.9	9.5	26.6[12]	—	—	1,080,124	8,459	...	...	359	—	180,807
Jersey	...	...	...	...	...	...	...	...	557	6,265	...	...	...	...	...
Jordan	1,789	15,663	8,967	99.4	0.6	—	1	826	9,792	1,638	66.1	33.9	...	...	...
Kazakhstan	17,157	165,476	68,942	88.0	12.0	—	7,403	5,234	64,773	4,320	...	...	31,279	89,945	63,950
Kenya	1,143	10,056	5,894	35.8	59.2	5.0[6]	—	84	5,978	179	38.8	61.2	...	...	108
Kiribati	3	26	10	100.0	—	—	—	—	10	99	...	...	...	...	...
Korea, North	9,500	83,220	21,974	43.1	56.9	—	—	—	21,974	968	...	...	600	30,140	30,006
Korea, South	58,779	522,219	371,011	63.1	1.6	35.3	—	—	371,011	7,716	41.8	58.2	80	3,191	84,926
Kosovo	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuwait	9,392	82,274	41,256	100.0	—	—	—	—	41,256	15,423	93.3	6.7	...	...	...
Kyrgyzstan	3,720	32,386	15,145	6.9	93.1	—	3,382	54	11,817	2,320	25.4	...	812	461	1,436
Laos	691	2,488	1,295	3.5	96.5	—	750	217	762	126	...	...	...	290	290
Latvia	2,164	18,545	4,683	33.6	66.4	—	636	2,733	6,780	2,923	59.5	40.5	...	...	98
Lebanon	2,537	20,122	10,192	91.0	9.0	—	—	216	10,408	2,691	...	...	...	...	200
Lesotho	76	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	...	...	...	[2]	[2]
Liberia	253	2,926	330	100	—	—	—	—	330	118	...	...	...	...	...
Libya	4,710	41,260	20,202	100.0	—	—	—	—	20,202	3,147	...	...	...	...	4
Liechtenstein	[13]	[13]	[13]	[13]	[13]	[13]	[13]	[13]	[13]	[13]	...	...	...	...	[13]
Lithuania	5,772	57,536	19,274	16.7	4.9	78.4	11,488	4,293	12,079	3,505	...	...	...	...	264
Luxembourg	528	10,897	4,136	78.2	20.6	1.2[6]	3,132	6,506	7,510	16,348	...	...	...	...	129
Macau	489	3,478	1,973	100.0	—	—	—	151	2,124	4,564	87.2	12.8	...	...	...
Macedonia	1,526	13,087	6,665	77.8	22.2	—	—	1,176	7,841	3,863	...	...	...	7,245	7,551
Madagascar	227	1,997	990	35.4	64.6	—	—	—	990	56	31.7	68.3	...	...	10
Malawi	238	1,717	1,270	—	100.0	—	8	—	1,262	100	67.4	32.6	1.8	70	57
Malaysia	20,082	137,278	82,282	92.9	7.1	—	616	93	81,759	3,475	48.4	51.6	3.6	382	13,275
Maldives	49	385	160	100.0	—	—	—	—	160	539	...	...	...	...	...
Mali	280	999	455	47.3	52.7	—	—	—	455	41	99	1	...	...	...
Malta	570	4,511	2,216	100.0	—	—	—	—	2,216	5,542	...	...	...	...	326
Marshall Islands	...	...	...	...	...	...	—	—	...	...	...	...	...	...	...
Martinique	396	3,469	1,190	100.0	—	—	—	—	1,190	2,771	...	...	...	...	...
Mauritania	115	1,007	240	85.0	15.0	—	—	—	240	80	...	...	...	...	7
Mauritius	663	5,782	2,165	94.4	5.6	—	—	—	2,165	1,775	64.7	35.3	...	...	289
Mayotte	...	...	...	...	...	...	—	—	139	666	...	...	...	...	...
Mexico	49,553	414,339	224,077	75.8	19.5	2.8[14]	1,006	47	223,118	2,190	...	...	1,211	9,882	13,446
Micronesia	...	...	...	...	...	...	—	—	...	...	...	...	...	...	...
Moldova	2,954	8,953	3,617	98.4	1.6	—	424	3,361	6,554	1,554	...	...	...	...	186
Monaco	[7]	[7]	[7]	[7]	[7]	[7]	[7]	[7]	[7]	[7]	...	...	...	[7]	[7]
Mongolia	901	7,893	3,303	100.0	—	—	8	171	3,466	1,260	...	...	...	6,865	6,865
Montenegro[15]	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Morocco	4,851	41,146	18,241	90.2	9.8	—	—	1,700	19,941	652	54.5	45.5	...	—	5,472
Mozambique	2,340	20,752	11,714	0.3	99.7	—	9,047	7,913	10,579	545	...	...	212	38	23
Myanmar (Burma)	1,930	13,850	6,437	63.8	36.2	—	—	—	6,437	129	75.5	24.5	1.8	1,013	185
Namibia	70	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	...	...	...	[2]	[2]
Nauru	10	88	32	100.0	—	—	—	—	32	2,498	...	...	...	...	...
Nepal	603	4,012	2,345	0.2	99.8	—	213	155	2,287	86	59.5	40.5	0.9	11	301
Netherlands, The	20,904	183,890	100,770	94.2	0.1	5.7[14]	5,188	21,405	116,987	7,196	...	...	497	...	13,560
Netherlands Antilles	210	1,840	1,065	100.0	—	—	—	—	1,065	4,885	...	...	...	...	...

natural gas					crude petroleum								country
published proven reserves, 2007 ('000,000,000 cu m)	production		consumption		reserves		production, 2004 ('000,000 barrels)	consumption, 2004 ('000,000 barrels)	consumption per capita (barrels)	refining capacity, 2007 ('000 barrels per day)	pipelines (2006) length (km)		
	natural gas, 2004 ('000,000 cu m)	manufactured gas, 2004 ('000,000 cu m)	natural gas, 2004 ('000,000 cu m)	natural gas per capita (cu m)	published proven, 2007 ('000,000 barrels)	years to exhaust proven reserves, 2004					petroleum	gas	
..	...	117	923	658	—	—	—	—	—	—	—	859	Estonia
25	...	3.5	4.7		0.4	..	—	5.6	0.1	—	—	—	Ethiopia
...	.	..	.		.	.	—	—	—	—	—	—	Faroe Islands
...	.	.	.	—	.	.	—	—	—	—	—	—	Fiji
—	—	1,533	4,769	940			—	78	15.2	252	—	694	Finland
9.7	1,374[7]	8,847[7]	49,845[7]	804[7]	122	15	8.3	632[7]	10.2[7]	1,979	7,913[7]	14,588[7]	France
...	.	.	.	.	.	.	—	—	—	—	—	—	French Guiana
...	.	.	.	.	.	.	—	—	—	—	—	—	French Polynesia
28	126	32	126	92.4	2,000	32	78	5.3	3.9	17	1,354	272	Gabon
...	.	.	.	.	.	.	—	—	..	—	—	—	Gambia, The
..	.	.	.	.	.	.	.	.	.	.	—	—	Gaza Strip
8.5	12	—	1,077	207	35	51	0.7	0.3	0.1	—	1,010	1,349	Georgia
255	22,564	19,596	120,583	1,461	367	17	25	811	9.8	2,428	7,373	25,072	Germany
23	.	122	.	—	15	.	..	13	0.6	45	13	316	Ghana
1.0	34	1,300	2,658	241	5.0	8	0.8	134	12.1	413	94	1,166	Greece
...	.	.	.	.	.	.	—	—	—	—	—	—	Greenland
.	.	.	.	.	.	.	—	—	—	—	—	—	Grenada
.	.	.	.	.	.	.	—	—	—	—	—	—	Guadeloupe
...	...	.	.	—	.	.	—	—	—	—	—	—	Guam
3.1	—	—	—	—	83	79	7.3	2.2	0.2	...	480	—	Guatemala
..	.	.	.	.	.	.	.	.	..	.	—	—	Guernsey
...	.	.	.	.	.	.	—	—	—	—	—	—	Guinea
...	.	.	.	.	.	.	—	—	—	—	—	—	Guinea-Bissau
.	.	.	.	.	.	.	—	—	—	—	—	—	Guyana
.	.	.	.	.	.	.	—	—	—	—	—	—	Haiti
—	.	.	.	—	.	.	—	—	—	—	—	—	Honduras
—	—	695	2,132	311			—	—	—	—	—	—	Hong Kong
8.1	3,035	992	15,021	1,485	127	12	7.2	43	4.2	161	1,325	4,397	Hungary
—	.	.	.	.	.	.	—	—	—	—	—	—	Iceland
1,075	26,764	9,482	26,764	24.8	5,625	20	259	983	0.9	2,255	12,652	7,185	India
2,769	72,710	3,938	33,142	152	4,300	9	412	382	1.8	993	9,051	10,254	Indonesia
27,581	81,259	5,049	83,865	1,252	136,270	61	1,430	539	8.0	1,451	16,329	18,138	Iran
3,172	2,600	1,636	2,600	95.8	115,000	157	729	173	6.4	598	7,143	3,146	Iraq
9.9	805	184	4,263	1,058	—	—	—	21	5.3	71	—	1,728	Ireland
...	.	.	.	.	.	.	—	—	—	—	—	—	Isle of Man
36	1,125	621	1,125	164	2.0	—	—	79	11.5	220	703	193	Israel
164	12,966	7,964	80,638[11]	1,393[11]	600	16	37	629[11]	10.8[11]	2,324	1,136	17,589	Italy
—	.	11	.	—	..	.	—	5.4	2.0	36	—	—	Jamaica
40	5,228	34,398	81,950	642	59	14	2.1	1,466	11.5	4,672	170	8,015	Japan
.	.	.	.	.	.	.	.	..	—	—	—	—	Jersey
6.0	267	180	267	47.3	1.0	.	—	30	5.3	90	49	426	Jordan
2,832	22,104	2,683	16,472	1,099	30,000	21	374	90	6.0	345	11,433	11,677	Kazakhstan
—	.	76	.	—	.	.	—	15	0.4	86	894	—	Kenya
...	.	.	.	.	.	.	—	—	—	—	—	—	Kiribati
..	.	51	.	.	.	.	—	4.2	0.2	71	154	—	Korea, North
—	—	29,269	29,611	616			—	828	17.2	2,577	827	1,482	Korea, South
...	...	...	...	...	...	...	...	...	...	...	...	...	Kosovo
1,557	9,700	5,787	9,700	3,626	101,500	106	855	321	120	889	597	269	Kuwait
5.7	29	.	798	157	40	68	0.5	0.7	0.1	10	16	254	Kyrgyzstan
...	.	.	.	.	.	.	—	—	...	—	540	—	Laos
.	.	7	1,588	685	40	.	—	—	—	—	497	1,097	Latvia
—	.	.	.	.	.	.	—	—	—	—	—	43	Lebanon
—	.	[2]	.	.	.	.	.	[2]	—	—	—	—	Lesotho
—	.	.	.	.	.	.	—	—	—	15	—	—	Liberia
1,491	6,817	954	5,746	895	41,464	61	566	126	20	380	6,916	4,363	Libya
—	.	[13]	.	.	.	.	.	[13]	[13]	—	—	20	Liechtenstein
—	.	935	2,828	821	12	212	2.2	64	18.5	190	349	1,696	Lithuania
.	.	5	1,399	3,099	.	.	—	—	—	—	—	155	Luxembourg
.	.	.	.	.	.	.	—	—	—	—	—	—	Macau
.	.	23	2,731	647	.	.	—	6.0	0.3	50	120	268	Macedonia
—	.	7	.	.	.	.	—	3.5	0.2	15	—	—	Madagascar
..	.	.	.	—	.	.	—	—	—	—	—	—	Malawi
2,124	55,889	1,714	30,045	1,277	3,000	11	280	201	8.5	545	1,829	5,654	Malaysia
..	.	.	.	...	.	..	—	—	—	—	—	—	Maldives
.	..	.	.	.	.	.	—	—	—	—	—	—	Mali
—	.	.	.	.	.	.	—	—	—	—	—	—	Malta
...	.	.	.	.	.	.	—	—	—	—	—	—	Marshall Islands
—	.	32	.	.	.	.	—	4.4	10.2	17	—	—	Martinique
28	.	48	.	.	100	.	.	—	—	—	—	—	Mauritania
.	.	.	.	.	.	.	—	—	—	—	—	—	Mauritius
..	.	.	.	.	.	.	—	—	—	—	—	—	Mayotte
412	37,311	3,720	45,948	439	12,352	12	1,242	506	4.8	1,684	15,208	24,580	Mexico
...	..	.	.	.	.	...	..	..	..	...	—	—	Micronesia
..	.	.	2,408	571	.	.	—	—	—	—	—	606	Moldova
.	.	[7]	[7]	.	.	.	...	[7]	[7]	—	—	—	Monaco
.	.	.	.	.	.	.	—	—	—	—	—	—	Mongolia
...	.	.	.	.	..	..	..	..	..	..	..	..	Montenegro[15]
1.6	45	23	45	1.5	1.0	20	0.8	47	1.5	155	285	715	Morocco
127	1,182	.	2.8	0.1	.	..	—	—	—	—	294	918	Mozambique
283	7,184	57	1,455	29.1	50	7	7.1	7.5	0.1	57	558	2,224	Myanmar (Burma)
62	.	[2]	.	.	.	.	.	[2]	[2]	—	—	—	Namibia
...	.	...	.	.	.	.	—	—	—	—	—	—	Nauru
..	..	50	.	—	.	...	—	—	—	—	—	—	Nepal
1,416	90,520	15,231	54,009	3,332	100	5	14	348	21.4	1,222	1,294	7,310	Netherlands, The
—	.	138	.	.	.	.	—	80	366	320	—	—	Netherlands Antilles

Energy (continued)

country	electricity												coal		
	installed capacity, 2004 ('000 kW)	production		power source, 2004			trade, 2004		consumption				reserves, 2005 ('000,000 metric tons)	production, 2004 ('000 metric tons)	consumption, 2004 ('000 metric tons)
		capacity, 2002 ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	fossil fuel (%)	hydropower (%)	nuclear fuel (%)	exports ('000,000 kW-hr)	imports ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	per capita, 2004 (kW-hr)	residential, latest (%)	non-residential, latest (%)			
New Caledonia	348	2,900	1,678	79.9	20.1	..	—	—	1,678	7,271	..	..	1.8	..	281
New Zealand	8,642	73,873	41,813	28.0	64.6	7.4[6]	—	—	41,813	10,238	..	..	571	5,156	3,774
Nicaragua	693	5,615	2,822	79.6	19.4	1.0[6]	22	23	2,823	525	70.7	29.3	..	..	..
Niger	105	920	247	100.0	—	—	—	220	467	40	56	44	70	178	178
Nigeria	5,898	51,518	20,224	65.8	34.2	—	—	—	20,224	157	..	..	244	3	3
Northern Mariana Islands	..	..	..	..	..	..	..	—	..	..	..	..	..	..	..
Norway	26,637	245,674	110,598	1.0	98.8	0.2[6]	15,254	3,828	122,024	26,657	..	..	5.4	2,904	904
Oman	3,336	24,966	11,499	100.0	—	—	—	—	11,499	5,079	..	..	..	..	..
Pakistan	20,360	152,923	85,699	66.8	30.0	3.2	—	—	85,699	564	72.3	27.7	3,055	4,587	7,894
Palau	62	543	171	85.4	14.6	—	—	—	171	8,543	..	..	..	..	..
Panama	1,555	11,817	5,860	35.5	64.5	—	207	78	5,731	1,807	79.5	20.5	..	—	—
Papua New Guinea	544	4,135	1,399	33.7	66.3	—	—	—	1,399	258	27.9	72.1	..	..	..
Paraguay	7,416	64,964	51,921	0.1	99.9	—	44,997	—	6,925	1,141	79	21	..	..	..
Peru	5,970	51,798	25,547	23.2	76.8	—	—	—	25,547	927	67.74	32.34	1,060	16	963
Philippines	15,125	110,849	55,957	66.2	15.4	18.4[6]	—	—	55,957	686	65.34	34.74	236	2,485	9,461
Poland	30,041	268,038	154,159	97.5	2.5	—	14,605	5,312	144,866	3,793	41.84	58.24	14,000	162,428	145,091
Portugal	11,024	98,480	45,105	75.5	22.5	2.0[6]	2,131	8,612	51,586	4,925	..	..	36	—	5,514
Puerto Rico	5,358	42,933	24,130	99.4	0.6	—	—	—	24,130	6,195	..	..	..	..	176
Qatar	2,670	19,771	13,233	100.0	—	—	—	—	13,233	19,840	74.9	25.1	..	..	..
Réunion	440	3,846	1,620	64.2	35.8	—	—	—	1,620	2,114	..	..	..	..	..
Romania	20,073	191,879	56,503	61.0	29.2	9.8	3,766	2,584	56,321	2,548	27.1	72.9	495	31,792	35,099
Russia	215,277	1,863,848	931,865	65.3	19.2	15.5	19,800	12,179	924,244	6,425	36.1	63.9	157,010	262,344	220,438
Rwanda	35	377	173	2.9	97.1	—	10	120	283	31	..	..	..	..	..
St Kitts and Nevis	20	175	130	100.0	—	—	—	—	130	3,333	..	..	..	..	..
St Lucia	57	613	309	100.0	—	—	—	—	309	1,879	..	..	..	..	..
St Vincent and the Grenadines	24	201	110	72.7	27.3	—	—	—	110	939	..	..	..	..	..
Samoa	29	210	110	63.6	36.4	—	—	—	110	619	..	..	..	..	..
San Marino	11	11	11	11	11	11	11	11	11	11	..	..	..	11	..
São Tomé and Príncipe	10	53	18	44.4	55.6	—	—	—	18	99	..	..	..	..	..
Saudi Arabia	29,119	211,116	156,506	100.0	—	—	—	—	156,506	6,902	..	..	..	..	..
Senegal	239	2,094	2,351	87.5	12.5	—	—	—	2,351	206	16.7	83.3	..	..	..
Serbia[15]	9,315	103,184	38,489	69.0	31.0	—	1,318	1,032	38,203	3,530	..	..	16,591	41,157	41,441
Seychelles	95	815	220	100.0	—	—	—	—	220	2,716	24.3	75.7	..	..	..
Sierra Leone	132	1,139	85	100.0	—	—	—	—	85	15	..	..	..	..	..
Singapore	7,368	77,508	36,810	100.0	—	—	—	—	36,810	8,682	..	..	..	..	1
Slovakia	7,273	76,151	30,567	30.5	13.8	55.7	10,593	8,731	28,705	5,335	..	..	172	2,952	8,740
Slovenia	2,985	22,277	15,279	37.4	26.8	35.8	7,094	6,314	14,499	7,262	..	..	275	4,809	5,374
Solomon Islands	12	105	33	100.0	—	—	—	—	33	63	..	..	..	..	..
Somalia	80	701	286	100.0	—	—	—	—	286	29	..	..	..	..	..
South Africa	40,481	346,992[2]	247,777[2]	92.0[2]	2.8[2]	5.2[2]	13,329[2]	13,232[2]	247,680[2]	4,818[2]	28.5	71.5	48,750	244,062	180,287
Spain	60,978	529,157	280,007	59.4	12.3	28.3[16]	11,139	8,111	276,979	6,412	..	..	530	20,487	45,804
Sri Lanka	2,958	24,248	8,158	63.7	36.3	—	—	—	8,158	420	62.7	37.3	..	..	95
Sudan, The	755	6,631	3,883	72.8	27.2	—	—	—	3,883	116	..	..	..	..	..
Suriname	389	3,408	1,509	9.1	90.9	—	—	—	1,509	3,437	..	..	..	..	..
Swaziland	128	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	.	.	208	[2]	[2]
Sweden	33,317	294,765	151,727	8.7	40.0	50.7[17]	17,750	15,646	149,623	16,670	.	.	0.9	—	3,329
Switzerland	17,468[13]	157,408[13]	65,299[13]	4.3[13]	54.3[13]	41.4[13]	27,759[13]	27,056[13]	64,596[13]	8,669[13]	..	..	..	..	177[13]
Syria	6,470	56,502	32,077	86.8	13.2	—	—	—	32,077	1,784	..	..	..	..	..
Taiwan	33,290	34,598	181,245	75.5	3.6	20.9	—	—	167,478	7,406	32.4	67.6	0.9	..	..
Tajikistan	4,443	38,921	17,277	2.3	97.7	—	4,714	4,400	16,963	2,638	.	..	..	51	154
Tanzania	881	4,757	2,478	4.9	95.1	—	..	—	2,591	69	..	..	200	85	85
Thailand	24,805	258,481	125,727	95.2	4.8	—	372	3,388	128,743	2,020	58.3	41.7	1,354	20,060	28,085
Togo	28	333	262	38.9	61.1	—	—	348	810	102	..	..	..	..	..
Tonga	8	70	36	100.0	—	—	—	—	36	327	..	..	..	..	..
Trinidad and Tobago	1,416	12,413	6,430	100.0	—	—	—	—	6,430	4,921	35.3	64.7	..	..	..
Tunisia	2,932	21,331	13,067	98.8	1.2	—	28	—	13,039	1,313	54.1	45.9	..	..	1
Turkey	35,587	279,032	150,698	69.3	30.7	—[1]	1,144	463	150,017	2,122	..	.	4,186	46,379	64,450
Turkmenistan	3,106	34,427	11,470	100.0	—	—	1,654	—	9,816	2,060	..	..	..	..	..
Tuvalu	.	.	..	.	.	.	—	—	..	..	..	..	..	..	..
Uganda	303	2,356	1,896	—	100	—	170	—	1,726	63	.	..	..	..	..
Ukraine	52,408	462,659	182,167	45.7	6.5	47.8	7,529	2,203	186,831	3,727	..	.	34,153	59,670	65,179
United Arab Emirates	5,880	51,509	52,417	100.0	—	—	—	—	52,417	12,000	..	..	..	..	..
United Kingdom	76,187	674,730	395,853	77.4	1.9	20.7[12]	2,294	9,784	403,343	6,756	..	..	220	25,097	33,353
United States	942,178	8,040,594	4,174,481	79.1	8.2	12.7[3]	22,898	34,210	4,185,793	14,240	21.4	78.6	242,721	1,008,880	1,000,482
Uruguay	2,171	19,027	5,936	19.5	80.5	—	19	2,348	8,265	2,408	76	34	..	..	1
Uzbekistan	11,751	102,571	51,030	87.2	12.8	—	11,929	11,843	50,944	1,944	..	.	4,000	2,699	2,699
Vanuatu	12	105	44	100.0	—	—	—	—	44	206	..	..	..	..	..
Venezuela	20,577	180,255	98,482	29.0	71.0	—	—	—	98,482	3,770	23.8	76.2	479	6,748	—
Vietnam	9,029	44,054	46,029	38.3	59.9	1.8[6]	—	—	46,029	560	..	.	150	25,500	14,900
Virgin Islands (U.S.)	323	2,829	1,050	100.0	—	—	—	—	1,050	9,633	..	..	..	..	290
West Bank	..	..	..	..	..	..	..	1,929	1,929	513	.	.	..	..	1
Western Sahara	58	508	90	100.0	—	—	—	—	90	336	..	.	..	..	..
Yemen	997	7,096	4,337	100.0	—	—	—	—	4,337	208	..	..	..	..	..
Zambia	1,778	19,798	8,512	0.6	99.4	—	231	—	8,251	721	33	67	10	233	153
Zimbabwe	2,099	17,616	9,908	44.3	55.7	—	—	2,040	11,948	924	42.6	57.4	502	3,398	3,435

[1]In addition, geothermal equals 0.1%. [2]South Africa includes Botswana, Lesotho, Namibia, and Swaziland [3]In additon, geothermal equals 2.1%. [4]Includes 173,936,000,000 of Canadian oil sands. [5]2005 [6]Geothermal [7]France includes Monaco. [8]In addition, geothermal equals 4.2%. [9]In addition, geothermal equals 0.7%. [10]In addition, geothermal equals 0.2%. [11]Italy includes San Marino.

natural gas					crude petroleum								country
published proven reserves, 2007 ('000,000,000 cu m)	production		consumption		reserves		production, 2004 ('000,000 barrels)	consumption, 2004 ('000,000 barrels)	consumption per capita (barrels)	refining capacity, 2007 ('000 barrels per day)	pipelines (2006) length (km)		
	natural gas, 2004 ('000,000 cu m)	manufactured gas, 2004 ('000,000 cu m)	natural gas, 2004 ('000,000 cu m)	natural gas per capita (cu m)	published proven, 2007 ('000,000 barrels)	years to exhaust proven reserves, 2004					petroleum	gas	
.	.	.	.	.	.	.	—	—	—	.	—	—	New Caledonia
25	3,776	438	3,776	925	53	7	7.4	38	9.3	104	568	1,962	New Zealand
—	..	37	.	—	..	.	—	6.4	1.2	20	54	—	Nicaragua
.	.	.	.	—	.	.	—	—	—	—	—	—	Niger
5,151	22,388	167	9,668	75	36,220	33	899	38	0.3	439	7,795	3,063	Nigeria
.	.	.	.	.	.	.	—	—	—	—	—	—	Northern Mariana Islands
2,328	81,278	7,760	5,106	1,115	7,849	8	1,130	108	23.7	310	2,557	6,418	Norway
850	18,096	139	8,019	3,542	5,506	20	285	27	12.0	85	3,405	4,072	Oman
793	32,153	967	32,162	212	289	11	24	85	0.6	269	2,001	10,257	Pakistan
—	.	.	.	.	—	—	—	—	—	.	—	—	Palau
—	.	—	.	.	.	.	—	—	—	.	—	—	Panama
345	85	.	85	15.7	240	12	18	0.5	0.1	33	264	—	Papua New Guinea
—	.	.	.	.	.	.	—	0.5	0.1	8	—	—	Paraguay
247	1,409	1,328	1,409	51.2	930	8	34	60	2.2	193	1,767	1,667	Peru
99	2,479	559	2,479	30.4	139	22	0.1	75	0.9	333	240	565	Philippines
165	5,821	6,045	17,616	461	96	18	6.6	134	3.5	467	2,161	13,552	Poland
—	.	431	3,938	376	.	.	—	93	8.9	304	182	1,099	Portugal
—	.	101	679	175	.	.	0.3	85	21.7	110	—	—	Puerto Rico
25,783	41,155	2,865	16,872	25,296	15,207	47	269	34	50	200	844	1,639	Qatar
...	..	.	.	.	.	.	—	—	—	—	.	—	Réunion
63	12,114	2,474	16,269	749	600	18	41	94	4.3	517	2,427	3,508	Romania
47,573	514,548	28,480	350,223	2,435	60,000	18	3,199	1,372	9.5	5,341	85,941	156,407	Russia
57	0.2	—	0.2	.	.	.	—	—	—	—	—	—	Rwanda
.	.	.	.	.	.	.	—	—	—	—	—	—	St Kitts and Nevis
.	.	.	.	.	.	.	—	—	—	—	.	—	St Lucia
.	.	.	.	.	.	.	—	—	—	—	—	—	St Vincent and the Grenadines
.	.	.	.	.	.	.	—	.	—	.	.	—	Samoa
.	.	.	11	.	.	.	.	11	11	—	.	—	San Marino
.	..	.	.	.	.	.	—	—	—	—	—	—	São Tomé and Príncipe
6,796	65,679	37,145	65,679	2,897	262,300	74	3,264	610	27	2,095	5,681	3,275	Saudi Arabia
—	13	20	13	1.1	.	.	—	8.6	0.8	27	.	43	Senegal
48	306	111	2,342	216	78	34	4.8	29	2.7	215	393	3,177	Serbia[15]
.	.	.	.	.	.	.	—	—	—	—	—	—	Seychelles
—	.	.	.	.	.	.	—	1.9	0.3	10	—	—	Sierra Leone
—	—	1,721	6,303	1,487	.	.	—	324	76	1,337	8	139	Singapore
14	169	1,625	6,555	1,218	9.0	24	0.3	42	7.8	115	416	6,769	Slovakia
5.7	5.2	7.0	1,071	537	7.0	.	—	—	—	14	11	2,526	Slovenia
...	.	.	.	—	.	.	—	—	—	—	—	—	Solomon Islands
5.7	.	.	.	.	.	.	—	—	—	—	—	—	Somalia
2.8	1,978	4,000	1,978	38.5	15	1	34	207	4.0	505	2,320	1,162	South Africa
2.5	356	4,359	28,942	670	150	8	1.9	449	10.4	1,272	4,069	7,962	Spain
—	.	74	.	—	—	—	—	16	0.8	50	—	—	Sri Lanka
85	.	353	.	.	5,000	5	110	28	0.8	122	5,543	156	Sudan, The
—	.	.	.	.	111	42	3.8	3.2	7.4	7	51	—	Suriname
...	.	.	.	.	.	.	.	[2]	—	—	—	—	Swaziland
—	.	1,836	1,054	117	.	.	—	150	16.8	434	—	798	Sweden
—	—	571[13]	3,310[13]	444[13]	.	.	—	371[13]	5.0[13]	132	101	1,831	Switzerland
241	6,860	334	6,860	382	2,500	18	159	85	4.7	240	2,000	2,764	Syria
84	850	.	850	37.6	4.0	4	2.8	352	15.3	1,220	—	686	Taiwan
5.7	32	.	563	87.6	12	111	0.1	0.1	.	—	38	549	Tajikistan
6.5	127	—	127	3.4	.	.	—	—	—	15	872	254	Tanzania
418	18,819	7,027	27,295	428	290	8	29	315	5.0	703	379	3,760	Thailand
—	.	.	.	.	.	.	—	—	—	—	—	—	Togo
...	.	.	.	.	.	.	—	—	—	—	—	—	Tonga
733	26,303	1,032	12,527	9,588	728	13	45	48	36.6	175	571	1,531	Trinidad and Tobago
65	2,070	76	3,278	330	400	12	25	12	1.2	34	1,578	2,945	Tunisia
8.5	708	3,174	23,373	331	300	17	16	186	2.8	714	3,543	4,621	Turkey
2,832	57,288	443	13,691	2,873	600	7	69	47	10	237	1,361	6,441	Turkmenistan
.	.	.	.	.	.	.	.	.	—	.	.	.	Tuvalu
...	.	.	.	.	.	.	—	—	—	—	—	—	Uganda
1,104	20,479	5,476	78,531	1,655	395	48	22	178	3.7	880	8,725	19,951	Ukraine
6,071	45,800	9,142	38,753	8,872	97,800	96	878	68	1.6	781	3,106	3,400	United Arab Emirates
481	113,935	14,275	115,230	1,930	3,875	6	653	616	10.3	1,877	9,538	22,205	United Kingdom
5,788	529,874	121,163	622,433	2,117	21,757	11	1,965	5,869	20	17,339	244,620[18]	548,665[18]	United States
—	—	161	111	32.3	.	.	—	15.4	4.5	50	160	257	Uruguay
1,841	57,288	285	54,369	2,074	594	11	32	32	1.2	222	868	9,594	Uzbekistan
...	.	.	.	.	.	.	—	.	.	.	—	.	Vanuatu
4,315	24,964	5,849	24,964	956	80,012	70	1,022	373	14	1,282	10,280	5,369	Venezuela
193	5,501	391	5,501	67.0	600	16	144	—	—	—	256	595	Vietnam
—	.	.	.	.	.	.	6	42	380	495	—	—	Virgin Islands (U.S.)
.	.	.	.	.	.	.	—	.	—	.	.	—	West Bank
...	.	.	.	.	.	.	—	—	—	—	.	.	Western Sahara
479	.	104	.	.	3,000	26	148	29	1.4	130	1,284	93	Yemen
—	.	19	.	—	..	.	—	3.0	0.3	24	771	—	Zambia
.	.	105	.	—	.	.	—	—	—	—	261	—	Zimbabwe

[12]In addition, geothermal equals 0.5% [13]Switzerland includes Liechtenstein. [14]In addition, geothermal equals 1.9% [15]Serbia includes Montenegro [16]In addition, geothermal equals 5.6%
[17]In addition, geothermal equals 0.6% [18]2003

Communications

Virtually all the states of the world have a variety of communications media and services available to their citizens: book, periodical, and newspaper publishing (although only daily papers are included in this table); postal services; and telecommunications systems, that is, television broadcasting, telephones (fixed and mobile), personal computers (PC's), and access to the Internet. Unfortunately, the availability of information about these services often runs behind the capabilities of the services themselves. Certain countries publish no official information; others publish data analyzed according to a variety of fiscal, calendar, religious, or other years; still others, while they possess such data almost simultaneously with the end of the business or calendar year, may not see them published except in company or parastatal reports of limited distribution. Even when such data are published in national statistical summaries, it may be only after a delay of up to several years.

The data also differ in their completeness and reliability. Book production generally include all works published in separate bindings except advertising works, timetables, telephone directories, price lists, catalogs of businesses or exhibitions, musical scores, maps, atlases, and the like. The figures include government publications, school texts, theses, offprints, series works, and illustrated works, even those consisting principally of illustrations. Figures refer to works actually published during the year of survey, usually by a registered publisher, and deposited for copyright. A book is defined as a work of 49 or more pages; a work published simultaneously in more than one country is counted as having been published in each. A periodical is a publication issued at regular or stated intervals and, in Unesco's usage, directed to the general public. Newspaper statistics are especially difficult to collect and compare. Newspapers continually are founded, cease publication, merge, or change frequency of publication. Data on circulation are often incomplete, slow to be aggregated at the national level, or regarded as proprietary. In some countries no daily newspaper exists.

Post office statistics are compiled mainly from the Universal Postal Union's annual summary *Statistique des services postaux*. Postal services, unlike the other media discussed earlier, tend most often to be operated by a single national service, to cover a country completely, and to record traf-

Communications

country	publishing (latest)							postal services				telecommunications	
	books		periodicals		daily newspapers			post offices, 2004				television, 2000	
	number of titles	number of copies ('000)	number of titles	number of copies ('000)	number	total circulation ('000)	circulation per 1,000 adult persons	number	persons per office	pieces of mail handled ('000,000)	pieces handled per person	receivers (all types; '000)	receivers per 1,000 persons
Afghanistan	2,795	3,741	..	..	12	113	5	410	69,693	2.4	0.03	362	14
Albania	381	5,710	143	3,477	21	76	29	563	5,527	7.6	1.8	383	123
Algeria	670	..	48	803	24	796	24	3,287	9,844	234	11	3,330	110
American Samoa	..	..	..	..	2	5.0	93	..	.	..	..	13	211
Andorra	57	..	..	.	2	17	227	..	.	..	..	30	458
Angola	22	419	.	.	5	128	11	55	281,637	0.7	0.05	193	19
Antigua and Barbuda	..	..	..	.	2	6.0	91	13	6,194	6.0	32	33	501
Argentina	9,850	39,663	.	..	182	2,200	75	5,689	6,745	393	9	10,500	293
Armenia	396[4]	20,212[4]	44	541	12	22	9	907	3,298	3.6	0.6	759	244
Aruba	..	..	..	..	13	73	852	4	17,100	12	94	20[6]	204[6]
Australia	10,835	..	.	.	49	2,934	182	3,844	5,188	5,727	261	14,200	738
Austria	25,358	..	2,792	.	16	2,720	394	1,999	4,088	2,054	252	4,310	536
Azerbaijan	542	2,643	49	801	24	132	23	1,311	6,373	7	1.2	2,080	259
Bahamas, The	.	..	..	..	4	39	130	62	5,141	26	46	75	247
Bahrain	40[4]	.	26	73	6	88	130	13	55,063	48	54	256	402
Bangladesh	.	.	..	..	37	6,880	53	9,995	13,928	290	2.1	909	7.0
Barbados	.	.	.	.	2	53	199	18	14,938	45	156	78[7]	290[7]
Belarus	3,809	59,073	155	3,765	10	1,101	127	3,784	2,593	876	51	3,420	342
Belgium	13,913	.	13,706	.	29	1,706	198	1,369	7,597	3,713[8]	346[8]	5,550	541
Belize	70	—	..	.	10	23.5	0.5	134[6]	1,720[6]	4.0[6]	12[6]	42[7]	179[7]
Benin	84[4]	42[4]	.	.	8	15	2.0	178	45,939	12	1.0	289	45
Bermuda	.	.	..	.	1	19	292	..	.	.	..	66[8]	1,031[8]
Bhutan	.	.	.	.	1	..	..	110	19,235	1.4	1.9	13[7]	20[7]
Bolivia	.	.	.	.	19	130	24	78	84,300	9.9[8]	0.7[8]	970	119
Bosnia and Herzegovina	.	.	.	.	7	106	26	245	15,957	29	13	411	111
Botswana	158[4]	..	14	177	2	76	49	181	9,773	39	22	41	25
Brazil	21,574[9]	104,397[9]	.	..	532	6,522	47	12,367	14,871	8,318	44	58,900	343
Brunei	45[4]	56[4]	15	132	2	25	94	32	11,428	10	26	216	668
Bulgaria	4,840	20,317	772	1,740	62	667	104	3,008	2,587	131	17	3,600	449
Burkina Faso	12[4]	14[4]	37	24	5	12	1.0	73	175,640	3.5	0.5	147	12
Burundi	.	.	.	.	1	11	2.0	32	227,557	16[2]	1.3[2]	171	30
Cambodia	.	.	.	.	6	36	3.0	79	174,660	3.7	0.2	100	8.0
Cameroon	.	.	.	..	3	35	2.0	377[6]	37,000[6]	6.1[6, 10]	0.46[6, 10]	503	34
Canada	19,900	.	1,400	37,108	100	5,350	199	..	.	..	..	21,700	716
Cape Verde	..	.	.	..	4	..	.	54[8]	7,780[8]	1.6[8]	2.1[8]	2.0	4.6
Cayman Islands	.	.	.	.	.	12[3]	..	..	.	..	..	23[6]	639[6]
Central African Republic	..	.	.	.	6	7.0	2.0	24	166,082	.	..	21	6.0
Chad	..	..	.	..	1	2.0	0.2	42	224,951	10	0.6	8.4	1.0
Chile	2,469	4,095	417	3,450	59	816	68	710[8]	20,870[8]	343[8]	23[8]	3,580	242
China	130,613	7,240[11]	7,999	250,400	1,035	85,470	86	66,393	19,700	25,163	19	370,000	293
Colombia	1,481	11,314	..	.	24	1,093	25	1,996	22,500	97	2.0	11,200	282
Comoros	.	.	..	.	1	..	..	37[8]	17,800[8]	0.4[8]	0.3[8]	..	..
Congo, Dem. Rep. of the	64[4]	535[4]	.	.	8	146	3.0	497[8]	98,870[8]	..	..	150[12]	3.0[12]
Congo, Rep. of the	.	..	3	34	6	28	8.0	..	.	.	..	45	13
Costa Rica	963	.	..	.	7	275	96	149	28,544	26	6.2	907	231
Côte d'Ivoire	.	.	.	.	20	115	7	197	90,720	40	2.1	950	60
Croatia	1,718	.	352	6,357	12	508	102	1,158	3,920	367	65	1,300	293
Cuba	932	4,610	14	285	16	600	66	1,855[8]	5,990[8]	12[8]	1.1[8]	2,800	250
Cyprus	930	1,776	39	338	8	46	76	1,111	743	71	69	120	180
Czech Republic	10,244	.	1,168	81,387	81	1,861	213	3,419	2,992	3,364	303	5,200	508
Denmark	12,352	.	157	6,930	34	1,825	414	996	5,436	1,389	257	4,310	807
Djibouti	.	.	7	6.0	—	—	—	11	70,828	0.9	0.4	31	71
Dominica	.	.	..	.	—	—	—	..	..	..	..	16	220
Dominican Republic	.	.	..	.	11	230	27	278	31,539	6.6	0.6	810	97
East Timor	.	..	..	.	2	3	3	5	177,367	0.1	0.1	..	..
Ecuador	12[4]	19[4]	199	.	36	1,220	137	315[8]	38,600[8]	13[8]	0.4[8]	2,710	218
Egypt	2,215	92,353	258	2,373	17	2,000	31	5,615	12,937	312	3.2	12,200	189
El Salvador	.	.	45	774	5	250	59	317	21,333	9	0.8	1,250	201
Equatorial Guinea	..	..	.	.	..	..	..	20	24,612	..	..	4.0[6]	9.0[6]
Eritrea	106	420	.	.	—	—	—	66	64,114	2.8	0.4	97	26

fic data according to broadly similar schemes (although the details of *classes* of mail handled may differ). Some countries do not enumerate domestic traffic or may record only international traffic requiring handling charges. Data on mail traffic includes the number of copies of newspapers, and excludes advertising material and ordinary money orders.

Data for some kinds of telecommunications apparatus are relatively easy to collect; telephones, for example, must be installed, and service recorded so that it may be charged. But in most countries the other types of apparatus mentioned above may be purchased by anyone and used whenever desired. As a result, data on distribution and use of these types of apparatus may be collected in a variety of ways—on the basis of numbers of subscribers, licenses issued, periodic sample surveys, trade data, census or housing surveys, or private consumer surveys. Data on telephones refer to "main lines," or the lines connecting a subscriber's apparatus (fixed or mobile) to the public, switched net. The information provided for the number of PCs is estimated only. "Users" refers to the number of people with access to computers connected to the Internet.

The *Statistical Yearbook* of Unesco contains extensive data on book, periodical, and newspaper publishing, and on television broadcasting that have been collected from standardized questionnaires. The quality and recency of its data, however, depend on the completion and timely return of each questionnaire by national authorities. The commercially published annual *World Radio TV Handbook* (Andrew G. Sennitt, editor) is a valuable source of information on broadcast media and has complete and timely coverage. It depends on data received from broadcasters, but, because some do not respond, local correspondents and monitors are used in many countries, and some unconfirmed or unofficial data are included as estimates. The statistics on telecommunications apparatus and computers are derived mainly from the UN-affiliated International Telecommunication Union's *World Telecommunication Development Report* (annual).

... Not available.

— None, nil, or not applicable.

telephones, 2007		cellular phones, 2007		personal computers, 2005		Internet users, 2007		broadband, 2007		country
main lines		cellular subscriptions ('000)	subscriptions per 1,000 persons	units ('000)	units per 1,000 persons	number ('000)	users per 1,000 persons	subscriptions ('000)	subscriptions per 1,000 persons	
('000)	per 1,000 persons									
81	3 0	4,668	172			500	18	0 5[1]	—[1]	Afghanistan
283[1]	90[1]	2,300	721	36[2]	12[2]	471[1]	150[1]	10	3 1	Albania
3,068	91	27,562	814	350	11	3,500	103	287	8 5	Algeria
10[3]	163[3]	2.2[2]	38[2]							American Samoa
37	501	69	918			59	791	20	264	Andorra
98[1]	6.2[1]	3,307	194	27[2]	1 9[2]	100	5 9			Angola
38[1]	494[1]	110	1,336			60	723	6 8[1]	82[1]	Antigua and Barbuda
9,500	240	40,402	1,022	3,000[2]	82[2]	10,246	259	2,600	66	Argentina
594[5]	197[5]	318	105	200[3]	66[3]	173[1]	58[1]	2 0[5]	0 7[5]	Armenia
39	372	146	1,404			24	257	15	145	Aruba
9,760	471	21,260	1,025	13,720[3]	689[3]	11,300	545	4,830	233	Australia
3,407	408	9,912	1,186	4,996	611	4,750	568	1,622	194	Austria
1,253	148	4,519	534	195	23	927	109	5 7	0.7	Azerbaijan
133	401	374	1,129			120	362	13.0	39	Bahamas, The
194	263	1,116	1,483	121[3]	164[3]	250	332	68	91	Bahrain
1,187	7.5	34,370	217	1,650[3]	11[3]	500	3.2			Bangladesh
135	501	237[1]	875[1]	40	149	160[5]	595[5]	55[1]	205[1]	Barbados
3,672	379	5,960[1]	614[1]	109[3]	11[3]	6,000	619	11[1]	1.2[1]	Belarus
4,668	446	10,738	1,027	3,627[3]	351[3]	5,220	499	2,715	260	Belgium
34	118	118	411	35[3]	127[3]	32	111	6 5	23	Belize
110	12	1,895	210	32	4 3	150	17	2 0	0 2	Benin
58[1]	895[1]	60	933	34[3]	535[3]	48	744	24[1]	367[1]	Bermuda
30	34	149	172	13	17	40	46			Bhutan
678	71	3,254	342	190[3]	23[3]	1,000	105	34	3 6	Bolivia
1,065	271	2,450	623			1,055	268	85	22	Bosnia and Herzegovina
137	73	1,427	758	80[3]	45[3]	80[1]	46[1]	3 5	1 9	Botswana
39,400	205	120,980	631	19,350[3]	107[3]	53,140	277	6,788	35	Brazil
80[1]	263[1]	301	789	31[3]	85[3]	159[1]	417[1]	11	29	Brunei
2,300	301	9,897	130	461[3]	59[3]	1,905	249	629	82	Bulgaria
95[1]	7.0[1]	1,611	109	31	2 4	80[1]	5 9[1]	1 7[1]	0 1[1]	Burkina Faso
35[1]	4.5[1]	250	29	34[4]	4 8[3]	60[1]	7 7[1]			Burundi
38	2 6	2,583	179	38[3]	2 6[3]	70	4 8	8 4	0 6	Cambodia
189	10	4,536	245	160[3]	9 8[3]	370[1]	22[1]	0 4	—	Cameroon
18,241	555	20,277	617	22,390[3]	705[3]	25,000[1]	768[1]	9,075	276	Canada
72[1]	138[1]	148	279	48[3]	10[3]	37	70	1 8[1]	3 5[1]	Cape Verde
38[2]	884[2]	34[3]	766[3]			22	466			Cayman Islands
12[1]	2.9[1]	130	30	11[3]	2 8[3]	60[1]	6 0[1]			Central African Republic
13[1]	1.3[1]	918	85	15[3]	1.7[3]	21	26			Chad
3,379	203	13,955	837	2,300	148	4,208	255	1,312	79	Chile
365,448	275	547,286	412	52,990[3]	40[3]	137,000	104	66,464	50	China
7,936	172	33,941	735	1,892	42	6,705	145	1,207	26	Colombia
19[1]	23[1]	40	48	5 0[3]	6 3[3]	21[1]	26[1]			Comoros
10[1]	0 2[1]	6,592	105			230	3 7			Congo, Dem. Rep. of the
16	4	1,288	342	17[3]	4 5[3]	70[1]	17[1]			Congo, Rep. of the
1,437	322	1,508	338	1,014[3]	239[3]	1,500	336	134	30	Costa Rica
261[1]	14[1]	7,050	366	262[3]	16[3]	300[1]	16[1]	—	—	Côte d'Ivoire
1,847	405	5,035	1,105	842[3]	191[3]	1,985	436	387	85	Croatia
1,043	93	198	18	377	34	1,310	116	1.9	0 2	Cuba
384	449	988	1,156	249[3]	309[3]	380	445	100	117	Cyprus
2,403	236	12,721	1,249	2,450[3]	240[3]	4,000	393	1,314	129	Czech Republic
2,825	519	6,230	1,145	3,543[3]	659[3]	3,500	643	1,959	360	Denmark
11[5]	14[5]	44[5]	56[5]	21[3]	31[3]	11[1]	14[1]			Djibouti
21[3]	295[3]	42[3]	589[3]	9.0[3]	127[3]	27[1]	372[1]	3.3[3]	41[3]	Dominica
907	93	5,513	565			1,677	172	154	16	Dominican Republic
2.4	2 1	78	68			1.2[1]	1.2[1]			East Timor
1,805	135	10,086	756	514	39	1,760	132	319	24	Ecuador
11,229	149	30,065	398	2,800	38	10,532	140	477	6.3	Egypt
1,080	158	6,137	895	350	51	763	111	90	13	El Salvador
10[5]	20[5]	220	436	7 0[3]	14[3]	8 0[1]	16[1]	0 2[1]	0.4[1]	Equatorial Guinea
37	7 7	84	17	35	8 0	120	25			Eritrea

Communications (continued)

country	publishing (latest)							postal services				telecommunications	
	books		periodicals		daily newspapers			post offices, 2004				television, 2000	
	number of titles	number of copies ('000)	number of titles	number of copies ('000)	number	total circulation ('000)	circulation per 1,000 adult persons	number	persons per office	pieces of mail handled ('000,000)	pieces handled per person	receivers (all types; '000)	receivers per 1,000 persons
Estonia	2,628	6,662	517	2,323	11	257	228	545	2,450	110	54	809	591
Ethiopia	240	674			5	92	1.4	650	116,307	29	0.3	376	6.0
Faroe Islands	.	.	.	.	1	6.0	136	33	1,416	11	271	47	1,022
Fiji	401	2,256	. .	.	3	33	37	169	4,975	30	31	92	113
Finland	13,104		5,711		53	2,255	522	1,311	3,993	1,859	506	3,580	692
France	34,766	1,041	2,672	120,018	85	7,934	160	16,947	3,556	19,658	326	37,000	628
French Guiana	.	.	.	.	1	2.0	7.0	. .	.	.	.	30[6]	172[6]
French Polynesia	.	.	. .	.	2	24	108	97[8]	2,370[8]	28[8]	102[8]	45	189
Gabon	.	.	. .	.	1	22	16	60	22,706	6.6	3.7	410	326
Gambia, The	14[13]	10[13]	10	885	2	2.6	1.7	19	77,772	7.8	2.0	3.9	3.0
Gaza Strip[14]	.	.	.	.	.	.	.	.	. .	.	. .	. .	. .
Georgia	581[4]	834[4]	.	.	9	26	7	998	4,527	3,241	716	2,380	474
Germany	71,515		9,010	395,036	371	22,095	313	13,019	6,348	23,869	289	48,200	586
Ghana	28	648	121	774	7	160	8	721	30,048	125[15]	2.5[15]	2,300	118
Greece	4,225		. .		32	618	68	2,200	5,045	734	54	5,330	488
Greenland	103	.	. .	.	—	—	—	75	757	7.9	85	22[6]	393[6]
Grenada	. .		4	89	—	—	—	53	1,929	8.9	51	33[7]	355[7]
Guadeloupe	. .	.	.	.	1	35	81	. .	. .	. .	. .	118[7]	262[7]
Guam		.	.	.	1	26	180	. .	. .	. .	. .	106[7]	646[7]
Guatemala			.	.	6	417	31	436	28,199	34	2.1	697	61
Guernsey			. .	. .	. .	.	. .	12	5,000	56	642	. .	. .
Guinea			3	5.0	2		. .	40	94,800	7.9[8]	0.4[8]	357	44
Guinea-Bissau			. .	. .	—	—	—	20	76,986	. .	. .	. .	. .
Guyana	42[4]	508[4]	. .	.	3	42	50	71	10,567	15	13	60[7]	70[7]
Haiti		.			3	26	3.0	55	152,853	1.7	0.3	36	5.0
Honduras	22	80	.	.	6	223	34	. .	. .	. .	. .	610	96
Hong Kong	. .		598	. .	30	319	54	131	53,152	1,254[8]	175[8]	3,290	493
Hungary	9,193	53,194	1,203	14,927	32	1,820	216	2,824	3,585	2,202	135	4,460	437
Iceland	1,527		938	384	3	91	292	94	3,106	68	355	143	509
India	11,903	.	. .	.	410	33,930	46	153,021[8]	6,240[8]	16,394[8]	16[8]	79,300	78
Indonesia	4,018[13]	8,103[13]	115	4,173	218	4,866	28	19,632	11,210	1,076	4.5	31,500	149
Iran	15,073	87,861	318	6,166	32	1,780	28	6,511	10,567	267	4.0	10,400	163
Iraq	. . .	.	.	. . .	11	. . .	.	278	100,924	69[8]	2.1[8]	1,880	83
Ireland		.		.	7	742	234	1,604	2,543	749	184	1,530	399
Isle of Man	. . .	.	. .	.	. . .	.	. . .	31	2,475	49	651	. . .	. . .
Israel	2,310[18]	9,368[18]		. .	34	2,722	406	661	9,986	764	116	2,040	335
Italy	35,236	278,821	9,951	80,469	94	7,737	154	13,855	4,189	6,661	115	28,100	494
Jamaica	.	. .	. . .	.	3	161	62	603	4,377	71	26	502	194
Japan	56,221[4]	400,013[4]	2,926		107	70,364	544	24,678	5,184	28,016	219	92,000	725
Jersey	. .	.	. .	. .	. . .	.		21	4,190	62[6]	468[6]	. . .	. . .
Jordan	511	2,673[4]	31	43	4	383	77	392	12,941	24	4.8	417	84
Kazakhstan	1,226	21,014		.	4	500	30	3,733	3,975	153	10.1	3,580	241
Kenya	300[4]	452	. .		5	315	10	865	38,691	136	4.1	758	25
Kiribati	.		. .		—	—	—	25[6]	3,200[6]	1.9[6]	1.2[6]	3	36
Korea, North	. . .				3	4,500	208	.	. . .	. . .	.	1,170	54
Korea, South	30,487[4]	142,804[4]	. .		136	18,500	393	3,692	12,905	4,952	103	17,100	364
Kosovo	.			.	. . .	.	. .	. . .	. . .	. . .	. .	. . .	. . .
Kuwait	196[19]	6,107[19]		.	7	390	173	59	44,177	32	12	1,090	486
Kyrgyzstan	351	1,980			3	73	15	922	5,644	28	5.6	239	49
Laos	88[4]	995[4]			4	22	4.0	234	24,751	1.1	0.2	53	10
Latvia	1,965	7,734	213	1,660	22	356	182	968	2,395	116	50	1,870	789
Lebanon	..			..	15	215	77	200	17,701	13	3.4	1,200	335
Lesotho	.		.	. . .	6	14	8.0	153	11,751	2.6	1.1	29	16
Liberia	.		.		3	33	12	34[12]	8,260[12]	. . .	.	79	25
Libya	26	2,645	.	.	5	79	15	360	15,945	50	8.8	717	137
Liechtenstein	.		.		2	19	606	12	2,850	34	977	12[6]	375[6]
Lithuania	3,645	14,915	269	. .	19	101	29	955	3,606	175	51	1,480	422
Luxembourg	681	.	508		6	115	303	105	4,211	220	485	170	391
Macau	67	99	16		10	197	448	18	25,401	27	58	123	286
Macedonia	892	2,496	74	347	13	150	92	320	6,345	28	14	571	282
Madagascar	119	296	55	108	9	78	5.0	617	29,356	26[8]	1.5[8]	372	24
Malawi	117[4, 21]	9,174[4, 21]	.	. . .	2	22	1.8	325	38,795	44[8]	3.4[8]	33	3.0
Malaysia	5,843	29,040	25	996	35	2,753	172	1,202	20,711	1,238	49	3,900	168
Maldives				.	3	5.0	18	216	1,487	1.4	4.8	11	40
Mali	14[4]	28[4]	. .	. .	4	11	1.0	124[8]	86,200[8]	3.4[8]	0.2[8]	130[8]	12[8]
Malta	404	.	359	.	4	48	130	51	7,839	57	143	217	556
Marshall Islands	.		. . .		—	—	—	..	..	..	..	. . .	. . .
Martinique	.		.	.	1	30	78	. .	. . .	. . .	. .	66[6]	168[6]
Mauritania	. .	. .	. . .		3	1.0	0.5	26	114,629	0.3	0.1	239	96
Mauritius	80	163	62	.	2	60	65	125	9,865	74	60	318	268
Mayotte	.	.	. .	. .	. . .	.	. .	. .	. .	.	. .	3.5[12]	30[12]
Mexico	.	.	158	13,097	299	9,580	98	8,002	13,209	698	6.6	27,700	283
Micronesia			. . .	. .	—	—	—	. .	. .	. .	. .	2.2	20
Moldova	921	2,779	76	196	6	75	21	1,146	3,681	99	24	1,270	297
Monaco	41	722	3	38	—	—	—	..	. . .	. .	.	25[6]	758[6]
Mongolia	285[4]	959[4]	45	6,361	6	50	25	385	6,790	20	8.1	155	65
Montenegro	.			. .	. . .	.	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Morocco	918	1,836		. .	20	355	10	1,653	18,766	284	9.5	4,720	166
Mozambique		3,490			6	16	1.0	299	64,963	8.9	0.5	88	5.0
Myanmar (Burma)	3,660	4,038		. .	8	501	10	1,331	37,569	. . .	. . .	292	7.0
Namibia	106				5	35	19	118	17,028	79	39	69	38
Nauru	.			. .	—	—	—	1	10,100	. . .	.	0.5[6]	0.1[6]
Nepal	.	.	.	. .	29	250	11	4,156[8]	5,260[8]	74	2.8	159	7.0
Netherlands, The	34,067		367	19,283	36	4,712	351	3,188	5,090	5,303[22]	326[22]	8,570	538
Netherlands Antilles	.		.	.	3	70	334	15	12,058	24	132	69[6]	321[6]

telephones, 2007		cellular phones, 2007		personal computers, 2005		Internet users, 2007		broadband, 2007		country
main lines		cellular subscriptions ('000)	subscriptions per 1,000 persons	units ('000)	units per 1,000 persons	number ('000)	users per 1,000 persons	subscriptions ('000)	subscriptions per 1,000 persons	
('000)	per 1,000 persons									
496	371	1,982	1,484	650	489	780	584	278	208	Estonia
880	11	1,209	15	225[3]	3.1[3]	291	3.5	0.3	—	Ethiopia
23	459	52	1,067	.	.	38	767	13	271	Faroe Islands
122	145	530	632	44[3]	52[3]	80	94	12	14	Fiji
1,740	330	6,080	1,152	2,515[3]	482[3]	3,600	682	1,617	306	Finland
34,800	565	55,358	898	35,000	579	31,571	512	15,550	252	France
51[2]	268[2]	138[2]	781[2]	.	.	42[5]	225[5]	.	.	French Guiana
54[1]	207[1]	175	665	78[3]	315[3]	75	285	23	89	French Polynesia
27	20	1,169	879	45	33	82	62	2.0	1.5	Gabon
76	45	800	468	23[3]	16[3]	100	59	0.3	0.2	Gambia, The
.	.	.	.	.	.	.	.	.	.	Gaza Strip[14]
556	127	2,600	592	192[3]	38[3]	360	82	47	11	Georgia
53,750	651	97,151	1,176	46,300[3]	561[3]	39,170	474	19,600	237	Germany
377	16	7,604	324	112[3]	5.2[3]	880	38	16	0.7	Ghana
6,010	539	12,295	1,103	986[3]	90[3]	2,540	228	1,018	91	Greece
36[1]	628[1]	66	1,159	.	.	52	908	.	.	Greenland
28[1]	267[1]	46[1]	446[1]	16[3]	155[3]	23	218	5.5[1]	54[1]	Grenada
210[16]	457[16]	350[3]	790[3]	100[3]	217[3]	85[5]	190[5]	.	.	Guadeloupe
80[17]	508[17]	33[2]	207[2]	.	.	65[5]	383[5]	2.7	16	Guam
1,355	105	10,150	760	231[3]	18[3]	1,320	102	27[5]	2.2[5]	Guatemala
55[16]	877[16]	32[2]	500[2]	.	.	39[5]	598[5]	.	.	Guernsey
50	16	2,000	213	44[3]	55[3]	50[1]	5.2[1]	.	.	Guinea
4.6	2.7	296	175	.	.	37[1]	23[1]	.	.	Guinea-Bissau
110[5]	147[5]	281[5]	375[5]	29	39	190	258	2.0[5]	2.7[5]	Guyana
108	11	2,500	261	.	.	1,000	104	.	.	Haiti
821.2	116	4,185	589	110[3]	16[3]	424	60	.	.	Honduras
4,125	572	10,752	1,492	4,172	593	3,961	550	1,899	264	Hong Kong
3,251	324	11,030	1,100	1,476[3]	150[3]	3,500	349	1,429	143	Hungary
187	620	328	1,089	142	483	202	672	98	325	Iceland
39,413	34	233,620	200	17,000	15	81,000	69	3,130	2.7	India
17,828	77	81,835	353	3,022[3]	14[3]	13,000	56	257	1.1	Indonesia
23,835	335	29,770	418	7,347[3]	105[3]	23,000	323	.	.	Iran
1,365	47	14,021	484	.	.	275	9.5	.	.	Iraq
2,113	491	4,983	1,159	2,011[3]	503[3]	1,708	397	806	187	Ireland
.	.	.	.	.	.	.	.	.	.	Isle of Man
3,005[1]	439[1]	8,902	1,285	5,037[3]	734[3]	2,000	287	1,529	221	Israel
26,890	463	78,571	1,351	18,150[3]	317[3]	32,000	544	10,860	185	Italy
342[1]	129[1]	2,495[1]	937[1]	166[3]	62[3]	1,500	553	79[1]	30[1]	Jamaica
51,232	400	107,339	839	69,200[3]	542[3]	88,110	689	28,287	221	Japan
74[16]	849[16]	61[16]	706[16]	.	.	27[3]	308[3]	.	.	Jersey
586	99	4,772	805	300[3]	53[3]	1,127	190	86	15	Jordan
3,237	210	12,323	799	.	.	1,901	123	270	18	Kazakhstan
265	7.1	11,349	302	441[3]	14[3]	3,000	80	18	0.1	Kenya
4.0[1]	43[1]	0.7[1]	7.5[1]	2.0[2]	23[2]	2.0	21	.	.	Kiribati
1,100[7]	50[7]	.	.	.	.	.	.	.	.	Korea, North
31,428	655	43,497	902	26,201[3]	545[3]	35,590	738	14,710	305	Korea, South
135[1]	65[1]	540[1]	259[1]	.	.	50[1]	24[1]	4.7[5]	2.3[5]	Kosovo
517	187	2,774	973	600	223	900	316	25[5]	9.3[5]	Kuwait
459	86	2,168	408	100	19	750	141	2.9	0.1	Kyrgyzstan
95	16	1,478	252	100	17	100	17	3.6	0.1	Laos
644	283	2,217	974	501[3]	219[3]	1,177	517	146	64	Latvia
681	189	1,260	307	409	115	950	263	190[1]	53[1]	Lebanon
53[1]	30[1]	456	302	.	.	60	34	.	.	Lesotho
2.0	0.5	563	150	.	.	20[1]	5.3[1]	.	.	Liberia
852	146	4,500	731	130[3]	23[3]	260[1]	44[1]	9.6[1]	1.6[1]	Libya
20[20]	580[20]	25[20]	729[20]	.	.	20[20]	583[20]	.	.	Liechtenstein
799	235	4,912	1,449	533[3]	155[3]	1,333	393	508	150	Lithuania
248	532	604	1,295	290	624	345	740	129	275	Luxembourg
178	370	794	1,651	130[3]	278[3]	238	495	111	230	Macau
464	227	1,947	955	160	79	416	204	101	49	Macedonia
134	6.8	2,218	113	91[3]	5.1[3]	110[1]	5.8[1]	2.5	0.1	Madagascar
175	13	1,051	76	25	1.9	140	10	1.6	0.1	Malawi
4,350	164	23,347	879	4,900[3]	197[3]	14,793	557	1,011	38	Malaysia
33	108	314	1,026	36[3]	109[3]	19[3]	58[3]	.	.	Maldives
80	6.5	2,531	205	45	4.0	100	8.1	3.2	0.3	Mali
230	566	372	914	67	166	158	389	83	204	Malta
4.5[3]	83[3]	0.7[1]	111	5.0[3]	88[3]	2.2[1]	39[1]	.	.	Marshall Islands
172[17]	447[17]	349[3]	884[3]	52[2]	130[2]	130[5]	328[5]	.	.	Martinique
35	11	1,300	416	42[3]	14[3]	30[1]	9.5[1]	1.0[1]	0.3[1]	Mauritania
361	286	929	736	344[3]	279[3]	340	270	62	49	Mauritius
10[16]	70[16]	22[2]	15[2]	.	.	.	.	.	.	Mayotte
19,754	185	68,241	641	14,000	131	22,104	208	4,549	43	Mexico
8.7	78	27	247	.	.	15	135	—	—	Micronesia
1,080	285	1,883	496	112[3]	26[3]	700	185	47	12	Moldova
34[20]	1,028[20]	15[20]	463[20]	.	.	16[20]	491[20]	.	.	Monaco
159[1]	59[1]	776	289	340	128	320	123	7.4	—	Mongolia
353[1]	589[1]	.	.	.	.	280	468	.	.	Montenegro
2,394	77	20,029	642	740	24	6,600	211	477	15	Morocco
67	3.3	3,300	154	112[3]	5.9[3]	200	9.3	.	.	Mozambique
504[5]	10[5]	214[1]	4.2[1]	400	8.5	40	0.8	1.5	—	Myanmar (Burma)
138	67	800	398	220[3]	109[3]	101	49	0.3	0.1	Namibia
1.9[2]	160[2]	1.5[2]	130[2]	.	.	0.3[2]	26[2]	.	.	Nauru
701	25	3,269	116	118[3]	4.6[3]	398	14	9.9	0.4	Nepal
7,334	447	17,300	1,059	11,110[3]	685[3]	15,000	914	5,507	335	Netherlands, The
81.0[3]	372[3]	200[3]	1,106[3]	.	.	2.0[3]	9.3[3]	.	.	Netherlands Antilles

Communications (continued)

country	publishing (latest)							postal services				telecommunications	
	books		periodicals		daily newspapers			post offices, 2004				television, 2000	
	number of titles	number of copies ('000)	number of titles	number of copies ('000)	number	total circulation ('000)	circulation per 1,000 adult persons	number	persons per office	pieces of mail handled ('000,000)	pieces handled per person	receivers (all types; '000)	receivers per 1,000 persons
New Caledonia					1	24	127	54	4,308	14	61	104	492
New Zealand			126	3,991	23	738	233	1,021	3,907	...	...	2,010	522
Nicaragua					6	95	18	183[8]	26,300[8]	8.3[8]	1.2[8]	350	69
Niger	5[4]	11[4]			1	3.5	0.3	52	259,952	1.9	0.2	388	37
Nigeria	1,314	18,800			25	2,770	24	5,342	24,094	391[2]	2.0[2]	7,840	68
Northern Mariana Islands					..	...	...	...	...	...	...	...	...
Norway	6,900[18]		8,017		78	2,405	651	1,504	3,057	2,570	560	3,000	669
Oman	7[4]	21[4]	15		6	108	37	644	3,935	32	7.6	1,350	563
Pakistan	124	714			204	6,246	64	12,107	12,785	604	4.0	18,300	131
Palau	..				.			...	.	..	.	...	...
Panama					7	188	66	125	25,403	17	5.5	572	194
Papua New Guinea	122				2	51	9	...	..	..	..	88	17
Paraguay	152	..			4	227	43	264	22,792	4.6[8]	0.5[8]	1,200	218
Peru	612	1,836			73	4,250	154	1,947	14,156	21	0.7	3,840	148
Philippines	1,507[4]	14,718[4]	1,570	9,468	42	4,711	63	2,441	33,436	357	4.3	11,100	144
Poland	14,104	80,306	5,260	75,358	48	4,333	135	10,923	3,530	1,890	50	15,500	400
Portugal	7,868[9]	26,942[9]	984	10,208	16	680	77	3,026	3,451	1,950	186	6,380	630
Puerto Rico					5	624	173	..	..	..		1,260	330
Qatar	209[13]	2,205[13]	11	47	5	95	113	37	20,998	23	31	503	869
Réunion	69	.	..		3	55	83	...	.	...	..	127[6]	184[6]
Romania	7,199	38,374	987		51	1,148	61	6,821	3,195	402	19	8,340	381
Russia	36,237	421,387	2,751	387,832	485	15,300	105	40,140	3,585	4,634	34	61,500	421
Rwanda	..	..	15	101	1	0.5	0.1	19	467,493	2.5	0.3	10[6]	1.7[6]
St Kitts and Nevis			10	44	1			7	6,027	3.1	66	12	260
St Lucia					1	.	.	46	3,467	5.2	33	32[6]	208[6]
St Vincent and the Grenadines					2	1.0	9.0	41[6]	2,680[6]	.	..	26	234
Samoa			..		2	.	.	38[2]	4,470[2]	0.9[2]	3.0[2]	11	61
San Marino			15	9	2	2.0	72	10[12]	3,000[12]	...	...	9.0[6]	346[6]
São Tomé and Príncipe					1			9	16,996	0.3[8]	0.6[8]	34	228
Saudi Arabia	3,900[4]	14,493[4, 21]	471		12	1,093 [k]	42	1,421[8]	14,200[8]	1,246[8]	45[8]	5,810	264
Senegal	.	.	..		18	47	5.0	137	83,109	12	1.1	376	40
Serbia	5,367[23]	16,669[23]	395[23]		29[23]	1,130[23]	107[23]	1,653[23]	6,358[23]	209[23]	21[23]	2,980[23]	282[23]
Seychelles					1	3.0	46	5	15,982	3.6	44	16	203
Sierra Leone					8	18	4.0					57	13[16]
Singapore		.			11	1,542	415	138	30,961	834	197	1,220	304
Slovakia	3,800	6,139	424	8,725	12	480	107	1,598	3,380	517	96	2,190	407
Slovenia	3,441	6,267	784	.	7	360	208	557	3,532	849	425	720	368
Solomon Islands					1	5	16	127[8]	3,150[8]	.	...	9.6	23
Somalia					8	7.2	1.0	...	..	...	...	102	14
South Africa	5,418	31,349	11	2,149	18	1,406	46	2,449[8]	17,200[8]	2,700	56	6,310	127
Spain	46,330	192,019			136	4,240	123	3,291	12,958	5,871	135	24,000	591
Sri Lanka	4,115	19,650			13	493	33	4,680	4,395	411	20	2,060	111
Sudan, The	.				10	80	2	209	169,966	2.7	0.1	9,580	273
Suriname	47[4]	21[4]			3	50	116	42	10,630		...	109	253
Swaziland					2	27	26	51	20,280	14	14	124	119
Sweden	13,496	.	373	19,242	95	4,312	578	1,720[12]	5,140[12]	4,570[12]	503[12]	5,090	574
Switzerland	15,371		60	4,561	93	2,486	398	2,585	2,801	5,674	761	3,940	548
Syria	598	310[12]	30	192	4	326	20	604	30,765	16	0.9	1,090	67
Taiwan	.	. .		.	30	4,000	188	9,976	2,270	5,973	264	9,220[7]	417[7]
Tajikistan	132[4]	997[4]	11	130	—	—	—	593	10,844	24	3.6	2,010	326
Tanzania	172[4]	364[4]			19	102	5.0	418	90,017	38	1.1	650	20
Thailand	8,142		1,522		34	11,753	187	4,478	14,224	1,491	24	17,700	284
Togo					1	20	4.0	55	108,880	5.0	0.9	161	32
Tonga					—	—	—	...	..	...	.	2.0[6]	20[6]
Trinidad and Tobago	26	30			4	137	125	245[8]	5,220[8]	..		429	340
Tunisia	720	6,000[21]	170	1,748	10	180	24	1,257	7,952	149	15	1,890	198
Turkey	6,546		3,554	.	81	4,948	96	4,381	16,485	925	13	30,300	449
Turkmenistan	450[4]	5,493[4]			2	45	14	190	25,084	91	19	911	196
Tuvalu	.				—	—	—	..		...	. .	0.1[12]	9.1[12]
Uganda	288	2,229[18]	26	158	5	89	5.0	329	84,561	25	0.9	620	27
Ukraine	6,225	68,876	717	2,521	38	4,970	101	15,554	3,021	1,230	26	22,500	456
United Arab Emirates	293[21]	5,117[21]	80	922	6	423	168	356	12,035	164	38	948	292
United Kingdom	107,263	.			109	17,485	352	14,609	4,071	21,865	361	38,800[7]	652[7]
United States	68,175		11,593		1,457	54,626	233	37,159	7,950	206,649	703	241,000	854
Uruguay	934	1,970			4	973	293	1,409	1,245	18	5.4	1,760	531
Uzbekistan	1,003	30,914	81	684	5	74	3.0	2,961	8,851	77	3.0	6,830	276
Vanuatu					1	3	22			..	..	2.3	12
Venezuela	3,468[4]	7,420[4]	..		92	5,000	206	355	74,034	58	2.2	4,490	185
Vietnam	5,581	83,000	338	2,710	10	1,530	20	3,061	27,152	545	6.7	14,500	185
Virgin Islands (U.S.)					1	17	156	10	2,175	1.8	17	65	594
West Bank[14]			.		3	35	15	...	..	..		...	...
Western Sahara					1			..		...	...	6.0[12]	24[12]
Yemen					3	270	15	251	80,993	6.5	0.3	5,100	283
Zambia			.	...	3	55	9	195[8]	45,000[8]	20	1.8	1,400	134
Zimbabwe	232		28	680	3	122	10	1,162	11,133	137[8]	9.4[8]	2,074[7]	183[7]

telephones, 2007		cellular phones, 2007		personal computers, 2005		Internet users, 2007		broadband, 2007		country
main lines		cellular subscriptions ('000)	subscriptions per 1,000 persons	units ('000)	units per 1,000 persons	number ('000)	users per 1,000 persons	subscriptions ('000)	subscriptions per 1,000 persons	
('000)	per 1,000 persons									
60	249	176	730			80[1]	332[1]	20	84	New Caledonia
1,747	418	4,251	1,017	1,924[3]	493[3]	2,200[1]	542[1]	853	204	New Zealand
248	44	2,123	379	220	43	155[1]	28[1]	19[1]	3 4[1]	Nicaragua
24[5]	1 7[5]	900	63	10	0 7	40[1]	2 8[1]	0 2[5]	—[5]	Niger
1,580	11	40,396	273	867[3]	6 8[3]	10,000	68	0 5[5]	—[5]	Nigeria
27[17]	383[17]	21[1]	260[1]			10[3]	0 1[3]			Northern Mariana Islands
1,990	424	5,192	1,105	2,630[3]	578[3]	3,800	809	1,440	306	Norway
268	103	2,500	963	118[3]	40[3]	340	131	20	7 8	Oman
4,806	29	62,961	384	600[16]	4 2[16]	17,500	107	45	0 3	Pakistan
...	...	...	...			4 0[2]	203[2]			Palau
495	148	3,011	901	147	46	745	223	144	43	Panama
60	9 5	300	47	367[3]	63[3]	110[1]	18[1]			Papua New Guinea
394	64	4,694	766	460	75	530	87	52	8 4	Paraguay
2,673	96	15,417	553	2,800	100	7,636	274	570	20	Peru
3,940	45	51,795	589	3,684[3]	45[3]	5,300	60	496	5 6	Philippines
10,336[5]	271[5]	41,389	1,087	7,362[3]	191[3]	16,000	420	3,428	90	Poland
4,171	393	13,451	1,266	1,402[3]	139[3]	3,225	304	1,513	142	Portugal
1,038[5]	262[5]	3,354[5]	848[5]			1,000	251	70	84	Puerto Rico
237	282	1,264	1,504	133[3]	215[3]	351	418			Qatar
300[16]	410[16]	490[2]	66[2]	32[16]	45[16]	220[5]	280[5]			Réunion
4,260	199	22,875	1,067	2,450[3]	110[3]	11,300[1]	522[1]	1,949	91	Romania
44,200	310	163,300	1,146	17,400	121	30,000	211	4,000	28	Russia
23	2.4	635	65			100[1]	11[1]	2 5	0 3	Rwanda
24[2]	500[2]	10[3]	217[3]	11[3]	239[3]	40[3]	870[3]			St Kitts and Nevis
52[3]	315[3]	106[5]	657[5]	26[3]	173[3]	110	667			St Lucia
23	190	111	918	16[3]	132[3]	57	473	8 0	66	St Vincent and the Grenadines
20[5]	105[5]	86	460	1[2]	6 7[2]	8 0[1]	45[1]	0 1[5]	0 4[5]	Samoa
21[2]	763[2]	17[2]	621[2]			15[3]	538[3]			San Marino
7 7	4 9	30	191			23	146	0 3	2 0	São Tomé and Principe
3,996	162	28,381	1,147	8,476[3]	340[3]	6,200	251	600	24	Saudi Arabia
269	22	3,631	293	250	21	820	66	38	3 1	Senegal
2,993	304	8,453	857	389[9 23]	37[3, 23]	1,500	152	326	33	Serbia
23	262	77	892	16	198	32	370			Seychelles
24[2]	4 8[2]	776	132			13	2 2			Sierra Leone
1,862	420	5,924	1,335	3,939[3]	913[3]	3,105	700	910	205	Singapore
1,151	214	6,068	1,126	1,929	357	2,312	429	472	88	Slovakia
857	428	1,928	965	808	411	992	496	345	172	Slovenia
7.6[1]	16[1]	11	22	22	46	8 0[1]	16[1]	1 0	2 0	Solomon Islands
100	12	600	69	6.2[2]	0.8[2]	98	11			Somalia
4,642	96	42,300	871	3,966	84	3,966	82	378	7 8	South Africa
20,328	459	48,813	1,102	12,000	281	20,097	454	8,070	182	Spain
2,742	142	7,984	414	530[3]	28[3]	772	40	63	3 3	Sri Lanka
345	9.0	8,218	213	3,250	90	3,500	91	43	1.1	Sudan, The
82[1]	180[1]	320[1]	708[1]	19[3]	42[3]	44	96	2 7[1]	5 9[1]	Suriname
44	43	380	333	36[3]	33[3]	42[1]	41[1]			Swaziland
5,506	604	10,371	1,137	6,861[1]	761[1]	7,000	768	3,280	360	Sweden
4,932	659	8,209	1,097	6,430	862	4,513	603	2,380	318	Switzerland
3,452	173	6,235	313	800	42	3,470	174	7.0	0 3	Syria
14,313	625	24,302	1,061	11,924[3]	524[3]	14,760	645	4,794	209	Taiwan
280	43	265[5]	41[5]			20[5]	3 0[5]			Tajikistan
163	4.0	8,323	206	278[3]	7.4[3]	400	9 9			Tanzania
7,024	110	79,066	1,238	3,716[3]	59[3]	13,416	210	913	14	Thailand
100	15	1,190	181	185	30	320[1]	51[1]			Togo
21	210	47	464	5 0[3]	48[3]	8 4	84	0 8	7 8	Tonga
307	230	1,510	1,132	137[3]	105[3]	213	160	36	27	Trinidad and Tobago
1,273	123	7,842	759	568	56	1,722	167	114	11	Tunisia
18,201	243	61,976	828	3,703[3]	51[3]	21,141	282	4,554	61	Turkey
398	82	217[1]	44[1]	.	.	70	14			Turkmenistan
0.7[2]	65[2]					3.0[3]	289[3]			Tuvalu
162	5.3	4,195	136	250	8.7	750[1]	25[1]	1 9	0 1	Uganda
12,859	278	55,240	1,196	1,810	39	10,000	216	800	17	Ukraine
1,386	316	7,732	1,765	450[3]	120[3]	2,260	516	380	87	United Arab Emirates
33,682	554	71,993	1,185	35,890[3]	604[3]	40,200	662	15,605	257	United Kingdom
163,170	534	255,396	835	220,000[3]	741[3]	220,000	719	73,206	239	United States
965	289	3,004	900	430[3]	133[3]	968	290	165	49	Uruguay
1,794[5]	67[5]	2,500[1]	93[1]			1,200	44	8 3[5]	0 3[5]	Uzbekistan
8 8	39	26	115	3[3]	14[3]	17	75	0 1[5]	0 3[5]	Vanuatu
5,082	184	23,820	861	2,145[3]	82[3]	5,720	207	858	31	Venezuela
28,529	327	23,730	272	1,044[3]	13[3]	17,872	205	1,294	15	Vietnam
72	641	80[5]	718[5]			30	269	3 0[6]	27[5]	Virgin Islands (U S)
349[5]	94[5]	1,095[5]	296[5]	169[3]	46[3]	243[5]	66[5]			West Bank[14]
...	...	...	...	...	...	...	...	...	...	Western Sahara
968	45	2,978[1]	137[1]	300[3]	15[3]	320	14			Yemen
92	7 7	2,639	221	113[3]	10[3]	500	42	2 3[1]	0 2[1]	Zambia
345	26	1,226	92	1,200	101	1,351	101	15	1 1	Zimbabwe

[1]2006. [2]2002. [3]2004. [4]First editions only. [5]2005. [6]1997. [7]1999. [8]1998. [9]Including reprints. [10]Foreign dispatched and foreign received only. [11]Millions of copies. [12]1996. [13]School textbooks and government publications only. [14]West Bank includes Gaza Strip. [15]Foreign received only. [16]2001. [17]2000. [18]Excludes government publications and textbooks. [19]Government publications only. [20]2003. [21]School textbooks only. [22]Domestic and foreign received only. [23]Includes Montenegro

Health services

The provision of health services in most countries is both a principal determinant of the quality of life and a large and growing sector of the national economy. This table summarizes the basic indicators of health personnel; hospitals, by kind and utilization; mortality rates that are most indicative of general health services; external controls on health (adequacy of food supply and availability of safe drinking water); and sources and amounts of expenditure on health care. Each datum refers more or less directly to the availability or use of a particular health service in a country, and, while each may be a representative measure at a national level, each may also conceal considerable differences in availability of the particular service to different segments of a population or regions of a country. In the United States, for example, the availability of physicians ranges from about one per 730 persons in the least well-served states to one per 260 in the best-served, with a rate of one per 150 in the national capital. In addition, even when trained personnel exist and facilities have been created, limited financial resources at the national or local level may leave facilities underserved; or lack of good transportation may prevent those most in need from reaching a clinic or hospital that could help them.

Definitions and limits of data have been made as consistent as possible in the compilation of this table. For example, despite wide variation worldwide in the nature of the qualifying or certifying process that permits an individual to represent himself as a physician, organizations such as the World Health Organization (WHO) try to maintain more specific international standards for training and qualification. International statistics presented here for "physicians" refer to persons qualified according to WHO standards and exclude traditional health practitioners, whatever the local custom with regard to the designation "doctor." Statistics for health personnel in this table uniformly include all those actually working in the health service field, whether in the actual provision of services or in teaching, administration, research, or other tasks. One group of practitioners for whom this type of guideline works less well is that of midwives, whose training and qualifications vary enormously from country to country but who must be included, as they represent, after nurses, perhaps the largest and most important category of health auxiliary worldwide.

Hospitals also differ considerably worldwide in terms of staffing and services. In this tabulation, the term hospital refers generally to a permanent facility offering inpatient services and/or nursing care and staffed by at least one physician. Establishments offering only outpatient or custodial care are excluded. These statistics are broken down into data for general hospitals (those providing care in more than one specialty), specialized facilities (with care in only one specialty), local medical centres, and rural health-care centres; the last two generally refer to institutions that provide a more limited range of medical or nursing care, often less than full-time. Hospital data are further analyzed into three categories of administrative classification: public, private nonprofit, and private for profit. Statistics on number of beds refer to beds that are maintained and staffed on a full-time basis for a succession of inpatients to whom care is provided.

Data on hospital utilization refer to institutions defined as above. Admission and discharge, the two principal points at which statistics are normally collected, are the basis for the data on the amount and distribution of care by kind of facility. The data on numbers of patients exclude babies born during a maternal confinement but include persons who die before being discharged. The bed-occupancy and average length-of-stay statistics depend on the concept of a "patient-day," which is the annual total of daily censuses of inpatients. The bed-occupancy rate is the ratio of total patient-days to potential days based on the number of beds; the average length-of-stay rate is the ratio of total patient-days to total admissions. Bed-occupancy rates may exceed 100% because stays of partial days are counted as full days.

Two measures that give health planners and policy makers an excellent indication of the level of ordinary health care are those for mortality of children under age five and for maternal mortality. The former reflects the

Health services

country	health personnel						hospitals							
	year	physicians	dentists	nurses	pharmacists	midwives	population per physician	year	number	kinds (%)			ownership (%)			total number of hospital beds	hospital beds per 10,000 pop.
										general	specialized	medical centres/other	public	private non-profit	private for profit		
Afghanistan	2002	3,617	630[1]	8,891	767		5,675	2002	73			277	77.0	23.0		12,668	16
Albania	2002	4,110	1,360[1]	12,570[2]			753	2002	51			...	100.0	—	—	9,514	31
Algeria	2002	28,642	8,618	87,571	5,198		1,095	2002	513				...	...	...	34,544	12
American Samoa	2003	49	15	127	2[1]	1[1]	1,253	2003	1	100.0	—	—	100.0	—	—	128	21
Andorra	2003	244	42	194	64	10[2]	296	2003	2	100.0	—	—	50.0	50.0		233	33
Angola	1997	736		10,942		492	12,985	1990	58	...	...	...	...	...	...	11,857	12
Antigua and Barbuda	1999	76	12[3]	233	13[3]	31[3]	867	2003	3	50.0	50.0	—	100.0	—	—	255	25
Argentina	2002	99,358	28,900[1]	16,000[1]	...	...	373	2001	1,235[7]		...	.	56.8[7]	43.2[7]		115,803	20
Armenia	2003	11,728	710[9]	18,379	121	1,541[9]	256	2003	137	. .	.	.	100.0	. .	...	14,208	44
Aruba	2004	126	22	277	20	6	740	2004	3	50.0	—	50.0	100.0	—	—	305	32
Australia	2004	54,800	9,400	159,600	13,756	11,649[10]	375	2001–02	1,283	.	.	.	58.1	41.9		79,311	40
Austria	2004	37,447	4,029[10]	17,767[10]	1,581	1,579[10]	216	2003	310	40.1	59.9		. .	.	...	71,741	81
Azerbaijan	2004	30,000	2,116[10]	59,872[10]	2,143	11,800	278	2003	735	.	.	.	100.0	.	.	68,500	83
Bahamas, The	2001	458	21[11]	1,323[11]	52[4]	..	672	2002	5	60.0	20.0	20.0	60.0	40.0		1,540	34
Bahrain	2003	1,189	144[10]	2,861[10]	131		580	2003	12	58.3	42.7	—	75.0	16.7	8.3	1,912	28
Bangladesh	2001	32,498	938[7]	18,135	7,485[4]	15,794	4,306	2001	568	.	.	.	69.3[7]	30.7[7]		44,030	3
Barbados	2002	376	63[1]	988[1]	138[12]	377[12]	721	2002	9	66.7	33.3	—	77.8	—	22.2	501	19
Belarus	2003	44,800	4,492	123,192[10]	3,001[10]	6,160[10]	220	2003	279	55.4[1]	44.6[1]		100.0	.	...	112,007	114
Belgium	2002	46,268	7,360[11]	109,187[11]	14,772	6,602[11]	223	2001	363[11]	80.4[11]	19.6[11]	—	38.6[11]	61.4[11]	—	71,907	70
Belize	2003	251	32[2]	303[2]	30[11]	23[11]	1,620	1999	7	.	.		100.0	—	—	598	25
Benin	2001	923	16[14]	5,003	85[14]	432[14]	7,183	2001	...	.	.	.	.	...	...	923	1
Bermuda	2003	121	22[3]	522[3]	29[3]		525	2003	2	50.0	50.0	—	.	...	...	226	36
Bhutan	2002	122	9[4]	500	5[4]	326[14]	6,019	2002	29	. .	.	.	. .	..	...	1,023	14
Bolivia	2002	2,987	692[10]	9,068[10]			2,827	2003	230	10.7[14]	8.9[14]	80.3[14]	.	.	...	12,464	15
Bosnia and Herzegovina	2003	5,576	679[10]	16,708[10]	350[10]	1,159[10]	691	2003		. .	.				...	11,981	31
Botswana	2003	510	38[1]	4,090[1]	142[1]		3,261	2003	30[15]	53.3[15]	3.3[15]	43.3[15]	...	...	...	3,816	22
Brazil	2001	357,888	165,599	89,710	66,727		485	2002	6,493	100.0		—	35.0	65.0		487,058	27
Brunei	2003	309	64	1,678	90[2]	404[2]	870	2003	10	90.0	—	10.0	90.0	10.0		905	26
Bulgaria	2003	28,243	6,482[10]	35,621[10]	1,020[10]	3,518[10]	277	2004	258	54.7	45.3		...	...	...	49,171	70
Burkina Faso	2001[16]	490	36	3,381	60	476	23,943	2001	78[5]	14.1[5]		85.9[5]	100.0	—	—	15,801	19
Burundi	2000	323	9[4]	1,783	62		21,737	1999	.	.	.	.	. .	...	. .	3,380	6
Cambodia	2004	2,122	241	8,085[2]	564[1]	3,040[2]	6,173	2004	188[11]	.	.	.	100.0	—	—	7,482	6
Cameroon	1996	1,031	56	5,112		70	13,510	1988	629	27.0		73.0	72.3	27.7		29,285	27
Canada	2002	59,294	17,287[2]	310,733[2]	24,518[1]	358[2]	529	2002–03	1,079[3]	81.8[3]	16.6[3]	1.6[3]	95.8[3]	—	4.2[3]	115,120	36
Cape Verde	2001	123		1,907	6[3]	...	3,604	2000	65[3]	8.0[3]	—	92.0[3]	100.0	—	—	689	16
Central African Republic	2001	189	16[14]	217	22[4]	179	20,291	2001	255	21.1[17]		78.9[17]	79.7[17]	20.3[17]		4,126	11
Chad	2001	205	2[10]	1,220	38	161	42,700	2001		..	.	...	. .	...	...	4,105	5
Chile	2003	17,250	6,750	10,000	1,830[3]	5,369[3]	925	2002	847	...	...	.	90.1	9.9		42,163	25
China	2002	2,122,019[18, 19]	[19]	1,345,706	368,852[1]	44,517[1]	687	2002	69,105[3]	11.2[3]	13.4[3]	75.4[3]	100.0	—	—	3,004,000	23
Colombia	2002	58,761	33,951	52,281			729	2003	1,165	.			. .			49,000	12
Comoros	2004	48	6[4]	180[7]	6[4]	74[7]	12,417	1995	..				.	...		1,450	29
Congo, Dem. Rep. of the	1996	3,224	514	20,652	59[4]		14,492	1986	400				52.5	47.5		..	21
Congo, Rep. of the	1995	632	35[4]	4,663	175[4]	160	4,083	1990					.	...		4,817	33
Costa Rica	2004	6,600	1,594[1]	9,425[1]	1,289[1]	.	644	2003	29[1]				87.9[1]	—	12.1[1]	6,000	14
Côte d'Ivoire	2001	1,113	219[4]	6,110	135[4]	2,196[3]	14,297	2001	...							5,981	4
Croatia	2003	10,820	3,021[10]	22,185[10]	2,235	1,491[10]	410	2003	70	54.0	46.0	—	...	...	. .	24,927	56
Cuba	2002	67,417	9,841	83,880			167	2003	266	..	.	.	100.0	—	—	69,534	62
Cyprus[21]	2000	1,800	619	2,931	584	120[22]	390	2003	115	71.8[7]	22.1[7]	6.1[7]	10.0[22]	0.9[22]	89.1[22]	1,236	57
Czech Republic	2003	44,106	6,698[10]	97,077[10]	5,199[10]	4,895[10]	230	2003	357	68.9	31.1	—	69.0	31.0		66,492	65
Denmark	2002	19,600	4,834	51,990	2,638	1,312	365	2002	69[10]	43.0[10]	57.0[10]	—	43.1[10]	56.9[10]	—	22,600	41

probability of a newborn infant dying before age five. The latter refers to deaths attributable to delivery or complications of pregnancy, childbirth, the puerperium (the period immediately following birth), or abortion. A principal source for the former data was UNICEF Child Mortality and for the latter, the UNICEF Report: Maternal Mortality in 2000.

Levels of nutrition and access to safe drinking water are two of the most basic limitations imposed by the physical environment in which health-care activities take place. The nutritional data are based on reported levels of food supply (whether or not actually consumed), referred to the recommendations of the United Nations' Food and Agriculture Organization for the necessary daily intake (in calories) for a moderately active person of average size in a climate of a particular kind (fewer calories are needed in a hot climate) to remain in average *good* health. Excess intake in the many developed countries ranges to more than 40% above the minimum required to maintain health (the excess usually being construed to diminish, rather than raise, health). The range of deficiency is less dramatic numerically but far more critical to the countries in which deficiencies are chronic, because the deficiencies lead to overall poor health (raising health service needs and costs), to decreased productivity in nearly every area of national economic life, and to the loss of social and economic potential through early mortality. By "safe" water is meant only water that has no substantial quantities of chemical or biological pollutants—*i.e.*, quantities sufficient to cause "immediate" health problems. Data refer to the proportion of persons having "reasonable access" to an "adequate" supply of water within a "convenient" distance of the person's dwelling, as these concepts are interpreted locally.

The data on health care expenditure were excerpted from a joint effort by the WHO and the World Bank to create better analytical tools by which the interrelations among health policy, health care delivery systems, and human health might be examined against the more general frameworks of government operations, resource allocation, and development process.

Expenditures were tabulated for direct preventative and curative activities and for public health and public education programs having direct impact on health status—family planning, nutrition, and health education—but not more indirect programs like environmental, waste removal, or relief activities. Public, parastatal (semipublic, *e.g.*, social security institutions), international aid, and household expenditure reports and surveys were utilized to build up a comprehensive picture of national, regional, and world patterns of health care expenditures and investment that could not have been assembled from any single type of source. For reasons of space, public and parastatal are combined as the former. A principal source for expenditures was the World Bank Group Statistical Database, which includes national statistics, UN databases, and World Bank surveys.

Internet resources for further information:

- WHO Global Health Atlas http://globalatlas.who.int
- WHO Regional Office for Africa http://www.afro.who.int
- WHO Regional Office for Europe http://www.euro.who.int
- WHO Regional Office for the Eastern Mediterranean http://www.emro.who.int/index.asp
- Pan American Health Organization http://www.paho.org
- WHO Regional Office for South-East Asia http://www.whosea.org
- ECOWAS Social and Economic Indicators http://www.ecostat.org/en/Socio-Economic/Health.pdf
- UNICEF Maternal Mortality in 2000. Annex Tables A, F; WHO, 2004 http://www.reliefweb.int/library/documents/2003/who-saf-22oct.pdf
- UNICEF Report on Child Mortality http://www.childinfo.org/areas/childmortality/u5data.php
- Human Development Report 2004 http://www.undp.org
- World Bank Database http://devdata.worldbank.org/hnpstats

No comparable source exists for hospitals.

admissions or discharges				bed occupancy rate (%)	average length of stay (days)	mortality		population with access to safe water 2002 (%)	food supply (% of FAO requirement) 2002	total health expenditures, 2001				country
										as percent of GDP	per capita (U.S.$)	by source (percent)		
rate per 10,000 pop.	by kinds of hospital (%)					under age 5 per 1,000 live newborn 2003	maternal mortality per 100,000 live births 2000					public	private	external grants/ loans	
	general	specialized	medical centres/ other											
..	..	..				257	1,900	13	117	5.2	8	52.6	47.4	11.2	Afghanistan
..	..	..				21	55	97	118	3.7	45	64.6	35.4	3.4	Albania
371[3]	..	..		49.3[4]	5[4]	41	140	87	126	4.1	70	75.0	25.0	0.1	Algeria
965[5]	100.0	—	—	38.4[5]	4[5]	..	..	..	..	..	..	..	..	..	American Samoa
..	..	..				7		100	..	5.7	1,261	71.0	29.0	—	Andorra
238[6]	..	..		44.5[6]	16[6]	260	1,700	50	89	4.4	37	63.1	36.9	14.2	Angola
872[6]	..	..		50.0[3, 6]	8[3, 6]	12	150[3]	91	100	5.6	456	60.9	39.1	2.9	Antigua and Barbuda
560[6, 7]	..	..		52.0[6, 8]	6[6]	20	82	97[9]	127	9.5	680	53.4	46.6	0.3	Argentina
..	..	..		44.7	10	33	55	92	89	7.8	46	41.2	58.8	3.7	Armenia
1,183	..	..		88.7	8	..	..	100	..	..	..	..	..	..	Aruba
..	..	..		78.2	5	6	8	100	115	9.2	1,776	67.9	32.1	—	Australia
2,790	..	..		74.6	8	5	4	100	140	8.0	1,806	69.3	30.7	—	Austria
..	..	..		..	..	91	94	77	101	1.6	83	66.9	33.1	7.7	Azerbaijan
837[3, 8]	..	..		85.4[3, 8]	11[3, 8]	14	60	97	114	5.7	1,084	57.0	43.0	0.3	Bahamas, The
..	..	..		..	..	15	28	100[9]	..	4.1	490	69.0	31.0	—	Bahrain
..	..	..		..	..	69	300	99	95	3.5	11	44.2	55.8	13.3	Bangladesh
810[12]	93.5[12]	6.5[12]	—	88.3[12]	32[12]	13	95	100	128	6.5	634	66.3	33.7	4.8	Barbados
..	..	..		..	..	17	35	100	117	5.5	82	86.7	13.3	—	Belarus
1,963[11]	96.0[11]	4.0[11]	—	84.4[11]	12[11]	5	10	100	140	8.9	1,983	71.7	28.3	—	Belgium
265[13]	..	..		..	..	39	140	91	127	5.2	167	45.1	54.9	6.1	Belize
..	..	..		..	..	154	850	68	111	4.4	18	46.9	53.1	21.5	Benin
1,313[3]	97.0[3]	3.0[3]	—	75.0[3]	8[3]	..	..	..	88	..	..	..	..	..	Bermuda
..	..	..		..	..	85	420	62	..	3.9	9	90.6	9.4	38.2	Bhutan
250[3]	..	..		48.0[3]	6[3]	56	420	85	94	5.3	61	66.3	33.7	12.2	Bolivia
612[6]	..	..		..	..	17	31	98	114	7.5	113	36.8	63.2	2.4	Bosnia and Herzegovina
..	..	..		..	..	112	100	95	93	6.6	151	66.2	33.8	0.4	Botswana
740[7]	..	..		..	7	35	260	89	128	7.6	227	41.6	58.4	0.5	Brazil
..	..	..		..	..	6	37	90[9]	127	3.1	429	79.4	20.6	..	Brunei
..	..	..		..	..	15	32	100	114	4.8	112	82.1	17.9	2.1	Bulgaria
..	..	..		..	..	207	1,000	51	102	3.0	9	60.1	39.9	25.6	Burkina Faso
..	..	..		..	..	190	1,000	79	71	3.6	3	59.0	41.0	43.7	Burundi
..	..	..		..	..	140	450	34	92	11.8	30	85.1	14.9	19.7	Cambodia
..	..	..		..	..	166	730	63	98	3.3	28	37.1	62.9	6.3	Cameroon
860	..	..		82.5	7	6	6	100	135	9.5	2,124	70.8	29.2	—	Canada
..	..	..		..	..	35	150	80	138	4.5	64	83.9	16.1	16.6	Cape Verde
..	..	..		..	..	180	1,100	75	88	4.5	10	51.2	48.8	32.4	Central African Republic
..	..	..		..	..	200	1,100	34	89	2.6	12	78.0	24.0	62.0	Chad
749[3, 6]	..	..		69.9[3, 6]	7[3, 6]	9	31	95	117	7.0	253	44.0	56.0	0.1	Chile
418[14]	—60.4[14]—		39.6[14]	66.9[14]	15[14]	37	56	77	125	5.5	52	37.2	62.8	0.2	China
614[20]	41.4[20]	16.7[20]	41.9[20]	57.2[20]	6[20]	21	130	92	111	5.5	159	65.7	34.3	0.2	Colombia
..	..	..	..	..	..	73	480	94	75	3.1	7	60.0	40.0	39.9	Comoros
..	..	..	..	..	..	205	990	46	72	3.5	4	44.4	55.6	18.0	Congo, Dem. Rep. of the
..	..	..	..	..	..	108	510	46	97	2.1	17	63.8	38.2	3.3	Congo, Rep. of the
958[5]	..	..		78.2[5]	6[5]	10	43	97	128	7.2	358	68.5	31.5	1.3	Costa Rica
..	..	..		..	..	192	690	84	114	6.2	41	16.0	84	3.2	Côte d'Ivoire
1,700	72.0	28.0	—	82.0	11	7	8	96[9]	110	9.0	366	81.8	18.2	0.1	Croatia
1,376[5]	..	..		..	..	8	33	91	136	7.2	186	86.2	13.8	0.2	Cuba
522[7]	..	..		81.0	6	5	47	100	131	8.1	764	47.7	52.3	2.3	Cyprus[21]
1,835	98.0	2.0	—	81.2	9	4	9	100	128	7.4	408	91.4	8.6	—	Czech Republic
1,857	87.0	13.0	—	90.0	9	4	5	100	128	8.4	2,565	82.4	17.8	—	Denmark

Health services (continued)

country	health personnel							hospitals								
	year	physicians	dentists	nurses	pharmacists	midwives	population per physician	year	number	kinds (%) general	kinds (%) specialized	kinds (%) medical centres/other	ownership (%) public	ownership (%) private non-profit	ownership (%) private for profit	total number of hospital beds	hospital beds per 10,000 pop.
Djibouti	1999	86	10	424	12		5,429	1999	8[3]	—25.0[3]—		75.0[3]	100.0		..	1,159	27
Dominica	2003	38	10	361	27[15]		1,580	2003	5[11]	1.9[11]	—98.1[11]—		100.0	—	—	270	30
Dominican Republic	2000	16,530	7,000	15,352	3,330		500	2003[8]	72[12]	—7.9[12]—		92.1[12]			..	9,395	11
East Timor	2002	47	..	..	.	.	17,355	1999	.	..	.	.			..	560	8
Ecuador	2002	20,592	2,062[2]	19,549[2]	906[22]	1,037[2]	627	2003	474[14]	17.0[14]	8.0[14]	75.0	26.0[14]	11.3[14]	62.7[14]	19,975	15
Egypt	2005	157,000	18,438[2]	188,000	46,096[2]		448	2005	5,072	4.5[11]	—95.5[11]—		87.9[11]	—12.1[11]—		170,000	24
El Salvador	2002	8,171	3,573	11,777	1,990	1,940[5]	798	2003	78				61.5[22]	1.3[22]	37.2[22]	4,625	7
Equatorial Guinea	2004	101	4[3]	169[3]		9[3]	5,070	1990							..	792	29
Eritrea	2000	173	4[3]	574[3]	..	79[3]	21,457	2000	10[3]					..	..	3,126	8
Estonia	2002	4,275	1,078	9,976	813[2]	453[10]	316	2003	51				87.2[11]	—12.8[11]—		8,248	61
Ethiopia	2002	1,971	61	13,018	125	1,142	34,473	2003	86	.	.	.	.	..	..	13,389	2
Faroe Islands	2003	83	38	360	10[14]	19[14]	518	2003	3	33.3[14]	—	66.7[14]	100.0	—	—	290	60
Fiji	2003	373	56	1,648	59[1]		2,229	1999	25	..	.	.	.	..	..	2,097	26
Finland	2003	16,633	4,607	112,637	7,756[10]	3,980[10]	313	2003	380	..	.	.	75.7	—24.3—		37,656	72
France	2004	196,000	40,935[23]	397,506	60,366	14,725[10]	306	2001	4,171	—100.0—			25.3	—74.7—		485,769	79
French Guiana	2003	319	38[15]	568	47[15]	40[15]	570	2003	25	.	.	.	.	.	..	764	42
French Polynesia	2004	447	113	824	82[2]	81[2]	562	2003	7	.	.	.	.	.	..	971	39
Gabon	2003	270	32[20]	759[20]	71[20]	240[20]	5,000	2003	27[17]	.	.	.	.	..	..	4,460	33
Gambia, The	2001	97	1,348	155[7]	6[7]	102[7]	14,000	2000	13[15]	15.4[15]	—	84.6[15]	..	..	..	1,140	8
Gaza Strip[24]	2001	.			.	.		2001	6	.			83.3[14]	—16.7[14]—		...	11
Georgia	2003	20,936	1,100	21,900	364[23]	1,500[23]	250	2003	422[4]				100.0	.	..	18,200	40
Germany	2003	304,000	63,854[10]	783,000[10]	53,000[10]	9,506[10]	271	2003	2,240	.	..		49.2[22]	36.0[22]	14.8[22]	541,901	66
Ghana	2002	975	36[3]	13,102	1,433	4,094	21,086	2001	121[5]	90.9[5]	9.1[5]	—	60.3[5]	—39.7[5]—		18,448	9
Greece	2001	46,325	12,394	33,252	12,304	2,264	221	2001	337	53.1	46.9	—	43.0	—57.0—		51,500	49
Greenland	2003	91	34[10]	515	10[5]	11[7]	624	2001	16	6.3	—	93.7[4]	100.0	—	—	406	72
Grenada	2003	127	14[3]	232[3]	47[3]		803	2000	3	100.0	—	—	100.0	—	—	330	32
Guadeloupe	2003	924	129[3]	1,640[3]	220[3]	140[3]	477	2003	29	..			44.8[3]	—55.2[3]—		2,428	55
Guam	1999	166	31	647	57	24	1,169	2000	1	.				..	..	225	13
Guatemala	2003	11,700	2,046[1]	44,986[1]		18,924[22]	1,053	2003	35[14]				..	.	..	6,118	5
Guernsey	1999	93		418	.		654	2003	3	100.0	—	—	100.0	—	—	112,007	...
Guinea	2001	996	38	3,506	199[2]	299[2]	8,571	2004	38	—100.0—			100.0	—	—	2,990	3
Guinea-Bissau	2003	250	11[14]	1,769[10]	12[17]	148[3]	5,546	2001	16[22]		.		62.5[22]	—37.5[22]—		1,448	11
Guyana	2003	366	30	1,738	40[3]	165[3]	2,055	2002	30[15]	. .			83.3[15]	—16.7[15]—		3,274	44
Haiti	1999	1,910	94[11]	834[11]	..		4,000	2000	49				..	..	..	6,431	8
Honduras	2001	1,680	989[7]	6,152[7]	975[22]		3,865	2003	68				41.2	—58.8—		5,158	16
Hong Kong	2003	11,016	1,848	43,782	1,412	136	621	2003	53	. .			77.4	—22.6—		35,526	52
Hungary	2004	38,877	4,618[1]	84,947[10]	5,125	2,165	260	2003	167	60.0	—40.0—		97.3	—2.7—		79,610	78
Iceland	2003	1,047	283[2]	2,474	243[10]	219[10]	360	2003	57	89.0[11]	11.0[11]	—	..	..	..	2,432	85
India	2001[25]	555,060	19,523[22]	776,400	..		1,853	2003	17,900[10]	...	. .	.	55.0[5]	—45.0[5]—		903,900	9
Indonesia	2001	21,467	5,450	97,293	5,822[26]	16,103	9,871	1999	1,215	...			55.4	—44.6—		124,834	6
Iran	1998	60,079	12,378	159,271	5,955[26]	7,387[7]	953	2003	733	79.8	—20.2—		84.5	—15.5—		111,552	17
Iraq	2003	16,594	2,689	69,525[1]	3,358	...	1,587	2003	196	.			66.8	—33.2—		34,505	13
Ireland	2003	10,270	2,006	63,474[2]	3,165	15,228[11]	389	2003	60[8]	100.0	—	—	100.0	—	—	13,020	35
Isle of Man	2004	143	24	41	24[26]		540	2003	3	—100.0—			100.0	—	—	505	70
Israel	2002	24,392	7,446	39,315	4,355	1,108	258	2003	356	18.5[14]	81.5[14]	—	71.3	—28.7—		40,116	61
Italy	2002	353,692	34,014	256,860	63,008		162	2003	1,410[10]	92.0[10]	8.0[10]	—	56.1[10]	—43.9[10]—		237,216	41
Jamaica	2003	2,253	212	4,374	52[3]	273[3]	1,193	2003	24[3]	75.0[3]	25.0[3]	—	75.0[3]	—25.0[3]—		3,795	14
Japan	2002	262,687	92,874	1,097,326	212,720	24,501[2]	489	2002	9,413[7]	88.7[7]	11.3[7]	—	73.5[7]	—26.5[7]—		1,646,797	128
Jersey	2001	174			.		500	1995	6	16.7	83.3	—	100.0	—	—	651	77
Jordan	2001	10,623	2,850	14,251	4,975	893	448	2003	95	...		.	43.1	—56.9—		8,982	17
Kazakhstan	2003	54,600	4,331[10]	113,400	2,672[10]	8,094[10]	274	2003	1,005	.			100.0		..	111,900	77
Kenya	2003	4,813	772	30,212	1,881		6,653	2003	649	—35.1[14]—		64.9[14]		..	..	60,657	19
Kiribati	2004	20	3	238	4[11]		4,545	2004	1	...	.	. .	..	.	..	140	67
Korea, North	2002	70,870		59,900		12,931[14]	313	2002		...	.	.	..	.	..	292,340	131
Korea, South	2003	95,881	20,446	192,480	50,623[2]	8,728[2]	500	2003	1,302	21.7	—78.3—		10.0	—90.0—		426,489	88
Kosovo	.	.	.	.	.	.	.	.	.	..	..	..	..	..	..	..	..
Kuwait	2002	3,780	673[10]	9,197[10]	722[2]	19[14]	625	2002	23				66.7[15]	—	33.3[15]	5,200	22
Kyrgyzstan	2001	13,379	1,077	33,698	109	3,140	366	2003	34[14]	89.1	—	10.9	100.0	—	—	26,600	53
Laos	2003	1,283	83	5,291	.		2,207	2003	25	0.7[4]	—99.3[4]—		100.0	—	—	6,255	27
Latvia	2002	7,900	1,245[10]	11,954[10]	292[15]	501[10]	295	2003	153	51.2[15]	4.1[15]	28.8[15]	97.5[11]	2.5[11]	—	18,200	78
Lebanon	2001	11,505	4,283	4,157	3,359	.	298	2002	144	...		. .	10.5[14]	—89.5[14]—		9,999	28
Lesotho	1995	105	10	1,169	60[16]	914	18,524	1987	22	90.9	9.1	—	54.5	45.5	—	2,400	13[12]
Liberia	2001	23	2[15]	2,800	.	99[7]	116,667	1988	92	—37.0—		63.0			..	..	..
Libya	1997	6,092	619[3]	17,136[3]	1,095[3]		781	2002		...	. .	. .	..	.	..	18,100	39
Liechtenstein	2000	46	18[7]	.	2[7]		710	2000	1	...	.	.	..	.	..	108	35
Lithuania	2004	13,682	2,490[10]	27,787[10]	2,266[10]	1,350[10]	252	2004	189	...			100.0		..	29,990	87
Luxembourg	2003	1,225	316	3,197	371	95[10]	367	2003	17	52.9	47.1	—	..	.	..	3,045	68
Macau	2004	1,006	137	1,043	48[7]		454	2004	2	—100.0—			50.0	—50.0—		1,114	21
Macedonia	2001	4,459	1,125	10,553	309	1,456	454	2002	58[3]	27.4[15]	24.2[15]	48.4[15]	100.0	—	—	10,248	49
Madagascar	2001	1,428	76	3,038	8	1,472	10,859	2000	. .				..	.	..	7,043	5
Malawi	2003	187	4	3,094	39		64,775	1998	395	12.2	0.8	87.0	59.2	—40.8—		14,200	13
Malaysia	2003	18,191	2,418	36,784	2,333[10]	7,711[2]	1,406	2003	337[7]	...	...	...	35.1[7]	—64.9[7]—		47,406	19
Maldives	2003	315	8	785	141	409	905	2003	14	20.0	—	80.0	100.0	—	—	643	23
Mali	2001	781	9	2,652	57[14]	284[2]	13,214	1998		..			..	..	..	2,412	2
Malta	2001	1,144	158	1,473	750	291[11]	344	2003	7	.	.	.	71.4[3]	—28.6[3]—		2,140	48
Marshall Islands	2002	34	4	152[2]	2[10]	6	1,575	2002	2	100.0	—	—	100.0	—	—	140	26
Martinique	2000	762	130[3]	1,700[3]	230[3]	150[3]	507	2000	8	..	..			.	.	2,674	69
Mauritania	1995	323	47	1,461	6[5]	237	7,251	1990	16				100.0	—	—	3,827	7
Mauritius	2004	1,303	167	2,774[28]	286	[28]	1,043	2004	14	57.1	28.6	14.3	68.7	—31.3—		3,677	31
Mayotte	1997	57	..	.	..	..	2,304	1997	2	100.0	—	—	100.0	—	—	186	14
Mexico	2002	140,286	9,108	192,828	.	6,558	734	2002	4,506[7]	...	..	.	34.2[7]	—65.8[7]—		76,529	11
Micronesia	2000	64	14	410	7[22]	7	1,678	2000	4	100.0	—	—	100.0	—	—	260	31
Moldova	2001	12,800	1,326	26,765	2,621	1,075	334	2003	312	.			100.0		..	25,000	67
Monaco	2002	156	21	500[14]	67[14]	11[14]	207	2001	1	100.0	—	—	100.0	—	—	521	161
Mongolia	2003	6,637	459	7,734	788	612	376	2002	390						.	18,180	74

admissions or discharges				bed occupancy rate (%)	average length of stay (days)	mortality		population with access to safe water 2002 (%)	food supply (% of FAO requirement) 2002	total health expenditures, 2001				country
	by kinds of hospital (%)									as percent of GDP	per capita (U.S $)	by source (percent)		
rate per 10,000 pop.	general	specialized	medical centres/other			under age 5 per 1,000 live newborn 2003	maternal mortality per 100,000 live births 2000					public	private	external grants/loans	
...	..	..	.			138	730	80	96	7 0	51	58 8	41.2	30 0	Djibouti
1,026[11]	.	.	.	94 6[11]	8[11]	14	65[7]	97	114	6.0	203	71 3	28 7	0 9	Dominica
470[12]	.	.	.	.	.	35	150	93	104	6.1	155	36 1	63.9	1.8	Dominican Republic
...	.	.	.	.	.	124	660	52	130	9 8	51	59 5	40 5	9 8	East Timor
508[14]	.	.	.	53 1[14]	6[14]	27	130	86	120	4.5	80	50 3	49 7	1.0	Ecuador
317[11]	.	.	.	.	.	39	84	98	133	3.9	59	48.9	51 1	2 0	Egypt
...	...	...	...	54.9[8, 12]	6[8, 12]	36	150	82	113	8.0	169	46.7	53.3	0.9	El Salvador
...	...	...	...	.	.	146	880	44	72	2 0	65	60 4	39 6	10 6	Equatorial Guinea
...	..	..	..	..	..	95	650	57	65	5.7	9	65.1	34 9	52.3	Eritrea
1,934	76.7[15]	21.5[15]	1.8[15]	67 7	9	9	63	100	117	5 5	224	77 8	22 2	—	Estonia
...	.	..	.	.	.	169	850	22	80	3 5	5	40.5	59 5	34 3	Ethiopia
278	.	.	.	86 4[15]	12[15]	.	.	.	.	.	.	.	.	.	Faroe Islands
...	.	.	.	.	..	20	75	45	127	4.0	79	67.1	32.9	10 1	Fiji
2,592	.	..	.	72.0	10	5	6	100	114	7.0	1,628	75.6	24 4	—	Finland
2,480	..	.	.	..	.	5	17	100	145	9 6	2,103	76.0	24 0	—	France
1,714[22]	.	.	.	70.3[22]	8[22]	.	.	88[9]	127	.	.	.	.	.	French Guiana
...	..	.	.	...	.	.	.	100	126	.	.	.	.	.	French Polynesia
...	.	.	.	.	.	91	420	87	113	3 6	151	47 9	52.1	1 8	Gabon
...	.	.	.	.	.	123	540	82	96	6 4	21	49 4	50.6	26 6	Gambia, The
752[14]	..	.	.	74.9[14]	3[14]	24	100	.	.	.	.	.	.	.	Gaza Strip
...	..	.	.	..	.	45	32	76	92	3.6	22	37 8	62 2	6 1	Georgia
1,812[22]	.	.	.	82 8[22]	13[22]	5	8	100	131	10 8	2,418	74 9	25 1	—	Germany
...	.	.	.	.	..	95	540	79	116	4 7	15	59 6	40 4	23 2	Ghana
1,530	83.4	16.6	—	75.0	8	5	9	99[9]	149	9 4	1,044	56.0	44 0	—	Greece
2,188	29.2	—	70.8	70.1	6	.	.	.	.	.	.	.	.	.	Greenland
774[5]	100.0	—	—	59.1[5]	7[5]	23	.	95	121	5 3	262	71 9	28.1	—	Grenada
2,154[3]	...	..	..	84 0[3]	10[3]	.	.	95[9]	113	.	.	.	.	.	Guadeloupe
...	...	..	..	.	.	.	.	100	.	.	.	.	.	.	Guam
...	...	.	.	.	.	47	240	95	101	4 8	86	48 3	51.7	1 4	Guatemala
1,115[1]	100.0	—	—	.	.	.	.	.	.	7.2	2,780	.	.	.	Guernsey
...	...	..	.	.	.	160	740	51	104	3.5	20	54 1	45.9	20 5	Guinea
...	...	.	.	.	.	204	1,100	59	88	5.9	9	53.8	46 2	38 6	Guinea-Bissau
...	...	.	.	.	.	69	170	83	119	5.3	50	79 9	20.1	2 2	Guyana
...	..	.	.	.	.	118	680	71	92	5.0	31	53 4	46 6	42.0	Haiti
459[22]	..	.	.	.	.	41	110	90	104	6.1	60	53 1	46 9	7 5	Honduras
1,917	...	.	.	...	.	6	7	100	134	4.7	720	19 5[1]	80.5[1]	—	Hong Kong
2,768	...	...	.	79.0	8	8	16	99	132	6 8	375	75 0	25.0	—	Hungary
2,828[12]	94.0[12]	6.0[12]	—	86.5[12]	12[12]	4	6	100	122	9.2	2,478	82 9	17.1	—	Iceland
...	...	..	...	...	.	87	540	86	111	5.1	29	17 9	82 1	0 4	India
...	..	...	...	..	..	41	230	78	134	2 4	21	25 1	74 9	6 5	Indonesia
...	..	..	.	.	.	39	76	93	128	6.3	79	43.5	56.5	0 1	Iran
645[4]	...	.	.	42.4[4]	4[4]	125	250	81	91	3.2	12	31.8	68 2	0 1	Iraq
1,520	100.0	—	—	84 5	7	6	5	100[9]	145	6.5	1,839	76.0	24.0	5.0	Ireland
...	...	...	...	.	.	.	.	.	.	.	.	.	.	.	Isle of Man
1,912	...	...	.	94 0	11	6	17	100	143	8.7	1,754	69.2	30 8	0 1	Israel
1,820[10]	91.1[10]	8.9[10]	—	73.7[10]	8[10]	4	5	100	146	8 4	1,562	75.3	24.7	—	Italy
242[3, 8]	81.7[3, 8]	18.3[3, 8]	—	53.7[3]	5[3]	20	87	93	120	6.8	178	42 1	57.9	3 0	Jamaica
...	..	..	..	.	.	4	10	100	118	8.0	2,558	77 9	22 1	—	Japan
1,718[4]	84.0[4]	16.0[4]	—	.	.	.	.	.	.	7 5	2,600	.	.	.	Jersey
512	...	..	.	73.5	5	28	41	91	109	9 5	163	47.0	53.0	4 4	Jordan
...	...	.	.	..	.	73	210	86	105	3 1	48	60.4	39 6	3 5	Kazakhstan
...	..	.	.	.	.	123	1,000	62	90	7 8	18	21 4	78.6	9 8	Kenya
...	.	.	.	.	.	66	.	64	125	8 6	40	98 8	1 2	4 4	Kiribati
...	.	.	.	.	.	55	67	100	92	2 5	.	73 4	26.6	3.0	Korea, North
629[14]	97.5[14]	2.5[14]	—	65.5[14]	13[14]	5	20	92	130	6 0	524	44 4	55 6	—	Korea, South
...	..	..	.	.	.	.	.	.	.	.	.	.	.	.	Kosovo
950[8, 15]	72.2[8, 15]	27.8[8, 15]	—	64 9[8, 15]	7[8, 15]	7	5	100	124	3 9	539	78 8	21 2	—	Kuwait
1,775	95.5	—	4.5	75.6	15	68	110	76	117	4 0	13	48 7	51 3	13 0	Kyrgyzstan
...	...	...	...	...	.	91	650	43	104	3.1	10	55.5	44 5	21.1	Laos
2,210	78.4[15]	4.6[15]	17.0[15]	76.5	13	12	42	100	115	6 4	190	52 5	47 5	0 7	Latvia
...	..	.	.	.	.	31	150	100	129	12.2	583	28 1	71 9	0.2	Lebanon
221[6]	.	.	.	.	.	84	550	76	116	5.5	23	78 9	21.1	6.0	Lesotho
...	.	.	.	.	.	235	760	62	82	4 3	5	75 9	24 1	57.2	Liberia
...	.	.	.	.	.	16	97	72	139	2.9	158	56 0	44.0	—	Libya
...	..	...	.	.	.	11	.	100	.	.	.	.	.	—	Liechtenstein
2,200[23]	...	...	.	76.9[23]	11[23]	11	13	100	130	6.0	216	70.5	29 5	1 0	Lithuania
1,941[15]	94.6[15]	5.4[15]	—	94.3	12	5	28	100	137	6.0	2,614	89 9	10 1	—	Luxembourg
726	...	..	.	64 4[15]	16[15]	.	.	.	108	.	.	.	.	.	Macau
995[15]	67.2[15]	6.1[15]	26.7[15]	68.5[3]	14[3]	11	23	.	105	6.8	102	84 9	15 1	6 8	Macedonia
...	...	..	...	.	.	126	55	45	88	2 0	5	65 9	34 1	36 8	Madagascar
...	.	..	.	...	.	178	1,800	67	93	7.8	14	35.0	65 0	26 5	Malawi
717[8, 20]	.	..	..	.	.	7	41	95	129	3.8	143	53.7	46.3	—	Malaysia
413[27]	.	..	..	25.0[27]	3[27]	72	110	84	115	6.7	99	83.5	16 5	1 9	Maldives
...	...	..	.	.	.	220	1,200	48	93	4 3	11	38.6	61 4	20 8	Mali
..	.	.	.	.	.	6	21	100	145	8.8	830	68 5	31 5	—	Malta
1,060	..	.	.	.	4	61	.	85	.	9 8	190	64 7	35 3	25 4	Marshall Islands
2,092[14]	..	.	.	73.7[14]	10[14]	.	.	94[15]	118	.	..	.	.	.	Martinique
.	.	.	.	.	.	183	480	56	120	3.6	10	72 4	27.6	23 2	Mauritania
1,512[8]	.	.	.	74 6[8, 15]	5[8, 15]	18	24	100	130	3.4	107	59 5	40.5	1 6	Mauritius
...	.	.	...	.	.	.	.	.	.	.	.	.	.	.	Mayotte
560[8]	.	.	.	75.1	6	28	83	91	135	6.1	367	44 3	55.7	0 5	Mexico
1,118	.	..	.	51.4[7]	.	23	.	94	.	7 8	.	72.0	28.0	16 2	Micronesia
...	.	.	.	.	.	32	36	92	110	5.7	22	49 7	50 3	7 5	Moldova
...	.	.	.	.	.	4	.	100	139	7.6	3,051	56 1	43.9	—	Monaco
205[11]	.	.	.	.	.	68	110	62	93	6.4	25	72.3	27.7	15 4	Mongolia

Health services (continued)

country	health personnel						hospitals								
	year	physicians	dentists	nurses	pharmacists	midwives	population per physician	year	number	kinds (%) general	kinds (%) specialized	kinds (%) medical centres/other	ownership (%) public	ownership (%) private non-profit	ownership (%) private for profit	total number of hospital beds	hospital beds per 10,000 pop.
Montenegro	2005	1,257	.	.	.	.	496	2005	.	.	.	.	.	.	.	18,400	295
Morocco	2003	13,955	2,304[10]	26,277	6,467	874	2,123	2002[8]	201[7]	48.8[7]	—	51.2[7]	100.0	—	—	26,153	8
Mozambique	2003	500	138[2]	3,664[2]	419[2]	1,414[2]	37,000	1997	238	4.2	—	95.8	100.0	—	—	12,630	1
Myanmar (Burma)	2000	14,356	984[1]	12,642	.	10,307[2]	3,114	2000	737	.	.	.	.	.	.	28,943	6
Namibia	2000	620	67[7]	3,800	91[5]	1,954[7]	7,545	1992	47	.	.	.	91.5	—	8.5	6,379	40
Nauru	2003	15	1	64	.	.	672	2004	.	.	.	.	.	.	.	60	60
Nepal	2003	1,259	45[14]	6,216	21	1,621[14]	19,837	2003	83	94.0	—	6.0	.	.	.	5,190	2
Netherlands, The	2003	52,602	7,623	213,128[10]	3,148[23]	1,825	307	2002	129	67.3	32.7	—	.	.	.	90,747	57
Netherlands Antilles	2001	333	60	1,198	47	9	652	2001	13	30.8	53.8	15.4	.	.	.	1,466	78
New Caledonia	2002	476	126	1,128	91[10]	64[10]	454	2002	9	12.5[4]	12.5[4]	75.0[4]	62.5[4]	—	37.5[4]	888	41
New Zealand	2002	12,505	1,582	34,660	3,808[10]	2,288[10]	306	2002	445	.	.	.	19.1	—	80.9	23,825	60
Nicaragua	2003	8,986	1,585	5,862	.	.	2,538	2003	56[15]	46.4[15]	7.1[15]	46.4[15]	.	.	.	5,031	10
Niger	2002	386	21	2,668	63	461	30,977	2001	.	.	.	.	.	.	.	.	5
Nigeria	2002	25,914	2,180[2]	119,400[10]	8,642[2]	62,386[22]	4,722	2002	13,964[5]	6.4[5]	0.6[5]	93.0[5]	86.2[5]	—	13.8[5]	54,872	5
Northern Mariana Islands	1999	31	3	123	4	14	2,249	2000	1	100.0	—	—	100.0	—	—	82	11
Norway	2003	12,232	5,627[10]	92,791[10]	1,781[10]	3,089[10]	370	2003	.	.	.	.	.	.	.	22,662	43
Oman	2003	3,478	395	8,001	662	65[3]	659	2002	57	8.4	—	91.6	26.3	—	73.7	5,168	20
Pakistan	2002	101,635	4,560	44,520	45,390	23,084	1,516	2003	5,496	16.5	—	83.5	.	.	.	98,264	7
Palau	2003	21	2	26[11]	1	1	967	2003	1	.	.	.	.	.	.	70	50
Panama	2003	4,286	903	3,048	756[11]	.	727	2003	63	.	.	.	.	.	.	7,553	24
Papua New Guinea	2000	275	90	2,841	.	.	19,269	1993	.	.	.	.	.	.	.	14,119	34
Paraguay	2001	6,400	1,947	1,089	433[14]	1,547[14]	1,977	2002	.	.	.	.	.	.	.	6,759	12
Peru	2004	32,619	2,809[1]	17,108[1]	4,789[3]	3,832[3]	658	2003	481	.	.	.	50.2[3]	—	49.8[3]	43,074	14
Philippines	2004	93,862	45,903	352,398	47,463	14,675	885	2003	1,723	96.5[3]	3.1[3]	0.5[3]	38.4	—	61.6	91,000	11
Poland	2004	87,617	10,737	181,291	25,217	21,129	446	2004	782	93.6	6.4	—	84.4	—	15.6	188,038	69
Portugal	2001	35,536	4,370[2]	37,477[2]	8,056[2]	827[11]	310	2002	215	43.0[14]	18.8[14]	38.2[14]	74.3[14]	14.7[14]	11.0[14]	38,802	36
Puerto Rico	2001	5,980	2,507	11,959[7]	829[26]	120[20]	642	2002	68[7]	79.4[7]	—	20.6[7]	35.3[7]	—	64.7[7]	12,669	32
Qatar	2002	1,518	145	3,139	279	.	399	2002	5	25.0	75.0	—	60.0	—	40.0	1,357	24
Réunion	2003	1,179	382	2,027	277	176[11]	449	2000	18	85.5	—	14.5	71.0	—	29.0	2,124	30
Romania	2004	42,538	4,919	109,668	1,275	6,497[10]	511	2004	427	.	.	.	98.8	—	1.2	162,558	66
Russia	2003	686,000	46,209	1,551,000	10,215	67,825[10]	208	2003	10,100	37.4[15]	17.2[15]	45.4[15]	98.6	—	1.4	1,653,000	105
Rwanda	2002	155	4	1,735	11	10	52,722	1990	198	.	.	.	100.0	—	—	12,152	17
St. Kitts and Nevis	2001	49	15	294	21[11]	.	936	2003	4	50.0	—	50.0	.	.	.	178	55
St. Lucia	2002	92	9[10]	331[10]	13[7]	.	1,609	2002	6	25.0[12]	25.0[12]	50.0	.	.	.	285	19
St. Vincent	2003	61	6[11]	267[11]	27[5]	.	1,429	2003	11	.	.	.	77.8[12]	—	22.2[12]	209	15
Samoa	2002	43	6	333	5	3	4,115	2004	16[10]	12.5[10]	—	87.5[10]	100.0	—	—	661	36
San Marino	2002	117	.	.	6	.	230	2002	1	.	.	.	.	.	.	134	52
São Tomé and Principe	1998	63	7	171	2[26]	40	2,126	.	.	.	.	.	.	.	.	.	.
Saudi Arabia	2001	31,983	3,672[10]	69,421	5,420	.	650	2002	324	.	.	.	74.1[3]	—	25.9[3]	46,622	22
Senegal	2001	1,008	93[3]	4,339	322[3]	628	10,511	2003	18	.	.	.	.	.	.	3,582	4
Serbia[30]	2001	27,769	4,209[7]	62,022	1,929	.	300	2002	.	.	.	.	.	.	.	51,785	60
Seychelles	2003	107	16	422	8	.	774	2003	7[8]	14.6[8]	14.6[8]	70.8[8]	100.0	—	—	419	51
Sierra Leone	2001	282	4	786	.	218[3]	16,333	2003	44	25.6[14]	—	74.4[14]	.	.	.	3,364	14
Singapore	2004	6,492	1,227	18,964	1,288	365	653	2004	29	55.6	—	44.4	44.8	—	55.2	11,795	34
Slovakia	2002	20,466	2,378	39,428	1,044[26]	965[10]	263	2003	111[11]	72.1[11]	27.9[11]	—	100.0	—	—	41,768	73
Slovenia	2002	4,636	1,199	14,205	778	.	430	2003	28	57.7	42.3	—	.	.	.	12,130	50
Solomon Islands	2003	57	26[1]	338[11]	28[1]	23[1]	8,491	2003	11	100.0	—	—	75.0	25.0	—	881	19
Somalia	1997	265	13	1,327	70	540[11]	25,034	1997	.	.	.	.	.	.	.	2,786	4
South Africa	2001	29,788	4,648	172,338	10,742	.	1,453	2001	612	.	.	.	51.1[11]	—	48.9[11]	144,364	35
Spain	2003	190,665	20,005	185,000	56,501	6,314[3]	223	2001	738	58.2	15.5	26.3	43.1	—	56.9	160,815	36
Sri Lanka	2002	9,518	461	16,924	830[1]	7,725[1]	2,492	2002	576	71.4	—	28.6	100.0	—	—	59,144	22
Sudan, The	2000	4,973	218	26,730	311	.	9,395	2002	.	.	.	.	.	.	.	36,419	7
Suriname	2000	313	4	688	14[3]	40[3]	2,000	2003	.	.	.	.	.	.	.	1,449	15
Swaziland	2000	184	20	3,345	46	.	5,560	2000	24[3]	41.7[3]	—	58.3[3]	.	.	.	1,570	15
Sweden	2001	25,200	13,446[7]	86,512[2]	5,317[2]	5,979[2]	354	2001	.	.	.	.	.	.	.	29,122	33
Switzerland	2002	25,921	3,468[2]	59,833[2]	4,450[2]	2,033[2]	281	2002	.	.	.	.	.	.	.	44,316	60
Syria	2003	25,147	12,206[10]	32,938[10]	8,862[10]	4,909[2]	699	2003	393	75.1	—	24.9	16.6	—	83.4	26,202	15
Taiwan	2003	20,020	5,220	57,820	13,670	490	714	2003	610	.	.	.	15.2	—	84.8	133,398	59
Tajikistan	2002	13,393	1,051[10]	26,887[10]	680	3,932[10]	472	2003	44[11]	.	.	.	98.2[15]	—	1.8[15]	40,387	61
Tanzania	2002	822	218[14]	13,292	365	13,953[14]	42,085	1993	173[5]	.	.	.	.	.	.	.	10
Thailand	2002	17,529	3,553	85,392	6,288	9,713[14]	3,589	2002	1,224	100.0	—	—	74.2	—	25.8	121,779	22
Togo	2001	289	25	1,230	141	346	17,887	2001	.	.	.	.	.	.	.	.	19
Tonga	2003	32	23	342	17[10]	19[10]	3,057	2004	4	.	.	.	.	.	.	296	29
Trinidad and Tobago	2001	1,234	216	1,936[28]	506	[28]	1,315	2003	71	.	.	.	.	.	.	4,384	33
Tunisia	2003	8,169	1,534	29,976	2,170	.	1,207	2003	168	13.5[7]	—	86.5[7]	100.0	—	—	16,682	17
Turkey	2001	82,920	15,866	162,597	22,922	41,586	826	2003	1,184	75.3[15]	8.8[15]	15.9[15]	84.3[15]	—	15.7[15]	156,549	26
Turkmenistan	1997	14,022	1,010	21,436	1,566	3,664	333	1994	368	.	.	.	100.0	.	.	46,000	115
Tuvalu	2003	7	2	30	1	10	1,591	2002	9	11.1[1]	—	88.9[1]	100.0	—	—	30	56
Uganda	2002	1,175	75	1,350	125	850	21,056	1996	81[20]	.	.	.	.	.	.	22,788	5
Ukraine	2002	224,000	20,800	526,000	23,488[11]	26,066[10]	214	2003	3,100	.	.	.	100.0	.	.	465,000	88
United Arab Emirates	2001	6,059	954	12,045	1,086	.	485	2002	143	.	.	.	74.0	—	26.0	7,448	22
United Kingdom	2002	80,306	22,194	367,520	40,028[28]	[28]	826	2002	.	.	.	.	.	.	.	186,290	38
United States	2002	853,200	168,000[2]	2,202,000	196,000[2]	3,000[14]	338	2002	5,794	94.4	5.6	—	34.6	52.2	13.2	976,000	34
Uruguay	2002	12,905	4,097	2,974	1,248	578	62	2003	107	.	.	.	44.8	—	55.2	6,695	19
Uzbekistan	2002	81,100	5,283	263,900	673	20,684	311	2003	192[14]	.	.	.	100.0	.	.	.	55
Vanuatu	2004	29	3[14]	312	6[14]	33[14]	7,407	2003	9[14]	5.6[14]	—	94.4[14]	100.0	—	—	573	31
Venezuela	2004	48,000	13,680	46,305[7]	8,571[7]	.	722	2003	55[6][7]	.	.	.	37.0[7]	—	63.0[7]	40,675	29
Vietnam	2003	47,587	.	48,157	5,977[10]	14,662[10]	1,700	2002	12,500[15]	.	.	.	.	.	.	184,440	23
Virgin Islands (U.S.)	2002	161	.	.	.	.	675	2004	2	.	.	.	.	.	.	329	30
West Bank[24]	2001	2,771	297	4,388	330	56[22]	1,186	2001	17	.	.	.	52.9[22]	—	47.1[22]	.	11
Western Sahara	1994	100	.	.	24	.	2,504	.	.	.	.	.	.	.	.	.	.
Yemen	2001	4,078	222	8,342	1,237[1]	385[15]	4,357	2001	121	.	.	.	.	.	.	9,802	6
Zambia	1995	601	26[4]	9,853	24[4]	311[4]	14,496	1993	994	8.2[33]	0.3	83.5[33]	80.9[33]	19.1[33]	—	22,927	29
Zimbabwe	2002	736	15	6,951	12	3,078[14]	16,205	1996[6]	1,378[22]	0.9[14]	2.6[14]	96.4[14]	100.0	—	—	22,973	20

[1]1999. [2]2000. [3]1996. [4]1990. [5]1991 [6]General hospitals only. [7]1997. [8]Government hospitals only [9]Urban only [10]2001. [11]1998. [12]1992. [13]Belize hospital only. [14]1995. [15]1994. [16]Government personnel only. [17]1988 [18]Includes doctors of traditional Chinese medicine. [19]Physicians includes dentists. [20]1989 [21]Republic of Cyprus only [22]1993. [23]2002. [24]West Bank

admissions or discharges				bed occupancy rate (%)	average length of stay (days)	mortality		population with access to safe water 2002 (%)	food supply (% of FAO requirement) 2002	total health expenditures, 2001				country
rate per 10,000 pop.	by kinds of hospital (%)					under age 5 per 1,000 live newborn 2003	maternal mortality per 100,000 live births 2000			as percent of GDP	per capita (U.S.$)	by source (percent)		
	general	specialized	medical centres/other									public	private	external grants/loans
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Montenegro
255[7]				63.8[22]	8[22]	39	220	80	126	5.1	53	39.3	60.7	1.4 Morocco
...				..		158	1,000	42	89	5.9	10	67.4	32.5	36.9 Mozambique
...				...		107	360	80	136	2.1	229	17.8	82.2	0.2 Myanmar (Burma)
...				68.0	9	65	300	80	100	7.0	114	67.8	32.2	3.8 Namibia
...				...		30	...	...	...	7.5	...	88.7	11.3	... Nauru
...				..		82	740	84	112	5.2	11	29.7	70.3	9.4 Nepal
939	95.4	4.6	—	65.8	9	5	16	100	125	8.9	1,974	63.3	36.7	— Netherlands, The
..	..	..							106					Netherlands Antilles
1,165[4, 6]	.			84.8[4, 6]	8[4, 6]				116					New Caledonia
1,332[3, 8]				64.0[3, 8]	6[3, 8]	6	7	100	122	8.3	1,056	76.8	23.2	— New Zealand
769[15]	—— 76.2[15] ——		23.8[15]	.	.	38	230	81	102	7.8	59	48.5	51.5	7.7 Nicaragua
...	..			.	.	262	1,600	46	91	3.7	7	39.1	60.9	16.9 Niger
...	...					198	800	60	116	3.4	20	23.2	76.8	7.1 Nigeria
1,670	100.0	—	—	56.4	4		.	98				.		Northern Mariana Islands
1,714	92.1	7.9	—	79.0[6]	5[6]	4	16	100	130	8.0	3,352	85.5	14.5	— Norway
1,052	.			55.0	4	12	87	79	...	3.0	232	80.7	19.3	— Oman
...	..	..		...		103	500	90	105	3.9	12	24.4	75.6	1.9 Pakistan
1,718				65.0	6	28		84		9.2	424	92.0	8.0	11.8 Palau
1,239[11]				52.5[11]	8[11]	24	160	91	98	7.0	336	69.0	31.0	0.6 Panama
...						93	300	39	95	4.4	24	89.0	11.0	21.2 Papua New Guinea
...				59.6		29	170	83	111	8.0	102	38.3	61.7	2.0 Paraguay
...						34	410	81	109	4.7	94	55.0	45.0	1.7 Peru
538[3]				62.1[3]	5[3]	36	200	85	105	3.3	30	45.2	54.8	3.5 Philippines
1,730[6]			—	75.9[6]	8[6]	7	13	100[9]	129	6.1	292	71.9	28.1	— Poland
1,146[14]	86.3[14]	10.5[14]	3.2[14]	74.5[14]	10[14]	5	5	100[9]	153	9.2	994	69.0	31.0	— Portugal
1,101[15]	94.0[15]	4.3[15]	1.7[15]	70.3[7]	6[7]		25							Puerto Rico
364[29]	.			72.5[29]	7[29]	15	7	100		3.1	862	73.5	26.5	— Qatar
2,011	.			71.8	6		41		146					Reunion
...	.					20	49	57	130	6.5	109	79.2	20.8	1.0 Romania
2,640				87.4	12	21	67	96	116	5.4	128	68.2	31.8	3.1 Russia
...						203	1,400	73	90	5.5	11	55.5	44.5	24.7 Rwanda
1,037	.			68.4	8	22	130[11]	99	108	4.8	443	66.3	33.7	5.6 St. Kitts and Nevis
983						18	30[7]	98	123	4.5	227	64.5	35.4	0.6 St. Lucia
728[7]				68.2[7]	7[7]	27	43[1]	93	107	6.1	166	63.5	36.5	0.3 St. Vincent
700[10]	70.8[12]	—	29.2[12]	32.9[12]	5[12]	24		88	122	5.8	74	82.2	17.8	15.6 Samoa
...				51.5	6	5		100		6.8	2,315	78.0	23.0	— San Marino
.						118		79	105	2.3	33	67.7	32.3	56.4 São Tomé and Principe
..	.					26	23	97[9]	118	4.8	360	74.6	25.4	— Saudi Arabia
						137	690	72	96	4.8	25	58.8	41.2	20.2 Senegal
1,434				74.0	12	14	11	93	105	8.2	90	79.2	20.8	1.4 Serbia[30]
1,346[31]				58.0[31]	5[31]	15		87	105	6.0	388	68.2	31.8	11.9 Seychelles
...						284	2,000	57	84	4.3	7	61.0	39.0	25.1 Sierra Leone
956	...	...		74.0	5	3	15	100		3.9	816	33.5	66.5	— Singapore
1,720	95.1	4.9	—	74.9	11	8	10	100	117	5.6	223	89.3	10.7	— Slovakia
1,710	.			75.2	10	4	17	100	118	8.4	821	74.9	25.1	— Slovenia
...	.					22	130	70	99	5.0	38	93.5	6.5	15.9 Solomon Islands
.						225	1,100	29	71	2.6	6	44.6	55.4	9.3 Somalia
...						66	230	87	121	8.6	224	41.4	58.6	0.4 South Africa
1,123				79.6	9	4	4	100	137	7.6	1,065	71.4	28.6	— Spain
2,043				.		15	92	78	103	3.6	30	48.9	51.1	3.1 Sri Lanka
.						93	590	69	95	3.5	18	18.7	81.3	2.7 Sudan, The
766[11, 32]				68.8[11, 32]	10[11, 32]	39	110	92	117	9.4	147	60.2	39.8	12.2 Suriname
..				.		153	370	52	103	3.3	73	68.5	31.5	7.9 Swaziland
1,906[15]				82.2[15]	8[15]	3	2	100	118	8.7	2,169	85.2	14.8	— Sweden
...				83.0	10	5	7	100	131	11.0	3,774	57.1	42.9	— Switzerland
1,058				75.5[8, 22]	3[8, 22]	18	160	79	123	5.4	61	43.9	56.1	0.3 Syria
...				.		8	8	100[9]		4.2	323	53.0	47.0	— Taiwan
1,492[15]				70.2[15]	15[15]	118	100	58	71	3.3	6	71.1	28.9	7.4 Tajikistan
..						165	1,500	73	85	4.4	14	46.7	53.3	29.5 Tanzania
...						26	44	85	111	3.7	66	57.1	42.9	0.1 Thailand
...						140	570	51	102	2.8	88	48.6	51.4	8.1 Togo
622[12]				56.2[12]	10[12]	19		97		5.5	88	61.6	38.4	20.7 Tonga
1,050[6]				70.7[6, 8]	6[6, 8]	20	160	91	113	4.0	244	43.3	56.7	3.8 Trinidad and Tobago
...						24	120	82	135	6.4	120	75.7	24.3	0.6 Tunisia
709[15]						39	70	93	133	5.0	137	71.0	29.0	— Turkey
						102	31	71	107	4.1	58	73.3	26.7	0.6 Turkmenistan
1,368[1]	40.9[1]	—	59.1[1]	51.5[6]	12.2[6]	51		93		5.4	380	53.4	46.6	29.4 Tuvalu
.	..					140	880	56	103	5.9	18	57.5	42.5	24.8 Uganda
..	...					20	35	98	119	4.3	34	67.8	32.2	0.7 Ukraine
	.					8	54	100	133	3.5	824	75.8	24.2	— United Arab Emirates
						6	13	100	135	7.6	1,837	82.2	17.8	— United Kingdom
1,200[33]				62.4[33]	4.9[33]	8	17	100	143	14.9	4,873	45.9	54.1	— United States
482				78.8[7, 8]	9[7, 8]	14	27	98	106	10.9	597	46.3	53.7	0.5 Uruguay
165						69	24	89	88	3.8	25	74.5	25.5	1.7 Uzbekistan
567[14]				41.9[14]	6[14]	38		60	113	3.8	42	59.2	40.8	8.4 Vanuatu
601[7, 8]				69.7[7, 8]	6[7, 8]	21	96	83	95	6.0	261	62.1	37.9	0.1 Venezuela
...						23	130	73	119	5.1	21	28.5	71.5	2.5 Vietnam
							.							Virgin Islands (U.S.)
711[14]				80.9[14]	4[14]	24	100	94						West Bank[24]
...							.							Western Sahara
				.		113	570	69	84	4.5	23	34.1	65.9	3.7 Yemen
1,249[34]	—— 75.7[34] ——		24.3[34]	68.5[33]	7[33]	182	729	51	83	5.7	20	53.1	46.9	48.7 Zambia
546[22]				69.8[22]	7[22]	126	1,100	83	81	6.2	55	45.3	54.7	7.8 Zimbabwe

includes Gaza Strip. [25]Registered personnel; all may not be present and working in the country. [26]Number of pharmacies. [27]Central Hospital only. [28]Nurses include midwives. [29]Hamad General Hospital only. [30]Includes Montenegro. [31]Victoria Hospital only. [32]Paramaribo Hospital (1,213 beds) only. [33]4,927 community hospitals only [34]1987

Social protection

This table summarizes three principal areas of social protective activity for the countries of the world: social security, crime and law enforcement, and military affairs. Because the administrative structure, financing, manning, and scope of institutions and programmed tasks in these fields vary so greatly from country to country, no well-accepted or well-documented body of statistical comparisons exists in international convention to permit objective assessment of any of these subjects, either from the perspective of a single country or internationally. The data provided within any single subject area do, however, represent the most consistent approach to problems of international comparison found in the published literature for that field.

The provision of social security programs to answer specific social needs, for example, is summarized simply in terms of the existence or nonexistence of a specific type of benefit program because of the great complexity of national programs in terms of eligibility, coverage, term, age limits, financing, payments, and so on. Activities connected with a particular type of benefit often take place at more than one governmental level, through more than one agency at the same level, or through a mixture of public and private institutions. The data shown here are summarized from the U.S. Social Security Administration's *Social Security Programs Throughout the World* (regional coverage; Africa 2005, Asia 2006, Europe 2006, The Americas 2005). A bullet symbol (●) indicates that a country has at least one program within the defined area (a circle [○] indicates data is for 2005); in some cases it may have several. A blank space indicates that no program existed providing the benefit shown; ellipses [...] indicate that no information was available as to whether a program existed.

Data given for social security expenditure as a percentage of total central governmental expenditure are taken from the International Monetary Fund's *Government Finance Statistics Yearbook*, which provides the most comparable analytic series on the consolidated accounts of central governments, governmentally administered social security funds, and independent national agencies, all usually separate accounting entities, through which these services may be provided in a given country.

Data on the finances of social security programs are taken in large part from the International Labour Office's *The Cost of Social Security* (triennial), supplemented by national data sources.

Figures for criminal offenses known to police, usually excluding civil offenses and minor traffic violations, are taken in part from Interpol's *International Crime Statistics* (annual) and a variety of national sources. Statistics are usually based on the number of offenses reported to police, not the number of offenders apprehended or tried in courts. Attempted offenses are counted as the offense that was attempted. A person identified as having committed multiple offenses is counted only under the most serious offense. Murder refers to all acts involving the voluntary taking of life, including infanticide, but excluding abortion, or involuntary acts such as those normally classified as manslaughter. Assault includes "serious," or aggravated, assault—that involving injury, endangering life, or perpetrated with the use of a dangerous instrument. Burglary involves theft from the premises of another; although Interpol statistics are reported as "breaking and entering," national data may not always distinguish cases of forcible entry. Automobile theft excludes brief use of a car without the owner's

Social protection

country	social security														
	programs available, 2006 or 2005					expenditures, latest (% of total central govt.)[f]	finances, latest								
							receipts					expenditures			
	old-age, invalidity, death[a]	sickness and maternity[b]	work injury[c]	unemployment[d]	family allowances[e]		total ('000,000 natl. cur.)	[b]insured persons (%)	employers (%)	government (%)	other (%)	total ('000,000 natl. cur.)	benefits (%)	administration (%)	other (%)
Afghanistan	●	●	●			4.5	..	..	..	..	..	..	..	..	..
Albania	●	●	●	●	●	9.7	967.0	—	—	88.8	11.2	1,440.0	99.5	—— 0.5 ——	
Algeria	●	●	●	●	●	..	27,700.0	..	..	..	..	28,748.0	61.8	30.6	7.6
American Samoa	●					.	..	..	.	.	..	13.0	100.0	—	—
Andorra	●	●	●			.	11,832.2		..	.	..	7,937.2	90.2	4.6	5.2
Angola						.	..	..	..	..	..	..	..	..	..
Antigua and Barbuda	○	...				.	13.0	29.2	48.7	—	22.1	4.2	66.1	33.9	—
Argentina	○	○	○	○	○	33.6	1,015,837.0	28.8	45.0	16.6	9.6	989,009.0	95.0	5.0	—
Armenia	●	●	●	●	●	28.1	..	..	..	..	..	..	..	..	..
Aruba	○		○			[5]	197.1[5]		.	.	..	179.0[5]	..	..	..
Australia	●	●	●	●	●	40.4	..	..	..	..	1.9	41,825	99.6	0.3	—
Austria	●	●	●	●	●	47.2	425,417.0	30.1	45.9	21.1	2.9	412,134.0	96.5	2.3	1.2
Azerbaijan	●	●	●	●	●	40.8	..	..	..	..	..	..	..	..	..
Bahamas, The	○	○	○			10.5	95.9	22.9	38.5	2.1	36.5	43.5	71.1	27.2	1.7
Bahrain	●		●			12.9	39.6	12.3	40.2	—	47.5	9.7	69.8	20.9	9.3
Bangladesh	●	●	●			9.7	73.6	12.4	37.5	2.4	47.7	34.1	94.0	6.0	—
Barbados	○	○	○	○		33.7	191.7	38.0	40.8	1.5	19.7	149.1	93.5	5.8	0.7
Belarus	●	●	●	●	●	41.8	3,199.0	—	—	93.2	6.8	3,199.0	100.0	—	—
Belgium	●	●	●	●	●	47.9	1,347,070.0	24.4	39.7	31.6	4.3	1,322,636.0	94.5	4.3	1.2
Belize	○	○	○			..	15.3	8.9	53.2	—	38.0	3.9	56.7	43.3	—
Benin	○	○	○				3,551.9	16.8	81.4	—	1.8	4,500.9	69.3	28.1	2.6
Bermuda	○	[9]	○			...	.	.	.	..	..	...	...	..	...
Bhutan						5.2	..	..	..	..	..	26.0	..	..	..
Bolivia		○			○	17.4	346.6	29.3	47.7	11.2	11.8	340.2	84.9	14.3	0.8
Bosnia and Herzegovina	●	●	●	●	●	38.9	.	..	.	..	..	...	..	...	...
Botswana	○[10]		○			1.1	—		.	.	..	65.0	..	..	..
Brazil	○	○	○	○	○	47.3	71,847.0	24.4	51.0	20.0	4.6	68,957.0	61.9	18.6	19.5
Brunei	●		●			...	...	...	...	...	...	39.5	...	...	...
Bulgaria	●	●	●	●	●	42.3	6,016.8	—	71.4	28.1	0.5	6,000.1	96.6	3.3	0.1
Burkina Faso	○	○	○		○	3.7	8,816.5	15.6	62.9	—	21.5	4,975.3	69.5	30.4	0.1
Burundi			○		○	13.9	1,991.5	31.6	47.6	—	20.8	1,563.9	74.8	16.8	8.4
Cambodia			○		○	7.8	..	..	..	..	..	...	...	...	...
Cameroon			○		○	0.5	41,331.8	13.1	64.8	—	22.1	41,332.0	70.6	28.8	0.6
Canada	●	○	○	○	○	42.1	130,306.6	9.9	15.6	64.4	10.1	115,764.2	96.9	2.5	0.6
Cape Verde		○	○		○	..	697.7	26.5	58.5	—	15.0	316.7	82.4	16.1	1.5
Cayman Islands	●	○	○		○	..	.	..	..	..	..	..	..	..	..
Central African Republic	○	○	○		○	.	3,604.0	8.4	76.0	—	15.6	3,247.0	64.6	32.9	2.5
Chad	○	○	○		○	.	1,172.8	12.6	77.6	—	9.8	634.5	43.0	51.4	5.6
Chile	●	●	●	●		25.4	1,186,056.0	32.8	2.7	37.9	26.6	798,770.0	83.9	14.7	1.4
China	●	●	●	●		22.4	57,446.2	—	99.4	—	0.6	54,654	98.4	0.6	1.0
Colombia	○	○	○	○	○	22.4	294,438.0	24.8	56.0	0.2	19.0	257,455.0	85.5	11.5	3.0
Comoros						..	40.7	100.0	—	—	—	54.3	17.4	62.3	20.3
Congo, Dem. Rep. of the	○	○	○		○	0.1	1,238.3	28.6	60.2	—	11.2	1,044.2	27.9	72.1	—
Congo, Rep. of the	○	○	○		○	3.3	15,272.8	12.1	80.2	—	7.7	7,256.7	66.6	21.3	12.1
Costa Rica	○	○	○		○	24.1	36,407.3	33.2	44.4	1.2	21.2	31,049.8	89.0	4.1	6.9
Côte d'Ivoire	○	○	○		○	10.5	27,288.4	19.3	75.4	—	5.3	20,593.5	100.0	—	—
Croatia	●	●	●	●	●	45.4	..	..	..	..	..	..	..	..	..
Cuba			○		○	..	2,284.8	—	37.4	62.6	—	2,284.8	96.7	—	3.3
Cyprus[14]	●	●	●	●	●	30.2	217.5	24.7	40.3	17.3	17.7	117.7	98.4	1.6	—
Czech Republic	●	●	●	●	●	45.9	...	.	.	...	...	...	...	...	...
Denmark	●	●	●	●	●	17.6	225,965.6	4.3	5.0	88.2	2.5	218,258.2	97.0	3.0	—
Djibouti	●				●	..	1,352.2	..	..	..	..	1,115.7	..	..	..
Dominica	○		○			...	12.3	22.6	50.9	—	26.5	4.4	68.0	32.0	—
Dominican Republic	○	○	○		○	9.0	77.9	20.1	72.9	—	6.8	74.3	75.9	24.1	—
East Timor						.	..	..	..	..	..	..	..	..	..

permission, "joyriding," and implies intent to deprive the owner of the vehicle permanently. Criminal offense data for certain countries refer to cases disposed of in court, rather than to complaints. Police manpower figures refer, for the most part, to full-time, paid professional staff, excluding clerical support and volunteer staff. Personnel in military service who perform police functions are presumed to be employed in their principal activity, military service.

The figures for military manpower refer to full-time, active-duty military service and exclude reserve, militia, paramilitary, and similar organizations. Because of the difficulties attached to the analysis of data on military manpower and budgets (including problems such as data withheld on national security grounds, or the publication of budgetary data specifically intended to hide actual expenditure, or the complexity of long-term financing of purchases of military matériel [how much was actually spent as opposed to what was committed, offset by nonmilitary transfers, etc.]), extensive use is made of the principal international analytic tools: publications such as those of the International Institute for Strategic Studies (*The Military Balance*) and the U.S. Arms Control and Disarmament Agency (*World Military Expenditures and Arms Transfers*), both annuals.

The data on military expenditures are from the SIPRI Military Expenditure Database, as well as from the IMF's *Government Finance Statistics Yearbook* and country statistical publications.

The following notes further define the column headings:

a. Programs providing cash payments for *each* of the three types of long-term benefit indicated to persons (1) exceeding a specified working age (usually 50–65, often 5 years earlier for women) who are qualified by a term of covered employment, (2) partially or fully incapacitated for their usual employment by injury or illness, and (3) qualified by their status as spouse, cohabitant, or dependent minor of a qualified person who dies.
b. Programs providing cash payments (jointly, or alternatively, medical services as well) to occupationally qualified persons for *both* of the short-term benefits indicated: (1) illness and (2) maternity.
c. Programs providing cash or medical services to employment-qualified persons who become temporarily or permanently incapacitated (fully or partially) by work-related injury or illness.
d. Programs providing term-limited cash compensation (usually 40–75% of average earnings) to persons qualified by previous employment (of six months minimum, typically) for periods of involuntary unemployment.
e. Programs providing cash payments to families or mothers to mitigate the cost of raising children and to encourage the formation of larger families.
f. Includes welfare.
g. A police officer is a full-time, paid professional, performing domestic security functions. Data include administrative staff but exclude clerical employees, volunteers, and members of paramilitary groups.
h. Includes all active-duty personnel, regular and conscript, performing national security functions. Excludes reserves, paramilitary forces, border patrols, and gendarmeries.

crime and law enforcement (latest)						military protection							country
offenses reported to the police per 100,000 population					population per police officers[g]	manpower, 2006[h]		expenditure, 2005				arms trade ('000,000 U.S.$)	
total	personal		property			total ('000)	per 1,000 population	total '000,000	per capita	% of central government expenditure	% of GDP or GNP	imports 1999	exports 2005	
	murder	assault	burglary	automobile theft										
...	...	...	...	...		50[1]	1.6	733	31	11.4	9.9	0	0	Afghanistan
168.8	26.2	5.8	10.7	14.1	550	21.5	6.8	117	37	5.3	1.4	30	0	Albania
178.0	0.7	67.6	13.7	1.7	840	137.5	4.1	2,925	89	12.6[2]	2.9	550	0	Algeria
3,006	8.0	494.0	588.0	6.0	460	[3]	[3]	—	—	—	—			American Samoa
2,616	0	16.7	515.2	110.6	220	—	—	.	.	. .		. .	.	Andorra
143.5	8.7	15.3	30.5	3.7	14[4]	108.4	8.9	1,654	140	41.1[2]	5.7	350	0	Angola
4,977	4.7	475.0	1,984.4	35.9	120	0.2	2.6	4	57		0.6	...	.	Antigua and Barbuda
631.0	6.0	68.2	43.0	117.1	1,270	71.4	1.8	1,912	50	3.0	1.0	90	0	Argentina
264.4	4.1	4.7	16.6	0.7		48.2	16.2	133	45	15.5	2.7	10	0	Armenia
5,461	1.2	180.0	451.3	202.5		[5]	[5]	—	—	—	—	.		Aruba
7,003	3.7	708.5	2,926.2	684.8	438	52.9	2.6	13,122	645	6.1	1.8	1,100	593[6]	Australia
6,095	1.4	3.0	944.0	34.7	470	39.9	4.8	2,687	329	2.1	0.9	30	318	Austria
176	4.2	2.4	10.3	0.4		66.7	7.9	314	37	11.1	2.5	10	0	Azerbaijan
4,870	27.1	61.5	1,560.2	415.7	125	0.9	2.8	39	121	3.0	0.7	..		Bahamas, The
1,390	1.6	0.5	380.1	207.6	180	11.2	15.4	483	675	14.2	3.6	70	0	Bahrain
90	2.8	4.3	4.3	1.1	2,560	125.5	0.9	669	5.0	9.9	1.0	80	0	Bangladesh
3,813	8.6	161.9	1,080.8	105.5	280	0.6	2.2	14[7]	52[7]	2.0[6]	0.8[7]	0	0	Barbados
1,282.4	11.6	20.6	197.9	59.9		72.9	7.5	368[8]	38[8]	3.3	1.2[8]	0	310[2]	Belarus
8,478	5.3	535.8	2,031.3	376.5	640	37.0	3.5	4,210	441	2.7	1.1	350	318	Belgium
..	12.8	20.0	600.0	4.0	290	1.1	3.7	9[6]	55[6]	4.8[6]	1.4[6]	0	0	Belize
297	5.1	102.0	4.6	0.6	3,250	4.6	0.6	15	10	5.0[6]	1.7	5	0	Benin
8,871	5.1	221.7	1,949.2	. .	370	[3]	[3]	—	—	—	—	...	..	Bermuda
...	...	...	...			.	.	8	11		1.0	0	0	Bhutan
660	28.6	59.4	0.9		.	33.0	3.5	153	16	5.1	1.6	10	0	Bolivia
402	2.5	2.6	. .			11.8	2.6	174	46	6.2	1.9	40	0	Bosnia and Herzegovina
8,281	12.7	431.9	1.9	73.1	750	9.0	5.1	313	177	3.9	3.0	40	0	Botswana
779.1	11.2	255.7	5.2	61.2		287.2	1.5	12,510	68	9.3	1.6	180	20[2]	Brazil
932.9	1.5	1.2	79.8	57.5	100	7.0	18.7	249	684	11.5[2]	3.9	20	0	Brunei
1,170.7	7.3	1.9	402.9	94.5	. .	51.0	6.6	641[8]	74[8]	5.9	2.4[8]	10	285	Bulgaria
9	0.4	1.7	—	—		10.8	0.8	76	6	6.7	1.3	0	0	Burkina Faso
156	9.7	10.8	2.0	0.2		50.5	6.2	50	6	27.7	6.2	60	0	Burundi
...	...	...			1,980	124.3	9.1	110	8	24.1	1.8	5	0	Cambodia
78	0.4	1.2	1.2	5.1	1,170	23.1	1.3	223	13	9.5	1.3	5	0	Cameroon
8,121	4.0	140.3	1,044.4	529.4	8,640	62.1	1.9	12,986	403	6.5	1.1	1,000	500	Canada
...	. .	.			110	1.2	2.5	7[7]	15[7]		0.7[7]	5	0	Cape Verde
...	..	.				[3]	[3]					—	—	Cayman Islands
135	1.6	22.8	2.7			2.6	0.6	15	2		1.1	0	0	Central African Republic
...	...	...	...		990	30.4	3.1	56	6		1.0	10	0	Chad
1,366	4.5	84.8	488.0	12.9	470	78.1	4.8	4,397	270	6.8	3.8	100	10[2]	Chile
128	0.2	5.2	45.2	6.9		2,255.0	1.7	44,300	34	7.3	2.0	675	900	China
790	56.3	61.8	57.9	75.3	420	207.0	4.7	4,562	106	18.9	3.7	60	0	Colombia
..	..		..	.	960	—[11]	[11]	.	.					Comoros
...	...		...		910	64.8[12]	1.1[12]	150	2		2.4	110	0	Congo, Dem. Rep. of the
32	1.5	4.7	0.2	0.2	870	10.0	2.7	79	22	9.5[7]	1.4	0	0	Congo, Rep. of the
868	5.3	11.1	232.4	23.1	480	—	—	.	.	.		0	0	Costa Rica
67	2.5	73.1	19.5	11.9	4,640	17.1[13]	1.0[13]	193	11	3.4[2]	1.2	0	0	Côte d'Ivoire
1,216	6.1	24.1	290.9	38.6		20.8	4.7	613	138	4.1	1.6	10	10	Croatia
...	.	.			650	49.0	4.3	1,700	124	.	3.8	0	0	Cuba
689	1.9	17.7	203.3	3.0	180		..	234	241	5.6	1.4	340	0	Cyprus[14]
4,142	2.6	71.7	831.4	263.0		22.3	2.2	2,210	216	4.6	1.8	220	109	Czech Republic
9,300	4.1	20.8	1,899	638.1	600	21.2	3.9	3,467	640	4.6	1.8	290	109	Denmark
252	4.2	124.2	45.0	0.5		9.9	20.3	28[7]	52[7]		4.0[7]	0	0	Djibouti
9,567	7.9	682.4	1,736	77.6	300	[15]	[15]	...				..		Dominica
..	15.8	28.4	154.0	14.0	580	24.5	2.7	175	20	4.5[7]	2.5	20	0	Dominican Republic
						1.3[16]	1.2[16]	4[6]	5[6]		1.3[6]		.	East Timor

Social protection (continued)

country	social security														
	programs available, 2006 or 2005					expenditures, latest (% of total central govt)[f]	finances, latest								
							receipts					expenditures			
	old-age, invalidity, death[a]	sickness and maternity[b]	work injury[c]	unemployment[d]	family allowances[e]		total ('000,000 natl cur.)	insured persons (%)	employers (%)	government (%)	other (%)	total ('000,000 natl cur.)	benefits (%)	administration (%)	other (%)
Ecuador	●	●	●	●		1.9	71,286.0	37.0	50.0	—	13.0	52,032.4	86.0	14.0	—
Egypt	●	●	●	●		11.2	2,443.5	22.8	41.0	2.0	34.2	1,685.6	93.4	6.6	—
El Salvador	●	●	●			13.5	465.3	27.1	51.7	—	21.2	368.3	78.1	21.9	—
Equatorial Guinea	●	●	●		●		141.0	7.1	92.9	—	—	134.0	49.3	50.7	—
Eritrea						...	.	.	.	.	.	.	.	...	..
Estonia	●	●	●	●	●	34.2	90.1								
Ethiopia	●		●			7.3	190.9	32.8	65.3	—	1.9	153.7	98.3	1.7	—
Faroe Islands	●				●										
Fiji	●		●			5.4	153.5	20.9	33.8	0.8	44.5	75.5	95.3	4.7	—
Finland	●	●	●	●	●	47.1	118,589.0	7.7	41.1	44.0	7.2	106,235	96.3	3.7	—
France	●	●	●	●	●	49.1	1,700,202.0	77.7	—	20.4	1.9	1,669,096.0	95.5	3.7	0.8
French Guiana	●		●			..	1,071.5	.				997.1	...	...	...
French Polynesia	●		●				19,268.0					17,832.0	...	...	...
Gabon	●		●			.	3,415.0	—	44.3	29.3	26.4	2,737.0	55.2	44.8	—
Gambia, The	●		●			1.0	—					5.6	...	..	...
Gaza Strip						—									
Georgia	●	●	●	●		12.2	.	.	.			. .	...	.	...
Germany	●	●	●	●	●	72.1									
Ghana	●		●			4.7	17,920.8	21.1	52.9	—	26.0	4,147.7	13.3	64.0	22.7
Greece	●	●	●	●	●	10.4	1,314,421.0	24.9	38.4	30.8	5.9	1,349,693.0	92.5	7.5	—
Greenland	●				●	.	.	.	.			. .	...	...	...
Grenada	●	●	●			8.6	24.1	20.1	60.3	3.2	16.3	13.5	93.1	6.9	—
Guadeloupe	●						2,607.3		.	.		5,883.4	...	.	...
Guam	●					.	...	.	...	.	.	7.3	...	...	...
Guatemala	●		●			7.0	348.5	29.1	54.8	—	16.1	279.7	82.7	14.6	2.7
Guernsey	●	●	●	●	●	..	103,560	—— 45.0 ——		40.7	14.3	85,468	94.8	5.2	...
Guinea	●	●	●		●	5.1	3,387.0	0.4	90.3	—	9.3	1,108.1	54.9	45.1	—
Guinea-Bissau						8.8	138.0	22.8	63.4	10.3	3.8	61.9	59.6	40.4	—
Guyana	●					..	1,070.8					1,373.7	...	...	..
Haiti	●		●			5.1	..			.		. .	...	..	..
Honduras	●		●				166.2	23.9	40.8	3.3	32.0	76.8	84.6	15.4	—
Hong Kong	●	●	●	●	●	24.1	...	.	. .	..	..	26,939	...	...	...
Hungary	●	●	●	●	●	40.4	798,000.0	—	—	—	—	737,000.0	—	—	—
Iceland	●	●	●	●	●	18.2	14,799	—	—	—	—	96,094	98.2	1.8	—
India	●	●	●	●		.	43,913.8	23.8	27.7	5.3	43.2	13,775.8	90.0	8.2	1.8
Indonesia	●		●			6.0	239,477.0	50.7	49.3	—	—	181,499.0	12.3	15.8	71.9
Iran	●	●	●	●	●	16.5	346,460.0	83.2	0.1	8.2	8.5	167,879.0	43.4	6.3	50.0
Iraq	●					..	...	. .	. .	.	.	. .	...	..	...
Ireland	●	●	●	●	●	33.1	4,627.5	16.3	24.8	57.7	1.2	4,612.9	95.2	4.7	0.1
Isle of Man	●	●	●	●	●					.	..	14.4	...	.	...
Israel	●	●	●	●	●	22.1	13,851.1	31.1	27.7	35.0	6.2	13,593.3	81.7	15.4	2.9
Italy	●	●	●	●	●	43.0	278,383.0	16.5	51.4	30.0	2.1	100,251.0	89.3	2.0	8.7
Jamaica	●	●	●		●	2.3	374.3	11.5	13.6	43.8	31.1	273.6	92.6	7.4	—
Japan	●	●	●	●	●	48.9	59,571,299.0	27.4	31.6	24.4	16.6	46,684,159.0	94.3	1.7	4.0
Jersey	●	●	●	●	●	9.5	60.9	—— 63.8 ——		23.4	12.8	52.8	..	...	...
Jordan	●		●			16.7	53.6	28.7	55.3	—	16.0	9.5	77.4	14.0	8.6
Kazakhstan	●	●	●		●	22.3	.	.	.	.	.	. .	...	...	...
Kenya	●	●	●			2.7	4,262.0	18.2	13.7	10.0	58.1	1,857.8	53.8	46.1	0.1
Kiribati	●		●			.	.	.	.	. .		. .	...	...	...
Korea, North												. .	.	..	..
Korea, South	●	●	●	●		13.7	7,425,400.0	—	62.2	—	—	9,656,600.0		..	.
Kosovo															
Kuwait	●					9.2	445.8	7.1	13.2	54.3	25.4	206.5	97.0	3.0	—
Kyrgyzstan	●	●	●	●	●	11.6						...	...	...	..
Laos	●	●	●						.	.	.	. .	...	.	
Latvia	●	●	●	●	●	28.7									
Lebanon	●	●	●		●	6.8									
Lesotho						11.1	—			. .		...	..	...	..
Liberia	●						2.9	—	69.0	13.8	17.2	12.0			
Libya	●	●					314.3	21.6	25.4	50.2	2.8	2.6	54.4	45.6	—
Liechtenstein	●	●	●	●	●							260.0	77.5	19.5	3.0
Lithuania	●	●	●	●	●	34.2	.	.	.	...	. .	. .	...	...	...
Luxembourg	●	●	●	●	●	51.8	72,471.8	24.2	34.6	34.4	6.8	24,981.7	...	...	...
Macau	●				●	6.2	223.2	. .	..	.	. .	65,214.4	97.2	2.4	0.4
Macedonia	●	●	●	●	●	..	24,482		.			207.4	...	...	...
Madagascar	●	●	●		●	1.5	15,229.0	22.2	77.8	—	—	..	..	...	...
Malawi	●	●	●				—	.	. .			14,542.0	81.2	18.8	—
Malaysia	●	●	●			5.8	7,958.7	20.7	40.2	—	39.1	5.4	.	...	.
Maldives	●					..	—	.	.			2,826.5	97.0	3.0	—
Mali	●	●	●				8,128.8	16.6	74.3	—	9.1	7.1	..	..	..
Malta	●	●	●	●	●	31.7	82.2	26.1	31.6	42.3	—	7,924.6	63.7	34.7	1.6
Marshall Islands	●	●										110.7	92.5	7.5	—
Martinique	●				●	.	3,913.1	.	. .	.		. .	...	...	...
Mauritania	●	●	●		●	..	808.4	1.5	90.4	—	8.1	8,429.6	...	...	...
Mauritius	●	●	●			23.5	1,733.5	2.9	47.9	31.7	17.5	735.2	63.5	31.2	5.3
Mayotte	●					.	...	.	. .	. .	. .	1,072.7	95.2	3.0	1.8
Mexico	●	●	●	●		20.1	16,011,795.0	20.9	54.8	12.9	11.4	. .	...	...	...
Micronesia	●					.	..	..	..	..	..	14,562,293.0	79.9	15.5	4.6
Moldova	●	●	●	●	●	36.8	.	.	.	. .	.	...	...	...	..
Monaco	●	●	●	25	●			. .				...	...	...	...
Mongolia	●	●			●	26.9	2,431.6	—	—	20.8	79.2	...	.	.	...
Montenegro	●											2,304.6	100.0	—	—
Morocco	●	●	●		●	11.2	4,660.5	20.6	47.5	12.9	19.0	. .	...	...	...
Mozambique	●					..	228.2	—	86.2	13.7	0.1	3,040.7	94.8	5.0	0.2
Myanmar (Burma)	●	●	●			2.3	44.3	19.9	59.6	18.5	2.0	145.0	100.0	—	—
												35.9	51.5	15.6	32.9

crime and law enforcement (latest)						military protection							country
offenses reported to the police per 100,000 population					population per police officer[a]	manpower, 2006[b]		expenditure, 2005				arms trade ('000,000 U S $)	
total	personal		property			total ('000)	per 1,000 population	total '000,000	per capita	% of central government expenditure	% of GDP or GNP	imports 1999	exports 2005	
	murder	assault	burglary	automobile theft										
587	25.9	35.6	164.5	52.9	260	46.5	3.5	887	66	. .	2.6	20	0	Ecuador
3,693	1.6	0.7	. .	3.1	580	468.5	6.5	2,632	37	10.1[6]	2.8	700	0	Egypt
879	36.9	71.1		82.0	1,000	15.5	2.2	108	16	3.9	0.6	10	0	El Salvador
. . .	. . .	. . .			190	1.3	2.5	7	14	16.5[2]	0.1	0	0	Equatorial Guinea
161.9	2.7	10.3	5.8	.		201.8	42.2	230[7]	49[7]	51.1[2]	24.1[7]	170	20[2]	Eritrea
3,565	13.8	28.3	1,659.2	169.8	.	4.9	3.6	204	152	4.5[2]	1.7	10	0	Estonia
258.3	6.5	77.8	1.4	1.4		182.5	2.4	341	5	16.5[6]	3.9	270	0	Ethiopia
. .	. . .					[3]	[3]	—	—	—	—			Faroe Islands
2,370	2.9	44.1	427.9	44.4	407	3.5	4.1	33	36	6.0	1.2	0	0	Fiji
14,350	0.7	34.9	1,739.7	33.2	640	28.3	5.4	2,744	515	4.4	1.4	400	128	Finland
6,097	3.4	162.7	632.4	511.0	630	254.9	4.2	52,917	871	4.8	2.5	800	1,600	France
8,936	27.2	178.7	1,367.3	150.6	.	[3]	[3]	—	—	—	—			French Guiana
1,799	0.9	98.9	232.7	. .		[3]	[3]	—	—	—	—		.	French Polynesia
114	1.4	17.9	2.3	7.5	1,290	4.7	3.3	110	79	8.1[7]	1.5	0	0	Gabon
89	0.4	10.6	5.6	.	3,310	0.8	0.4	2	2	6.6	0.5	0	0	Gambia, The
4,355	. . .	. . .	. . .	. .		—	—	. . .						Gaza Strip
286	4.7	99.5	21.1	0.8		11.3	2.5	230	51	19.1	3.5	10	30[2]	Georgia
7,682	3.5	139.6	1,377.4	114.3		284.5	3.5	38,060	462	3.6	1.4	1,300	2,027	Germany
. . .	2.2	418.9	1.5	.	620	7.0	0.3	80	4	10[6]	0.7	0	0	Ghana
3,641	3.0	68.2	356.8	166.5	380	163.9	14.7	9,236	833	5.6[7]	4.1	1,900	36	Greece
9,360	18.1	845.0	1,883.5		340	[3]	[3]	—	—	—	—			Greenland
8,543	7.8	98.9	582.2		230									Grenada
5,793	13.2	215.2	821.5	453.9		[3]	[3]	—	—	—	—			Guadeloupe
10,080	7.9	169.3	634.2	333.6		[3]	[3]	—	—	—	—			Guam
510	27.4	77.1	27.9	58.1	670	29.2	2.2	105	8	2.4	0.3	0	0	Guatemala
. . .	.	.	.	.	.	[3]	[3]	—	—	—	—			Guernsey
18.4	0.5	0.7	0.7	0.1	1,140	9.7	1.0	63	8	4.5[7]	2.8	0	0	Guinea
129	0.5	8.7	4.0	0.2	.	9.3	6.4	12	6	8.2	4.0	0	0	Guinea-Bissau
1,277	19.1	246.0	365.8	32.2	190	1.1	1.5	14[8]	19[8]	2.0[2]	1.8[8]	0	0	Guyana
701	. . .	.			400	[17]	[17]	15	2		0.4	0	0	Haiti
392	154.0	44.4	4.3	25.8	1,040	12.0	1.6	50	7	2.6[2]	0.6	10	0	Honduras
1,122	1.0	117.1	133.4	15.3	221	[3]	[3]	—	—	—	—			Hong Kong
5,011	4.1	76.6	804.4	41.3	237	32.3	3.2	1,596	158	4.1	1.5	80	15	Hungary
31,332	0.7	15.8	920.3		940	—	—	—	—	—	—	10	0	Iceland
594	4.6	.	15.6		820	1,325.0	1.2	22,273	20	19.1	2.8	700	57	India
120.9	1.0	4.4	1.8	1.7	1,119	302.0	1.4	3,410	38	6.6	1.2	450	100[2]	Indonesia
77	0.5	47.7				545.0	7.9	9,057[18]	130[18]	13.0	5.8[18]	150	10[2]	Iran
197	7.1	34.7			140	227.0[19]	8.0[19]					5	0	Iraq
1,696	1.4	12.4	479.8	16.3	310	10.5	2.5	1,141	275	2.1	0.6	40	37	Ireland
2,867	0.7	12.3	921.4	60.6		[3]	[3]	—	—	—	—	—	—	Isle of Man
6,254	2.2	491.8	990.1	501.7	210	168.3	24.7	12,522[20]	1,875[20]	22.3	9.7[20]	2,400	2,600	Israel
4,214	4.4	46.4		537.0	680	191.2	3.2	33,531	578	4.8	1.9	700	1,034	Italy
1,871	37.2	511.4	135.7	7.2	430	2.8	1.0	56	20	1.8	0.6	10	0	Jamaica
1,773	1.0	16.0	206.0	34.0	480	260.3	2.0	44,165[8]	345[8]	2.6	1.0[8]	3,000	20[2]	Japan
. . .	. . .					[3]	[3]	—	—	—	—			Jersey
1,256	6.3	14.0	31.0	52.2	630	100.5	18.3	673	130	12.3	5.3	70	0	Jordan
932	15.9			3.4		65.8	4.3	592	39	4.7	1.1	160	10[2]	Kazakhstan
484	6.4	54.1	76.9	9.7	1,500	24.1	0.7	317	9	8.1[7]	1.7	5	0	Kenya
261	5.1	11.6	38.6		330	—	—	. .	. .					Kiribati
. . .					460	1,106.0	49.0	3,300[6]	72[6]		7.3[6]	30	140[2]	Korea, North
3,494	2.1	64.6	7.0		506	687.7	14.3	20,333[8]	430[8]	10.4	2.6[8]	2,200	420[7]	Korea, South
. . .	. . .	. . .	. . .	. .		. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Kosovo
1,346	1.5	36.4	75.9	56.7	80	15.5	5.0	3,909	1,370	16.5	4.8	725	0	Kuwait
987	. .	12.6	482.4	.		12.5	2.4	76	15	7.5[7]	3.1	0	0	Kyrgyzstan
. . .					280	29.1	5.1	46	2	10.4[7]	0.4[7]	0	0	Laos
2,097	9.3	18.6	56.1	129.0		5.2	2.3	274	119	4.0	1.7	5	0	Latvia
3,063	5.5	209.7	78.0	30.0	530	72.1[21]	18.8[21]	1,002	280	9.8	4.5	10	0	Lebanon
2,357	50.4	156.9	250.4	30.8	1,130	2.0	1.0	34	17	5.0[7]	2.3	0	0	Lesotho
. . .	.		. .	. .	1,570	2.4[22]	0.8[22]	46[6]	16[6]	9.4[6]	11.0[6]	0	0	Liberia
1,065	2.1	5.4				76.0	12.7	749	128	6.4[6]	2.0	20	30[2]	Libya
. . .	. . .	114.3	614.3	153.6	660	[23]	[23]	—	—	—	—			Liechtenstein
2,029	9.0	10.4	585.6	96.7		13.5	4.0	308	90	4.5	1.2	20	0	Lithuania
6,280	17.2	89.0	1,152.8	182.0	829	0.9	2.0	296	584	0.7	0.8	50	0	Luxembourg
1,698	5.4	34.0	250.5	26.6		[3]	[3]							Macau
1,102	5.4	26.9		44.7		10.9	5.3	127	62	6.4	2.2	20	0	Macedonia
112	0.6	12.0	0.7	0.1	2,900	13.5	0.7	54	3	5.0[7]	1.1	0	0	Madagascar
850	3.1	82.2	13.1		1,670	5.3	0.4	14[6]	1[6]	2.2[2]	0.7[6]	0	0	Malawi
604	3.1	25.9	155.6	20.8	760	110.0	4.1	3,120	119	7.0	2.4	925	0	Malaysia
2,353	1.9	3.3	36.1		35,710			6	20	10.1	1.2	.		Maldives
10.0	0.7	1.5	0.8	0.3	160	7.4	0.6	120	10	8.7[2]	2.3	0	0	Mali
1,841	3.0	35.2	1,079.2	243.9	230	2.2	5.4	41	101	2.2	0.7	0	0	Malta
2,273	.	.	.	.	400	[24]	[24]	—	—	—	—			Marshall Islands
6,305	5.8	184.9	641.2	192.8	.	[3]	[3]	—	—	—	—			Martinique
95.4	0.8	27.0	7.3	2.5	710	15.9	5.0	70	23	13.2	3.6	0	0	Mauritania
2,712	2.9	7.8	116.0		240	—	—	12	10	0.7	0.2	0	0	Mauritius
. . .	. .	.			.	[3]	[3]	—	—	—	—			Mayotte
108	7.3	30.2				192.8	1.9	3,119	29	3.0[6]	0.4	160	30[2]	Mexico
. . .	. .	.	. .	. .		[24]	[24]	—	—	—	—			Micronesia
957	9.9	11.1	50.4	15.6		6.8	1.6	25	6	1.3	0.3	0	20[2]	Moldova
3,430	—	46.7	106.7	70.0		—	—	.	.	.	.			Monaco
1,010	30.0	74.7	486.0	2.1	120	8.6	3.3	30	12	5.9[6]	1.6	0	0	Mongolia
. . .	.	.	.	.	.	. . .	. . .	. . .	. . .	. . .	. . .	. . .	.	Montenegro
366	1.4	6.7			840	200.8	6.6	2,312	77	13.5[2]	4.5	130	0	Morocco
166	4.2	9.2	45.9		.	11.2	0.6	62	3	9.1[2]	0.9	5	0	Mozambique
64.5	1.9	26.9	0.1	0.1	650	375.5	7.9	73[7]	113[7]	21.5[7]	7.6[7]	60	0	Myanmar (Burma)

Social protection (continued)

country	social security													
	programs available, 2006 or 2005					expenditures, latest (% of total central govt)[1]	finances, latest							
							receipts					expenditures		
	old-age, invalidity, death[a]	sickness and maternity[b]	work injury[c]	unemployment[d]	family allowances[e]		total ('000,000 natl cur.)	insured persons (%)	employers (%)	government (%)	other (%)	total ('000,000 natl cur.)	benefits (%)	administration (%)	other (%)
Namibia	○	.	.	.	○	12.2	.	.	.	.	.	.	.	.	.
Nauru	○	○	○	.	○	.	.	.	.	.	.	.	.	.	.
Nepal	●	[9]	●	.	.	4.6	—	.	.	.	.	59.3	.	.	.
Netherlands, The	●	●	●	●	●	44.0	154,427.0	37.3	30.3	19.0	13.4	135,609.0	96.9	3.1	—
Netherlands Antilles[5]	.	.	.	○	.	12.9	317.0	100.0	—	—	—	275.0	.	.	.
New Caledonia	.	.	.	.	.	.	15,834.0	.	.	.	.	14,598.0	.	.	.
New Zealand	●	●	●	●	●	32.9	14,266.0	1.0	4.7	92.5	1.8	14,372.3	95.6	2.8	1.6
Nicaragua	○	○	○	.	○	11.3	647,454.8	13.5	49.1	7.6	29.8	452,038.6	82.4	17.6	—
Niger	○	○	○	.	○	.	5,634.9	9.4	90.6	—	—	3,804.2	62.5	—	37.5
Nigeria	○	.	.	.	.	.	54.0	50.0	50.0	—	—	22.6	42.5	57.5	—
Northern Mariana Islands	○	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	○	○	.	.	○	43.0	158,105.0	18.3	31.4	46.6	3.7	131,578.2	98.7	1.3	—
Oman	●	.	●	.	.	3.5	—	.	.	.	.	.	.	.	.
Pakistan	●	●	●	.	.	.	9,321.4	1.3	8.0	84.3	6.4	8,092.0	97.4	1.2	1.4
Palau	●	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Panama	○	○	○	.	.	23.1	496.7	31.0	39.5	7.1	22.4	452.8	94.0	4.8	1.2
Papua New Guinea	●	[9]	●	.	.	0.9	45.0	40.5	32.1	8.0	19.4	9.4	82.3	9.7	8.0
Paraguay	○	○	○	.	.	14.9	.	.	.	.	.	253,341	.	.	.
Peru	○	○	○	.	.	15.7	1,363,280.6	30.2	65.1	4.7	—	1,435,134.1	78.5	21.5	—
Philippines	●	●	●	.	.	2.1	19,213.6	22.2	32.3	—	45.5	7,878.3	87.3	12.3	—
Poland	●	●	●	●	●	45.3	11,572,248.0	2.1	70.2	25.1	2.6	11,452,165.0	98.8	1.2	—
Portugal	●	●	●	●	●	41.7	833,442.5	31.3	50.1	13.4	5.2	756,410.8	94.6	4.2	1.2
Puerto Rico	○	○	○	○	○	.	.	.	.	.	.	1,041.3	100.0	—	—
Qatar	.	.	.	.	.	.	80.0	—	—	100.0	—	80.0	100.0	—	—
Réunion	.	.	.	.	.	.	.	.	.	.	.	13,200.0	.	.	.
Romania	●	●	●	●	●	35.8	90,561.2	—	48.9	51.1	—	90,561.2	100.0	—	—
Russia	●	●	●	●	●	40.4	.	.	.	.	.	.	.	.	.
Rwanda	○	.	○	.	.	.	2,350.0	23.9	39.8	—	36.3	965.8	60.8	39.2	—
St. Kitts and Nevis	○	○	○	.	.	4.9	14.3	.	.	.	.	7.9	.	.	.
St. Lucia	○	○	○	.	.	.	14.6	28.6	28.6	—	42.8	3.4	61.4	38.6	—
St. Vincent and the Grenadines	○	○	○	.	.	8.8	—	.	.	.	.	—	.	.	.
Samoa	●	.	●	.	.	—	—	.	.	.	.	—	.	.	.
San Marino	●	●	●	●	.	30.1	51,673.0	12.0	48.7	36.1	3.2	46,179.0	95.7	3.7	0.6
São Tomé and Príncipe	○	○	○	.	.	.	46.4	37.7	56.3	—	6.0	23.7	100.0	—	—
Saudi Arabia	●	.	●	.	.	.	1,761.4	26.8	73.2	—	—	4,292.9	100.0	—	—
Senegal	[10]	○	○	.	○	1.8	17,202.0	—	47.6	51.4	1.0	15,371.0	84.6	11.1	4.3
Serbia	●	●	.	●	●	50.9	.	.	.	.	.	.	.	.	.
Seychelles	○	○	○	.	.	14.2	69.1	30.1	60.2	—	9.7	42.7	69.6	4.9	25.5
Sierra Leone	○	.	○	.	.	.	.	.	.	.	.	153.0	100.0	—	—
Singapore	●	●	●	.	.	18.1	7,531.9	49.1	35.3	0.1	15.6	5,045.8	78.0	0.6	21.4
Slovakia	●	●	●	●	●	49.6	74,205	.	.	.	.	87,916	.	.	.
Slovenia	●	●	●	●	●	44.2	.	.	.	.	.	.	.	.	.
Solomon Islands	●	.	●	●	.	.	20.9	27.8	41.1	—	31.1	17.4	89.7	10.3	—
Somalia	.	.	○	.	.	.	—	.	.	.	.	.	.	.	.
South Africa	○	[9]	○	○	○	2.2	2,034	—	100.0	—	—	2,260.0	.	.	.
Spain	●	●	●	●	●	46.6	8,320,972.0	15.9	53.9	27.9	2.3	8,038,090.0	94.3	2.6	3.1
Sri Lanka	○	[32]	○	.	○	20.4	15,399.9	22.0	24.4	29.1	24.5	5,819.0	98.5	1.3	0.2
Sudan, The	○	.	○	.	.	0.6	62.0	24.9	0.5	—	74.6	14.7	37.5	62.5	—
Suriname	○	.	.	.	○	.	73.0	24.7	75.3	—	—	70.6	100.0	—	—
Swaziland	○	.	○	.	.	0.4	10.7	31.4	31.4	—	37.2	3.9	45.8	54.2	—
Sweden	●	●	●	●	●	46.9	446,909.7	2.8	37.9	50.8	8.5	439,997.3	93.7	3.3	3.0
Switzerland	●	●	●	●	●	47.8	45,800.1	45.6	22.6	25.9	5.9	41,745.7	91.5	3.0	5.5
Syria	●	.	●	●	.	5.3	3,147.9	30.4	60.9	.	5.6	1,455.9	95.7	4.2	0.1
Taiwan	●	●	●	●	.	13.8	.	.	.	.	.	.	.	.	.
Tajikistan	●	●	●	●	●	12.2	.	.	.	.	.	.	.	.	.
Tanzania	○	○	○	.	.	.	3,275.8	25.9	25.9	—	48.2	2,780.7	5.8	14.1	80.1
Thailand	●	●	●	●	●	7.8	654.0	—	60.2	—	39.8	260.0	88.2	11.8	—
Togo	○	[9]	○	.	○	.	10,162.0	8.1	61.5	—	30.4	5,844.0	77.5	22.5	—
Tonga	.	.	.	.	.	0.8	.	.	.	.	.	.	.	.	.
Trinidad and Tobago	○	○	○	.	○	19.3	584.9	12.0	24.1	39.7	24.2	438.4	85.6	11.1	3.3
Tunisia	○	○	○	○	○	21.2	325.3	36.9	63.1	—	—	358.3	.	.	.
Turkey	●	●	●	●	.	4.2	12,075,809.0	28.5	32.9	22.8	15.8	10,241,427.0	97.2	2.2	0.6
Turkmenistan	●	●	●	●	●	.	.	.	.	.	.	.	.	.	.
Tuvalu	○	.	.	.	.	.	.	.	.	.	.	0.1	67.6	32.4	—
Uganda	○	.	○	.	.	2.2	265.9	32.1	64.3	1.1	2.5	145.0	0.3	76.8	22.9
Ukraine	●	●	●	●	●	48.9	20,350.0	—	—	—	—	20,350.0	100.0	—	—
United Arab Emirates	.	.	.	.	.	3.2	182.2	17.3	6.2	0.5	76.0	182.2	100.0	.	.
United Kingdom	●	●	●	●	●	28.9	92,157.0	18.1	24.9	52.9	4.1	88,294.0	93.8	3.3	2.9
United States	○	○	○	○	○	42.2	804,909.0	25.5	33.9	28.8	11.8	627,653.0	95.5	3.3	1.2
Uruguay	○	[34]	○	○	○	38.1	535,507.0	31.4	37.3	26.0	5.3	548,591.0	93.6	5.4	1.0
Uzbekistan	●	●	●	●	●	.	.	.	.	.	.	.	.	.	.
Vanuatu	●	.	.	.	.	.	—	.	.	.	.	—	.	.	.
Venezuela	○	○	○	○	[34]	11.2	7,457.6	21.3	40.7	12.7	25.3	6,355.7	86.1	14.9	—
Vietnam	●	●	●	.	.	10.5	.	.	.	.	.	.	.	.	.
Virgin Islands (U.S.)	○	.	.	○	○	.	.	.	.	.	.	.	.	.	.
West Bank	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Western Sahara	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Yemen	●	.	●	.	.	10.5	—	.	.	.	.	—	.	.	.
Zambia	○	[9]	○	.	.	1.3	179.2	28.4	28.4	—	43.2	67.7	40.6	59.4	—
Zimbabwe	○	[9]	○	.	.	.	167.0	25.9	7.6	64.2	2.3	112.2	93.7	6.2	0.1

[1]As of February 2007 U.S. forces numbered 15,000, and NATO-sponsored security forces numbered 35,500. [2]1999 [3]Political dependency; defense is the responsibility of the administering country. [4]Includes civilian militia [5]Netherlands Antilles includes Aruba. [6]2003. [7]2004 [8]Excludes expenditure on military pensions. [9]Medical care only [10]Old age benefits only [11]Military defense is the responsibility of France [12]As of June 2007 UN peacekeeping troops numbered 176,619 [13]As of June 2007 UN troops numbered 7,846. [14]Republic of Cyprus only [15]No regular military forces; Commonwealth of Dominica Police Force. [16]UN forces of 1,628 military police are stationed in East Timor as of June 2007. [17]Haitian Army was disbanded in 1995, and a National Police Force of 5,300 was formed; in June 2007 there were 7,065 UN troops in Haiti. [18]Includes public order. [19]As of September 2007 U.S. and allied coalition forces numbered 168,000 and 13,000, respectively [20]Includes

crime and law enforcement (latest)						military protection								country
offenses reported to the police per 100,000 population					population per police officer[9]	manpower, 2006[h]		expenditure, 2005				arms trade ('000,000 U.S.$)		
total	personal		property			total ('000)	per 1,000 population	total '000,000	per capita	% of central government expenditure	% of GDP or GNP	imports 1999	exports 2005	
	murder	assault	burglary	automobile theft										
2,006	26.3	533.6	602.0	65.8		9.2	4.7	187	92	8.4[7]	3.2	130	0	Namibia
...	25.0	400.0	100.0		110	—	—	—	—	—	—	.	.	Nauru
9	2.8	1.1	0.8	.	1,000	69.0	2.5	175	6	12.4	2.1	0	0	Nepal
7,808	10.9	242.8	3,100.4	239.0	510	53.1	3.2	9,568	523	3.6	1.5	775	1,461	Netherlands, The
5,574[26]	...	396	3,455		330	[3]	[3]	—	—	—	—	.	.	Netherlands Antilles[5]
.	...	.	...	.	.	[3]	[3]	—	—	—	—	.	.	New Caledonia
13,854	3.9	546.3	2,352.9	788.6	630	8.7	2.1	1,101	269	2.5	1.0	575	0	New Zealand
1,069	25.6	203.8	110.7	.	90[4]	14.0	2.7	34	6	2.9[2]	0.7	0	0	Nicaragua
99	0.9	16.6	1.0	0.7	2,350[27]	5.3	0.4	35[7]	3[7]	6.4[2]	1.2[7]	0	0	Niger
312	. .		. .	..	1,140	78.5	0.6	674	5	8.1[2]	0.7	0	0	Nigeria
245	3.8	92.6	73.7	20.8		[3]	[3]	—	—	—	—			Northern Mariana Islands
9,769	2.3	66.1	95.0	465.8	660	25.8	5.5	4,887	1,058	4.6	1.7	480	382	Norway
331	1.5	1.8	.	14.9	430	41.7	16.6	3,652	1,516	35.3[6]	11.9	30	0	Oman
318	7.1	2.2	10.4	9.0	720	619.0	3.9	4,534	29	19.8	3.5	1,000	100	Pakistan
...	.		323.0			[24]	[24]	—	—	—	—			Palau
419	2.0	11.8	25.1	77.7	180	—	—	119	50		1.1	5	0	Panama
766	8.6	66.7	63	22.0	720	3.1	0.5	30	5	2.4[6]	0.6	0	0	Papua New Guinea
418	11.5	54.2	21.4	30.5	310	10.3	1.7	55	9	3.9[2]	0.7	10	0	Paraguay
218	3.2	24.1	7.8	3.6	730	80.0	2.9	1,088	39	12.3[2]	1.4	30	0	Peru
.	13.1	14.9		3.3	1,160	106.0	1.2	865	10	4.5	0.9	110	0	Philippines
2,901	2.8	79.2	936.8	185.0	370	141.5	3.7	5,880	154	3.5	1.9	40	361	Poland
661	3.1	1.5	115.3	40.4	660	44.9	4.2	4,183	398	3.3[7]	2.3	60	9	Portugal
2,339	16.2	101.8	412.4	1,521	380	[3]	[3]	—	—	—	—		.	Puerto Rico
1,079	2.1	7.1	34.1	11.5		12.4	14.8	2,127	2,751	9.6[7]	6.2	120	0	Qatar
2,097	7.8	123.1	181.3	137.9	220	[3]	[3]	—	—	—	—		.	Reunion
2,206	7.1	5.8	367.8	30.4		97.2	4.5	1,948	90	5.0[6]	2.0	200	36	Romania
20,514	21.3	32.6	669.1	25.6		1,027.0	7.2	31,100	217	34.6	4.1	470	6,126	Russia
..	45.1	114.3	.	0.3	4,650	51.0	5.8	62	7	22.7[2]	2.9	30	0	Rwanda
3,808	12.0	434.0	1,790	.	300	—	—		.	.				St. Kitts and Nevis
4,386	17.0	1,193.0	778.0		430	—	—						.	St. Lucia
3,977	10.3	986.9			250	—	—						..	St. Vincent and the Grenadines
.	.					[28]	[28]	—	—	—	—			Samoa
...	4.1					—	—		.				..	San Marino
558	4.0				400	—	—	0.6	4	1.3	1.2	0	0	São Tomé and Príncipe
149	0.5	0.2		45.4	280	199.5	8.4	25,372	1,092	14.4	8.2	7,700	0	Saudi Arabia
123	0.5	8.8	2.1	8.2	730	13.6	1.2	124	11	7.3[7]	1.5	0	0	Senegal
...	...	.	.	.	...	39.7[29]	3.7	580[30]	77[30]		2.6[30]	10	0	Serbia
5,361	3.7	43.4	378.0	40.9	120	0.2	2.4	13	157	3.8	1.8	.	...	Seychelles
.	.				600	13.0	2.5	12	2	13.5	1.0	10	0	Sierra Leone
783	1.0	2.4	40.1	55.2	230	72.5	16.4	5,468	1,274	28.8[7]	4.7	950	20[2]	Singapore
1,740	2.4	204.6	504.3	142.4		20.2	3.7	824	153	4.5	1.7	20	62	Slovakia
3,138	3.6	20.7	427.3	25.6		6.6	3.3	514	257	3.1	1.5	10	0	Slovenia
...	...	.			620	—	—		.			0	0	Solomon Islands
144	1.5	8.0	31.2	.	540	[31]	[31]	43	5		0.9	20	0	Somalia
7,140.8	121.9	595.6	896.6	262.7	870	55.8	1.2	3,568	76	4.2[6]	1.5	50	410[6]	South Africa
4,449	2.7	23.4	562.8	343.3	580	147.3	3.3	11,829	268	4.3	1.1	750	521	Spain
280	8.2	10.8	54.7		860	71.1	3.4	612	30	10.5	2.6	40	0	Sri Lanka
...	10.2	46.3	66.6	4.7	740	104.8	2.8	502	13	27.5[6]	1.8	10	0	Sudan, The
17,819	7.6	1,824.4	.			1.8	3.6	21	43	11.0[7]	1.6	10	0	Suriname
3,962	18.1	471.7	706.8	54.1	610	—	—	49[7]	39[7]	4.6	1.8[7]	0	0	Swaziland
12,982	4.5	42.5	1,615.1	658.9	330	27.6	3.0	5,521	612	5.4	1.5	230	1,416	Sweden
7,030	2.7	73.3	1,065.9	1,065.5	640	4.3	0.6	3,489	464	8.1[7]	1.0	1,100	207	Switzerland
42	1.0	—	15.6	2.7	1,970	307.6	16.6	6,138	345	23.6[2]	5.1	210	0	Syria
799	8.2			124.9	720	290.0	12.7	7,352	324	10.3	2.2	2,600	20[2]	Taiwan
317	2.5	4.6				7.6	1.1	46[7]	7[7]	2.0[7]	2.2[7]	0	0	Tajikistan
1,714	7.7	1.7	96.6	0.9	1,330	27.0	0.7	135	4	10.1[2]	1.1	5	0	Tanzania
351	7.7	25.4	9.9	3.3	530	306.6	4.7	2,018	31	1.6	1.1	330	0	Thailand
11	..				1,970	8.6	1.5	33	5	9.4[2]	1.5	0	0	Togo
2,727	1.0	108.5	541.7	14.8	330	[28]	[28]	[27]	23[7]		1.0[7]		...	Tonga
1,170	9.7	31.0	452.7	80.6	280	2.7	2.1	32	25	2.2[6]	0.2	0	0	Trinidad and Tobago
1,419	1.2	165.1	60.1	10.2	340	35.3	3.5	469	29	5.0	1.6	10	0	Tunisia
547	3.9	120.0	.	28.9	1,570	514.9	7.1	10,301	143	6.7[5]	2.8	3,200	337	Turkey
...	...					26.0	5.3	450	93	16.0[2]	3.7	10	0	Turkmenistan
...				—	290	—	—							Tuvalu
316	9.9	54.8	19.3	8.3	1,090	45.0	1.6	197	7	8.9[6]	2.3	30	0	Uganda
1,115	10.0	14.7	224.3	7.6		187.6	4.0	1,999	42	4.5	2.4	10	500[6]	Ukraine
2,604.7	3.0	10.1	5.1	23.0	140	50.5	12.0	2,559	546	30.1[2]	2.0	950	0	United Arab Emirates
9,823[33]	2.8[33]	405.2[33]	1,832.7[33]	752.9[33]	350	216.9	3.6	60,076	1,000	6.0	2.7	2,600	12,985	United Kingdom
5,374	9.0	430.2	1,041.8	591.2	318	1,546.4	5.2	504,638	1,700	20.1	4.1	1,600	11,552	United States
3,002	7.7	162.5	52.3	130.1	170	24.0	7.3	219	67	5.2	1.3	10	0	Uruguay
328	3.2	3.0	33.2	2.3		55.0	2.1	53	2	5.3[2]	0.4	0	10[2]	Uzbekistan
..	.	.	.	.	450	—	—	.	.	. .				Vanuatu
1,106	22.1	152.2	358.2	239.4	320	82.3	3.0	1,606	60	5.0	1.2	310	0	Venezuela
74	1.5	8.5				455.0	5.5	3,140	38		6.0	70	0	Vietnam
10,441	22.3	1,943.2	3,183.7	954	240	[3]	[3]	—	—	—	—		.	Virgin Islands (U.S.)
2,226	..	..				—	—	.						West Bank
.	...	..	..			[3]	[3]	—	—	—	—		.	Western Sahara
.	5.3	3.2	1.2	3.6	1,940	66.7	3.2	1,009	50	18.8[2]	7.0	30	0	Yemen
666	9.8	9.5	153.5	9.6	540	15.1	1.3	45	4	3.9[2]	0.7	0	0	Zambia
5,619	9.0	198.4	435.9	13.4	750	29.0	2.4	132	11	12.1[2]	2.3	10	0	Zimbabwe

U.S. military aid of U.S.$2 billion annually [21]As of June 2007 UN peacekeeping troops numbered 13,300 [22]As of June 2007 there were 13,900 UN peacekeeping troops in Liberia. [23]Military defense is the responsibility of Switzerland [24]Military defense is the responsibility of the United States [25]Coverage provided through France's program [26]Curaçao only [27]Includes paramilitary forces. [28]Military defense is the responsibility of New Zealand [29]NATO-sponsored troops in Kosovo (March 2007) numbered 16,500 [30]Includes Montenegro, excludes Kosovo. [31]Following the 1991 revolution, no national armed forces have yet been formed [32]Maternity benefits only [33]England and Wales. [34]Coverage is provided under other programs

Education

This table presents international data on education analyzed to provide maximum comparability among the different educational systems in use among the nations of the world. The principal data are, naturally, numbers of schools, teachers, and students, arranged by four principal levels of education—the first (primary); general second level (secondary); vocational second level; and third level (higher). Whenever possible, data referring to preprimary education programs have been excluded from this compilation. The ratio of students to teachers is calculated for each level. These data are supplemented at each level by a figure for enrollment ratio, an indicator of each country's achieved capability to educate the total number of children potentially educable in the age group usually represented by that level. At the first and second levels this is given as a net enrollment ratio and at the third level as a gross enrollment ratio. Two additional comparative measures are given at the third level: students per 100,000 population and proportion (percentage) of adults age 25 and over who have achieved some level of higher or postsecondary education. Data in this last group are confined as far as possible to those who have completed their educations and are no longer in school. No enrollment ratio is provided for vocational training at the second level because of the great variation worldwide in the academic level at which vocational training takes place, in the need of countries to encourage or direct students into vocational programs (to support national development), and, most particularly, in the age range of students who normally constitute a national vocational system (some will be as young as 14, having just completed a primary cycle; others will be much older).

At each level of education, differences in national statistical practice, in national educational structure, public-private institutional mix, training and deployment of teachers, and timing of cycles of enrollment or completion of particular grades or standards all contribute to the problems of comparability among national educational systems.

Reporting the number of schools in a country is not simply a matter of counting permanent red-brick buildings with classrooms in them. Often the resources of a less developed country are such that temporary or outdoor facilities are all that can be afforded, while in a developed but sparsely settled country students might have to travel 80 km (50 mi) a day to find a classroom with 20 students of the same age, leading to the institution of measures such as traveling teachers, radio or televisual instruction at home under the supervision of parents, or similar systems. According to UNESCO definitions, therefore, a "school" is defined only as "a body of students . . . organized to receive instruction."

Such difficulties also limit the comparability of statistics on numbers of teachers, with the further complications that many at any level must work part-time, or that the institutions in which they work may perform a mixture of functions that do not break down into the tidy categories required by a table of this sort. In certain countries teacher training is confined to higher education, in others as a vocational form of secondary training, and so on. For purposes of this table, teacher training at the secondary level has been treated as vocational education. At the higher level, teacher training is classified as one more specialization in higher education itself.

The number of students may conceal great variation in what each country defines as a particular educational "level." Many countries do, indeed, have a primary system composed of grades 1 through 6 (or 1 through 8) that passes students on to some kind of postprimary education. But the age of intake, the ability of parents to send their children or to permit them to finish that level, or the need to withdraw the children seasonally for agricul-

Education

country	year	first level (primary)					general second level (secondary)					vocational second level[a]	
		schools	teachers[b]	students[c]	student/ teacher ratio	net enrollment ratio[d]	schools	teachers[b]	students[c]	student/ teacher ratio	net enrollment ratio[d]	schools	teachers[b]
Afghanistan	2002	4,876	58,312	3,900,000	52.9	29	1,994	34,271	400,000	18.1	14	.	.
Albania	2000–01	1,811	28,293	523,253	18.5	95	409[1]	5,780	100,082	17.3	77		2,174[1]
Algeria	2002–03	15,426[1]	167,529	4,612,574	27.5	95	3,954[1]	155,356	3,192,247	20.5	67		14,896
American Samoa	2001	32	524[2]	11,343			10	245[2]	4,217	.	. . .	1	21[2]
Andorra	1999–2000	12		5,996	.	89	6[1]	.	2,655[1]	. .	71		..
Angola	1997–98		31,062[3]	1,342,116		61		5,138[3]	267,399	.	. . .		566[3]
Antigua and Barbuda	2000–01	55	525	10,427	19.9		14	381	5,794	10.0	.	1[4]	16[4]
Argentina	1999–2000	22,283	307,874	4,609,077	15.0	96	21,492[5]	127,718[5]	3,281,512[5]	25.7[5]	81	5	5
Armenia	2003–04	1,439[7]	46,000[7]	498,500[7]	10.8[7]	94	[7]	[7]	[7]	[7]	83	81	3,380
Aruba	2002	36	478	9,595	20.1	99	15	568	8,160	14.4	75	11	34
Australia	2003	9,607[7]	229,576[7]	3,330,300[7]	14.5[7]	97	[7]	[7]	[7]	[7]	88	1,949	32,300
Austria	2002–03	4,458[8]	67,152[8]	649,198[8]	9.7[8]	90	734[9]	41,840[9]	326,891[9]	7.8[9]	89	925	. . .
Azerbaijan	2004–05	4,553[7]	173,819[7]	1,634,341[7]	9.4[7]	80	[7]	[7]	[7]	[7]	76	59	7,028
Bahamas, The	2002–03	113[1]	2,029	34,079	16.8	86	37	2,135	31,975	15.0	76	..	. . .
Bahrain	2000–01	241	9,970	150,054	15.1	90		.	40,946		87	..	.
Bangladesh	2002–03	63,658[11]	315,055	17,561,828	55.7	84	16,095[11]	312,348	10,897,971	34.9	45	138[11]	8,431
Barbados	2002	109	1,823	29,502	16.2	100	32	1,389	21,436	15.4	90	. . .	. .
Belarus	2003–04	4,460[7]	138,744[7]	1,369,000[7]	9.9[7]	94	[7]	[7]	[7]	[7]	85	248	14,772
Belgium	2002–03	4,596	89,445[12]	755,447		100	1,911	112,487	795,790	7.1	97	. . .	. .
Belize	2003–04	275	2,618	62,074	23.7	99	43	1,074	15,344	14.3	69	..	.
Benin	2001–02	4,682	21,766	1,152,798	53.0	58	145[13]	4,447[1]	188,035[1]	42.0[1]	20	14[13]	283[13]
Bermuda	2002	26[1]	478[1]	10,474	.	100	.	355[1]	3,726[1]	10.5[1]	86	..	. .
Bhutan	2004	433[7]	4,376[7]	135,988[7]	31.1[7]		[7]	[7]	[7]	[7]	.	8[13]	95[13]
Bolivia	2002		72,433	1,718,000	23.7	95		15,823	443,470	28.0	71	. . .	. . .
Bosnia and Herzegovina	2002–03	955[1]	20,874	365,072	17.4	98	184[1]	10,798	169,497	15.7	81	..	. . .
Botswana	2003	770	13,153	328,825	25.0	81	275	9,597	205,093	21.4	54	6	. . .
Brazil	2002	172,508	1,581,044	35,150,362	22.2	97	21,304	468,310	8,710,584	16.6	75	. . .	. . .
Brunei	2003	207[12]	4,828[12]	58,837[12]	12.2[12]	91	33	2,913	37,793	13.0	68	8	538
Bulgaria	2002–03	2,720[7]	61,354[7]	825,668[7]	13.5[7]	90	[7]	[7]	[7]	[7]	88	513	21,103
Burkina Faso	1996	3,568	14,037	702,204	50.0	36	252	4,152	137,257	33.0	9	41	731
Burundi	1998	1,512	12,107	557,344	46.0	57	400	3,548	56,872	16.0	9		. . .
Cambodia	2002–03	5,915	48,433	2,747,411	56.7	93	594	22,830	543,885	23.8	24	. . .	2,315[1]
Cameroon	2002–03	9,459[1]	49,042	2,798,523	57.1	67	700[4]	27,595	669,129	24.2	11[4]	324[4]	11,221
Canada	1999–2000	15,596[7]	302,977[7]	5,397,000[7]	17.8[7]	100	[7]	[7]	[7]	[7]	98	. . .	10,990[18]
Cape Verde	2002–03	370[19]	3,145	87,841	27.9	99	.	1,967	47,666	24.2	58	. . .	124
Central African Republic	1998	930[19]	3,125	284,398	91.0	53	46[19]	845[19]	42,253[2]		.	..	..
Chad	2002–03	2,660[20]	16,471	1,119,242	67.9	63	153[4]	2,595[14]	187,659	. .	10	18[20]	148[14]
Chile	2003–04	8,702[4]	50,261	1,713,538	34.1	85		35,208	1,170,288	33.2	81	..	11,900
China	2003	425,846	5,703,000	116,897,000	20.5	100	79,490	4,537,000	85,832,000	18.9	73	9,908	488,000
Colombia	2003	33,957	190,961	5,207,772	27.3	87	12,293	168,587	3,603,949	21.4	56	. . .	. . .
Comoros	2002–03	346[17]	2,908	106,972	36.8	55	. .	3,379	38,203	11.3	.	. .	20
Congo, Dem. Rep. of the	1998	17,585	154,618	4,022,411	26.0	54	6,007	89,461	1,234,528	13.8	17[4]	..	..
Congo, Rep. of the	1998	1,166	4,515	270,451	59.9	96	.	5,094	114,450	22.5	. . .	..	1,746[14]
Costa Rica	2002–03	3,768[17]	24,142	545,509	22.6	90	468[17]	13,170	235,156	17.9	53		2,240
Côte d'Ivoire	2001–02	7,699[14]	40,529[20]	1,662,285[20]	41.0[20]	61	428[17]	15,959[20]	539,134	. .	21		1,424[4]
Croatia	2003–04	2,138	28,335	393,421	13.9	89	665	20,073	195,340	9.7	87	442[21]	13,000[21]
Cuba	2002–03	9,397	86,641	925,325	10.9	94	2,032	80,372	938,047	11.7	86		27,267[20]
Cyprus[22]	2001	367	3,756	63,367	16.9	96	123	4,724	59,526	12.6	93	11	597
Czech Republic	2003–04	3,870	65,615	956,324	14.6	87	344	12,175	142,167	11.7	91	1,344	31,874
Denmark	2003	2,690[8]	33,100[8, 20]	705,974[8]		100	152	12,000[9, 20]	68,313[9]	. .	96	157	13,100[20]

tural work all make even a simple enrollment figure difficult to assess in isolation. All of these difficulties are compounded when a country has instruction in more than one language or when its educational establishment is so small that higher, sometimes even secondary, education cannot take place within the country. Enrollment figures in this table may, therefore, include students enrolled outside the country.

Student-teacher ratio, however, usually provides a good measure of the ratio of trained educators to the enrolled educable. In general, primary and secondary students have been counted on the basis of full-time enrollment; tertiary students and teachers have been counted on the basis of both full-time and part-time enrollment or employment. At the primary and secondary levels, net enrollment ratio is the ratio of the number of children within the usual age group for a particular level who are actually enrolled to the total number of children in that age group (× 100). This ratio is usually less than (occasionally, equal to) 100 and is the most accurate measure of the completeness of enrollment at that particular level. It is not always, however, the best indication of utilization of teaching staff and facilities. Utilization, provided here for higher education only, is best seen in a gross enrollment ratio, which compares total enrollment (of all ages) to the population within the normal age limits for that level. For a country with substantial adult literacy or general educational programs, the difference may be striking: typically, for a less developed country, even one with a good net enrollment ratio of 90 to 95, the gross enrollment ratio may be 20%, 25%, even 30% higher, indicating the heavy use made by the country of facilities and teachers at that level.

Literacy data provided here have been compiled as far as possible from data for the population age 15 and over for the best comparability internationally. Standards as to what constitutes literacy may also differ markedly; sometimes completion of a certain number of years of school is taken to constitute literacy; elsewhere it may mean only the ability to read or write at a minimal level testable by a census taker; in other countries studies have been undertaken to distinguish among degrees of functional literacy. When a country reports an official 100% (or near) literacy rate, it should usually be viewed with caution, as separate studies of "functional" literacy for such a country may indicate 10%, 20%, or even higher rates of inability to read, or write, effectively. Substantial use has been made of UNESCO literacy estimates, both for some of the least developed countries (where the statistical base is poorest) and for some of the most fully developed, where literacy is no longer perceived as a problem, thus no longer in need of monitoring.

Finally, the data provided for public expenditure on education are complete in that they include all levels of public expenditure (national, state, local) but are incomplete for certain countries in that they do not include data for private expenditure; in some countries this fraction of the educational establishment may be of significant size. Occasionally data for external aid to education may be included in addition to domestic expenditure.

The following notes further define the column headings:

a. Usually includes teacher training at the second level.
b. Full-time and part-time.
c. Full-time; may include students registered in foreign schools.
d. Latest.

third level (higher)									literacy (2000–04)			public expenditure on education (percent of GNP)[d]	country
students[c]	student/ teacher ratio	institutions	teachers[b]	students[c]	student/ teacher ratio	gross enrollment ratio[d]	students per 100,000 population[d]	percent of population age 25 and over with post-secondary education[d]	over age 15 total (%)	male (%)	female (%)		
.	.	1	462	13,000	28.1	2	60	3.0	29.0	43.0	14.0	2.0	Afghanistan
18,495[1]	8.5[1]		2,927	42,160	14.4	16	1,367	.	98.7	99.2	98.3	3.2	Albania
356,237	23.9		57,747	682,775	11.8	21	2,176		69.8	79.5	60.1	4.9[1]	Algeria
160[2]	7.6[2]	1	77	1,178	15.3		2,003	22.6	99.4	99.4	99.5	8.1	American Samoa
.	.	1	..	1,341	.		2,093		100.0	100.0	100.0		Andorra
22,401[2]	.	1	776	8,327	10.7	1	87		66.8	82.1	53.8	3.4	Angola
46[4]	2.9[4]	1[1]	16[1]	46[1]	2.9[1]		73	11.6	86.6			4.0	Antigua and Barbuda
[5]	[5]	1,744	126,224	1,336,800	10.6	60	3,673	17.0[6]	97.2	97.2	97.2	4.3	Argentina
28,600	8.4	20	6,628	55,900	8.4	27	1,863	20.3	99.4	99.7	99.2	3.1	Armenia
178	5.2	2	21	203	9.7	30	214	16.2	97.3	97.3	97.3	4.1	Aruba
1,717,800	53.8	46	84,435	929,752	11.0	74	4,671	31.0[6]	100.0	100.0	100.0	5.0	Australia
243,440	...	86	19,002	268,005	14.1	49	3,315	14.0	100.0	100.0	100.0	5.8	Austria
55,794	7.9	42	13,630	127,248	9.3	17	1,532	14.2	98.8	99.5	98.2	3.4	Azerbaijan
...	.	1[10]	160[1 10]	3,463[1 10]	21.6[1 10]	18	1,198	15.2[6]	95.5	94.7	96.4	4.0	Bahamas, The
3,522	..	2	696	14,187	20.4	33	2,225	12.5[6]	87.7	92.5	83.0	4.4[1]	Bahrain
126,355	15.0	13[11]	61,321	877,335	14.3	6	667	3.7	41.1	50.3	31.4	2.3	Bangladesh
...	.	4	339	11,226	33.1	38	4,143	11.2	99.7	99.7	99.7	7.9	Barbados
138,593	9.4	58	21,684	337,000	15.5	62	3,413	12.5	99.6	99.8	99.4	2.1	Belarus
...	..	226	26,454	298,387	11.3	61	2,888	33.0	100.0	100.0	100.0	6.2	Belgium
		12[1]	228[1]	2,853		2	1,240	10.2	76.9	76.7	77.1	5.7	Belize
4,873[13]	17.2[13]	16[13]	962[14]	14,085[14]	14.6[14]	4	253	1.3	33.6	46.4	22.6	3.3	Benin
...	...	1		544	.	62		26.8[6]	98.0	98.0	98.0	3.7[1]	Bermuda
1,822[3]	12.2[3]	14	321	3,381	10.5		448		42.2	56.2	28.1	5.9	Bhutan
.	.		13,929	298,668	21.4	39	3,537	16.7[15]	86.5	92.9	80.4	6.5	Bolivia
	.	56[1]	2,838	34,477	12.1		901		85.5	96.5	76.6		Bosnia and Herzegovina
2,899[16]		1	697[17]	12,286[16]		5	731	1.4	78.9	76.1	81.5	8.6[1]	Botswana
483,670	...	1,180	197,712	2,694,245	13.5	21	1,530	6.8	88.4	88.3	88.6	4.4	Brazil
3,024	5.6	2	392	3,805	9.7	13	1,090	12.9	92.7	95.2	90.2	3.0	Brunei
217,313	10.3	42	18,710	215,712	11.5	39	2,741	15.0	98.6	99.1	98.2	3.6	Bulgaria
9,539	13.0	9	632	9,531	15.1	1	84		26.6	36.8	16.6	3.6[14]	Burkina Faso
		8	379	5,037	13.3	2	92	0.6	58.9	66.8	51.9	4.0	Burundi
9,983[1]	4.3[1]		1,001[1]	8,901[1]	8.9[1]	3	75	1.0	73.6	84.7	64.1	1.9	Cambodia
150,829	13.4		3,166	81,318	25.7	6	510		67.9	77.0	59.8	4.1	Cameroon
298,071[18]	27.1[18]	274	61,633	1,220,651	19.8	60	3,977	17.1	100.0	100.0	100.0	6.9	Canada
1,856	15.0	.	290	2,215	7.6		492		75.7	85.4	68.0	8.1	Cape Verde
.		1	154[16]	6,474[16]	42.0[16]	2	160	2.0	48.6	64.8	33.5	2.3[19]	Central African Republic
3,668	.	8	288[20]	5,901[17]		1	71		25.5	40.6	12.7	2.0	Chad
386,832	32.5			567,114	..	42	3,555	11.5	95.9	96.1	95.7	4.3	Chile
10,306,000	21.1	1,592	725,000	11,086,000	15.3	16	860	3.7	90.9	95.1	86.5	2.3	China
..	.	266[20]	75,568[20]	673,353[20]	8.9[20]	24	1,768	10.4	94.2	93.7	94.6	5.4	Colombia
69	3.5		125	1,707	13.7	2	298	0.2	56.2	63.5	49.1	3.9	Comoros
...	...	.	3,788	60,341	15.9	2	124	1.3	82.8	88.9	77.1	1.0	Congo, Dem. Rep. of the
23,606[14]	13.5[14]		1,341[4]	16,602[4]	12.4[4]	4	582	3.0	80.7	87.5	74.4	4.4	Congo, Rep. of the
53,809	24.0	52	3,874	77,283	19.9	19	1,910	12.7	95.8	95.7	95.9	5.2	Costa Rica
11,037[4]	7.8[4]		1,657[4]	87,565		7	396	0.9	48.1	60.1	38.2	4.8	Côte d'Ivoire
150,792[21]	11.6[21]	89[16]	7,622[16]	100,297[16]	13.2[16]	39	2,257	11.9	98.1	99.3	97.1	4.6	Croatia
244,253[20]	9.0[20]	64	24,199	235,997	9.8	34	2,110	5.9	99.8	99.8	99.8	8.7	Cuba
4,497	7.5	32	1,077	11,934	11.1	23	1,702	22.3	96.8	98.6	95.1	6.4	Cyprus[22]
399,524	12.5	193[23]	17,458	264,123	15.1	36	2,589	9.5	100.0	100.0	100.0	4.6	Czech Republic
172,225		162	9,600[20]	183,694		67	3,410	25.8	100.0	100.0	100.0	8.6	Denmark

Education (continued)

country	year	first level (primary)					general second level (secondary)					vocational second level[a]	
		schools	teachers[b]	students[c]	student/ teacher ratio	net enrollment ratio[d]	schools	teachers[b]	students[c]	student/ teacher ratio	net enrollment ratio[d]	schools	teachers[b]
Djibouti	2000–01	73	1,127	37,938	33.7	36	26[5, 19]	628[4, 5]	16,121[5]	. .	21	[5]	[5]
Dominica	2002–03	63[21]	550	10,460	19.0	81	15[21]	441	7,455	16.9	72	. . .	19
Dominican Republic	2002–03	4,001[4]	35,867	1,374,624	38.3	96	. . .	24,723[5]	658,164[5]	26.0[5]	36	[5]	[5]
East Timor	2003	. .	4,080	183,600	45.0	. .	.	1,103	38,180	34.6	20	. . .	. . .
Ecuador	2002–03	17,367[14]	83,736	1,987,465	23.7	99	.	73,284[5]	972,777[5]	13.3[5]	50	. .	[5]
Egypt[24]	2002–03	24,198	533,831	11,433,939	21.4	91	1,942	91,458	1,249,706	13.7	81	1,959	151,792
El Salvador	2000	5,090	26,209	1,212,622	46.3	90	. .	9,255[20]	147,867	. .	49	. . .	. . .
Equatorial Guinea	1998	483	1,322	74,940	56.7	84	. . .	763	18,602	24.6	26	. . .	122[13]
Eritrea	2001–02	695	6,706	330,278	49.3	46	196	2,671	151,065	56.6	22	12	174
Estonia	2002–03	592	15,762[11]	200,500	. .	95	284	10,361	106,000	10.2	88	79	1,779[11]
Ethiopia	1999–2000	11,490	115,777	6,462,503	55.8	51	410	13,154	571,719	43.5	18	62	1,309
Faroe Islands	2001–02	38	.	5,579	. .	. .	23	. .	2,019	. . .	. . .	11	. . .
Fiji	2003	712	5,127	142,531	27.8	100	157	3,935	68,178	17.3	76	64	1,023[16]
Finland	2003	3,808	43,783[16]	597,414	.	98	440	7,480[16]	121,816	. . .	94	340	19,698[16]
France	2000–01	39,131[14]	211,192	3,839,770	18.2	99	11,052[14]	483,493	5,399,433	11.2	94	. . .	. . .
French Guiana	2001–02	92	1,871[12]	22,851	. .	. .	36	1,919	21,439	11.2	. .	. . .	210[14]
French Polynesia	2000–01	173	2,811[14]	26,249	.	100	82	2,035[21]	24,743	. . .	64	. . .	316[2]
Gabon	2002–03	1,175	7,764	279,816	36.0	78	88	2,504	97,604	39.0	. . .	114	412[4]
Gambia, The	2002–03	331[21]	4,708	178,288	37.9	79	85[21]	2,349	59,793	25.5	33	. . .	. . .
Gaza Strip[26]	2002–03	.	. .	. .	. .	. .	.	.	. . .	. .	. . .	. .	. .
Georgia[27]	2003–04	3,148[7]	69,700[7]	654,600[7]	9.4[7]	77	[7]	[7]	[7]	[7]	74	85	2,146[14]
Germany	2002–03	17,829[21]	235,179	3,303,737	14.0	83	19,668[21]	515,596	6,716,720	13.1	88	9,754[21]	79,792
Ghana	2003–04	13,115[21]	71,330	2,678,912	37.6	59	8,906[21]	51,875	1,257,998	24.2	36[21]	99	453
Greece	2002–03	6,018	52,788	647,642	12.3	94	3,162	53,366	576,613	10.8	86	602	16,658
Greenland	2001–02	87[7]	1,191[7]	11,368[7]	9.5[7]	.	[7]	[7]	[7]	[7]	. . .	. . .	. . .
Grenada	2002–03	58[14]	888	16,598	18.7	84	19[4]	740	14,860	20.1	96	. . .	. . .
Guadeloupe	2001–02	348[17]	2,984	38,092[13]	. . .	.	88[5]	3,955[5]	51,366[3, 5]	. . .	. . .	[5]	[5]
Guam	2000–01	24	1,063	17,001	16.0	. . .	11	1,010	18,217	18.0	. . .	2	370[3]
Guatemala	2002–03	17,905[17]	68,901	2,075,694	30.1	87	3,118[5, 17]	44,435[5]	434,830[5]	9.8[5]	30	[5]	[5]
Guernsey[27]	2004	10	600[7]	9,000[7]	15.0[7]	. . .	6	[7]	[7]	[7]	. . .	. . .	. . .
Guinea	2002–03	5,765	23,859	1,073,458	45.0	66	557	8,360	301,491	36.1	21	41	1,268[20]
Guinea-Bissau	2000–01	. .	3,518	155,033	44.1	45	. . .	1,783	25,648	14.4	9	. . .	. . .
Guyana	2002–03	428[28]	4,202	111,854	26.6	99	109[28]	3,321	69,426	20.9	78	7[28]	512[28]
Haiti	2002–03	360	30,205[4]	1,110,398[4]	36.8[4]	26	144	. . .	195,418[4]	. . .	22[4]	18	. . .
Honduras	2001	9,746	32,568	1,109,242	34.0	87	1,000	15,647	195,072	12.5	21[17]	. .	. . .
Hong Kong	2002–03	803	23,988	468,800	19.5	98	542	25,742	471,100	18.3	74	1	1,008
Hungary	2003–04	3,747	89,784	913,000	10.2	91	1,622	38,479	531,400	13.8	94	622	9,716
Iceland	2002	193	4,437	44,695	10.1	100	36	2,258	21,379	9.5	86	. . .	. . .
India	2001–02	664,041	1,928,075	113,883,060	59.0	88	311,061	2,486,715	64,882,221	26.1	. . .	. . .	. . .
Indonesia	2001–02	148,516	1,164,808	25,850,849	22.2	92	28,627	700,976	10,490,634	15.0	54	4,522	139,359
Iran	2002–03	68,627	297,711	7,028,924	23.6	86	49,008	352,518	8,694,127	24.7	72	69	970
Iraq	2003–04	11,066	206,953	4,280,602	20.7	91	2,968	74,681	1,454,775	19.5	37	259	7,677
Ireland	2000–01	3,286	22,850	439,560	19.2	96	419	12,476	197,376	15.8	83	247	5,788
Isle of Man	2001	32	. . .	6,611	. .	.	5	.	5,374	. .	. . .	.	. . .
Israel	2002–03	2,178	60,600	758,798	12.5	19	1,768	75,938	451,027	5.9	89	180	. . .
Italy	2002–03	18,854[29]	256,650	2,778,877	10.8	100	7,906[29]	410,577	3,829,583	9.3	91	6,637[29]	307,279[29]
Jamaica	2002–03	788[2]	10,968	325,302	29.7	95	135[11]	11,315[5]	229,701[5]	20.3[5]	75	. . .	[5]
Japan	2003	23,633	414,000	7,227,000	17.5	100	16,584	511,000	7,558,000	14.8	100	62[1]	99,862[16]
Jersey	2002	21	.	7,380	. .	.	10	. .	5,715	.	. . .	. . .	. . .
Jordan	2002–03	2,708	55,900	1,222,400	21.9	92	912	15,200	179,800	11.8	80	214	3,026
Kazakhstan[27]	2002–03	8,254	60,509	1,120,000	18.5	92	. . .	170,190	1,976,400	11.6	87	357	5,893
Kenya	2002–03	15,906[4]	166,758	5,590,143	33.5	67	2,878[4]	57,181	1,362,131	23.8	25	62[4]	. .
Kiribati	2002–03	88[30]	660	14,823	22.5	.	19[30]	324[30]	10,334[30]	31.9[30]	. . .	2[30]	39[30]
Korea, North	2000	4,886	59,000[31]	1,609,865	. .	. .	4,772	111,000[31]	2,181,524	. . .	. . .	. . .	. . .
Korea, South	2003	5,463	154,075	4,175,626	27.1	100	4,881	215,546	3,621,170	16.8	88	169	12,714
Kosovo	.	.	. .	. .	. .	. . .	.	.	. .	. . .	. .	. . .	. . .
Kuwait[32]	2000–01	349[8]	17,385[8]	193,582[8]	11.1[8]	83	117[9]	9,234[9]	76,221[9]	8.3[9]	77	40	1,107
Kyrgyzstan	1999–2000	1,985	19,200	466,200	24.3	89	1,474[13]	36,600	633,900	17.3	. . .	53[13]	5,100
Laos	2002–03	7,896[14]	28,571	875,300	30.6	85	750[3]	13,421	348,309	30.0	35	. .	350
Latvia	2004	1,026[7]	34,500[7]	301,000[7]	8.7[7]	86	[7]	[7]	[7]	[7]	88	103	3,666
Lebanon	2002–03	2,160[14]	26,428	449,311	17.0	91	. .	34,613	350,211	10.1	. . .	275[14]	11,595
Lesotho	2002–03	1,249[14]	8,908	418,668	47.0	86	187[4]	3,384	81,130	24.0	23	9[13]	162
Liberia	1999–2000	. . .	10,047[21]	496,253	.	70	.	6,621[21]	84,643	. .	18	. . .	. . .
Libya	2002–03	2,733[13]	122,020[20]	743,997	.	96[14]	.	17,668[20]	619,940	.	62[14]	480[20]	. . .
Liechtenstein	2003–04	14[21]	242	2,266	9.2	. .	12[5]	198[5, 21]	4,113[5]	.	. .	[5]	[5]
Lithuania	2002–03	2,172[7]	50,200[7]	594,300[7]	11.8[7]	91	[7]	[7]	[7]	[7]	94	82	4,700
Luxembourg	2002–03	. . .	2,966	32,004	10.8	90	.	3,279[5]	9,963	. .	80	. . .	[5]
Macau	2003–04	82	1,615	39,378	24.4	87	47	1,666	41,830	25.1	74	2	125
Macedonia	2001–02	1,010	13,508	242,707	18.0	95	95	5,550[5]	92,068[5]	16.6[5]	53	[5]	[5]
Madagascar	2002–03	14,438[21]	55,309	2,856,480	51.6	79	. .	19,471	436,211	22.4	. . .	. . .	1,092[21]
Malawi	2002–03	3,706[20]	45,780	2,846,589	62.2	100	.	11,360	517,690	45.6	29	. . .	475[20]
Malaysia	2003	7,498	174,189	2,996,780	17.2	93	1,682	113,032	1,951,225	17.3	70	86	7,126
Maldives	2000	230	2,221	68,242	30.7	92	298	2,212	52,327	23.7	51	. . .	. . .
Mali	2002–03	2,871[29]	22,577	1,294,672	57.3	45	307[2]	4,549[20]	311,717	. . .	5[21]	. . .	21,731[21]
Malta	1999–2000	126	1,501	34,261	22.8	96	75	2,561	27,354	10.7	87	23	526
Marshall Islands	2002–03	100	703	10,957	15.6	84	16	202	3,147	15.6	65	. .	. .
Martinique	2001–02	273	3,280	53,347	16.4	. .	78	4,257	51,057	12.0	. . .	15[4]	896[4]
Mauritania	2002–03	2,676[21]	9,606	394,401	41.1	68	. . .	2,980	81,278	27.3	16	. .	257
Mauritius	2002–03	291	5,256	132,432	25.2	97	175	5,553	99,687	18.0	74	114	433
Mayotte	2001–02	112	555[2]	28,591	. . .	. .	14	246[2]	15,626	. . .	.	2[3]	17[3]
Mexico	2001–02	99,230	609,654	14,843,400	24.3	99	39,691	536,579	8,600,700	16.0	63	6,610[14]	65,712
Micronesia	1997–98	171	1,486	25,915	18.6	. . .	24	418	6,809	16.2	. . .	. . .	. . .
Moldova	2003–04	1,576[7]	42,600[7]	578,800[7]	13.6[7]	79	[7]	[7]	[7]	[7]	69	83	2,200
Monaco	2002–03	7	127[14]	1,899	. .	.	4	192[14]	3,140	. . .	. . .	4[14]	89[14]
Mongolia	2001–02	700[7]	20,076[7]	510,300[7]	25.4[7]	79	[7]	[7]	[7]	[7]	77	32	985

students[c]	student/ teacher ratio	third level (higher) institutions	teachers[b]	students[c]	student/ teacher ratio	gross enrollment ratio[d]	students per 100,000 population[d]	percent of population age 25 and over with post-secondary education[d]	literacy (2000–04) over age 15 total (%)	male (%)	female (%)	public expenditure on education (percent of GNP)[d]	country
5	5	1[19]	13[19]	476		1	110		65.5	76.1	55.5	3.4	Djibouti
406	21.4	2[21]	34[2]	461[14]	14.2[2]		630	2.8	94.0	.		5.5	Dominica
5	5	.	11,111	286,957	25.8	35	3,351	12.9	87.7	88.0	87.3	2.4	Dominican Republic
...	...	.	.	4,500[16]	.	12	552	1.4	58.6	65.0	52.0	.	East Timor
5	5	21[14]	12,856[14]	115,554	.	20	894	15.5	91.0	92.3	89.7	1.1	Ecuador
2,214,152	14.6	293	.	1,239,441	.	29	1,842	4.6	55.6	67.2	43.6	4.8	Egypt[24]
...	...	.	7,501	114,675	15.3	17	1,827	6.4	79.7	82.4	77.1	2.9	El Salvador
2,105[13]	17.3[13]	.	58[13]	578[13]	10.0[13]	3	164	.	84.2	92.1	76.4	2.2	Equatorial Guinea
1,992	11.4	1[21]	198[21]	3,096[21]	15.6[21]	2	89	1.7	58.6	69.9	47.6	3.3	Eritrea
28,095	...	47	3,052	63,625	20.8	66	4,683	14.1	99.8	99.8	99.8	6.0	Estonia
12,551	9.6	6	1,779	40,894	23.0	2	64	1.4	41.5	49.2	33.8	4.6	Ethiopia
2,195[14]	.	1	19[14]	173[14]	9.1[14]		397		99.0	99.0	99.0		Faroe Islands
9,706	..	1	365[11]	15,393[11, 25]	11.3[11]	12	1,856[25]	6.7	93.7	95.5	91.9	5.9	Fiji
304,688		20[11]	7,728[16]	169,846		88	3,258	28.0	100.0	100.0	100.0	6.4	Finland
...	.	1,062[4]	134,107	2,119,149	15.8	56	3,594	11.4	98.8	98.9	98.7	5.6	France
2,404[14]	11.4[14]	1	194	637	3.3		375	6.7	83.0	83.6	82.3		French Guiana
3,730[2]	11.8[2]	1	54	1,600	29.6	1	681		95.0	94.9	95.0	9.8[20]	French Polynesia
7,587	...	2[4, 23]	585[23]	7,473[23]	12.6[23]	7	606		71.0	80.0	62.0	4.6	Gabon
428	...	4[21]	155[13]	1,169[21]		2	98	.	40.1	47.4	33.1	3.0	Gambia, The
...	..	.	.										Gaza Strip[26]
20,355	..	26	7,390	123,900	16.8	38	2,702		99.5	99.7	99.4	4.3	Georgia[27]
1,729,839	21.7	296[21]	284,116	2,334,569	8.2	51	2,829	23.0	100.0	100.0	100.0	4.6	Germany
18,672	41.2	15[21]	1,432[14]	25,372[14]	17.7[14]	3	147	.	54.1	62.9	45.7	4.2	Ghana
147,612	8.9	18	20,932[18]	272,037[18]	13.0[18]	74	2,480	9.0	91.0	94.0	88.3	4.0	Greece
...	.	1	14	100	7.1	..	177		100.0	100.0	100.0		Greenland
	..	1	111	1,106	10.0		1,090	1.5	85.0			5.7	Grenada
5	5	1	168	4,144	24.7	9	958	5.2	90.1	89.7	90.5		Guadeloupe
4,369[21]	...	1	192[3]	3,533[21]			2,343	39.9	99.0	99.0	99.0	8.5[21]	Guam
5	5	.	13,105[17]	111,739		8	954	4.0	69.1	75.4	63.3	1.7[4]	Guatemala
...	..	1	.	.			.		100.0	100.0	100.0		Guernsey[27]
7,172		7	860	16,361	19.0	1	76		41.1	55.1	27.0	2.0	Guinea
..		.	.					0.1	36.8	53.0	21.4	2.3	Guinea-Bissau
6,266[28]	12.2[28]	1	371[28]	4,848		6	645	6.7	98.6	99.0	98.2	4.5	Guyana
..	.	2	899[4, 23]	12,348[4, 23]	13.7[4, 23]	1.0	169	0.7	51.9	53.8	50.0	1.1	Haiti
...		10	3,704	64,142	17.3	15	982	3.1	80.0	79.8	80.2	3.6[17]	Honduras
59,400	58.9	9	5,620	86,900	14.9	31	1,280	13.4	93.5	96.5	90.2	4.3	Hong Kong
134,800	13.9	68	23,798	390,458	16.4	51	3,854	10.1	99.3	99.4	99.3	5.8	Hungary
...	.	11	2,620	13,884	5.3	63	4,820	19.9	100.0	100.0	100.0	7.8	Iceland
.	.	42,057	758,706	10,453,229	13.8	12	1,042	7.3	61.0	73.4	47.8	4.1	India
2,027,464	5	1,634[28]	194,828[28]	3,126,307[28]	16.0[28]	16	1,514	2.2	87.9	92.5	83.4	1.3	Indonesia
9,729	10.0	72[4]	84,579	1,673,757	19.8	21	2,476		77.0	83.5	70.4	4.9	Iran
128,981	16.8	65	14,700	288,670[11]	.	14	1,198	4.1	58.0	70.7	45.0		Iraq
96,842	16.7	29	6,925	119,131	17.2	52	3,134	21.0	100.0	100.0	100.0	5.3	Ireland
.	..	1	.	1,128[17]			1,512		..	...			Isle of Man
138,361	...	7	10,171	219,763	21.6	57	3,458	11.2	96.9	98.3	95.6	7.8	Israel
2,565,029[29]	8.3[29]	74[18]	54,856[18]	1,913,352		57	3,355	3.8	98.5	98.9	98.1	4.8	Italy
5	5	1	2,006	45,770	22.8	18	1,717	4.2	87.6	83.8	91.4	5.3	Jamaica
1,047,720[16]	10.5[16]	1,227	170,000	3,054,000	18.0	51	2,395	34.4	100.0	100.0	100.0	3.5	Japan
.	..	1	.	582[30]	.	.	667		100.0	100.0	100.0		Jersey
43,861	14.5	22	6,036	153,965	25.5	35	3,076	9.4	89.9	95.1	84.7	5.0	Jordan
250,900	42.6	180	37,600	658,100	17.3	45	4,365	10.0	99.5	99.7	99.2	3.2	Kazakhstan[27]
27,687	.	14[23]	4,393[3, 23]	98,607[23]		3	322		73.6	77.7	70.2	7.1	Kenya
1,501[30]	38.5[30]	—	—	—	—				90.0	..		6.3[14]	Kiribati
...	.	519[14]	27,000[31]	390,000[31]	14.4[31]				95.0	.			Korea, North
949,515	74.7	742[1]	163,606	3,223,431	19.7	85	6,736	21.1	97.8	99.2	96.4	4.2	Korea, South
...	..	.	.	.	.	.	.		.	.	.	.	Kosovo
2,997	2.7	1	918	17,747	19.0	21	.	16.4	82.9	84.7	81.0	5.0	Kuwait[32]
52,200	10.2	44	8,400	159,200	19.0	42	3,282		98.7	99.3	98.1	3.2	Kyrgyzstan
5,053	14.4	9[3]	1,794	28,117	15.7	5	508	0.4	68.7	77.0	60.9	2.8	Laos
45,000	12.3	56	5,360	131,000	24.4	73	5,670	13.9	99.7	99.8	99.7	5.8	Latvia
46,271	4.0	20[14]	11,196	144,050	12.9	44	4,152	0.6	87.4	93.1	82.2	2.7	Lebanon
1,128	7.0	1	545	6,108	11.2	3	298	.	81.4	73.7	90.3	8.4	Lesotho
45,067	..		633[21]	44,107		2	1,483		55.9	72.3	39.3	5.7	Liberia
178,052		13		375,028	.	58	6,795	2.7	81.7	91.8	70.7	7.1	Libya
5	..	2	309	2,858[13]	7.5		8,269	11.6	100.0	100.0	100.0		Liechtenstein
44,400	9.4	15	14,200	168,200	11.8	72	4,849	12.6	99.6	99.6	99.6	6.0	Lithuania
22,093		5		8,644[34]		12	1,937	10.8	100.0	100.0	100.0	4.0	Luxembourg
2,349	18.8	7	1,164	13,680	11.8	81	2,460	5.9	91.3	95.3	87.8	3.0	Macau
5	5	30	1,519	45,624	30.0	28	2,263	8.7[6]	96.1	98.2	94.1	3.5	Macedonia
8,138[21]	7.5[21]	6[21]	1,857	32,593	17.6	2	190	1.5[6]	70.6	76.4	65.2	2.9	Madagascar
2,228[20]	4.7[20]	6[20]	453	4,565	10.1	1	39	0.7	64.1	74.9	54.0	6.1	Malawi
38,387	5.4	48[14]	34,955	632,309	18.1	29	2,524	6.8	88.7	92.0	85.4	8.7	Malaysia
.		—	—	—	—				96.3	96.2	96.4	6.4[21]	Maldives
39,754	..	7[21]	1,312[29]	28,332		3	268		19.0	26.7	11.9	3.0	Mali
3,447	6.6	1	754	6,362	8.4	30	1,631	6.2[6]	87.9	86.4	89.2	4.6	Malta
...		1	.	3,131		.	5,841	2.6	91.2	92.4	90.0	9.1	Marshall Islands
7,661[20]	.	1	99[13]	11,755[20]			3,077	5.5[6]	97.6	97.2	98.0	.	Martinique
3,129	12.2	4	353	9,198	26.1	4	351	1.3	51.2	[F]9.5	43.4	3.7	Mauritania
7,326	16.9	3	461[21]	16,764		15	1,384	1.9	84.3	88.2	80.5	4.7	Mauritius
1,733	.	—	—	—	—		.	.	91.9	.	.		Mayotte
1,448,550	22.0	4,183	216,804	2,147,100	9.9	22	2,115	11.0[6]	90.3	92.0	88.7	5.4	Mexico
...	.	1	71	1,884	26.5	.	1,744		92.4	92.9	91.9	6.2	Micronesia
22,800	10.4	100	7,700	122,700	15.9	30	2,900	11.3	96.2	97.5	95.0	4.5	Moldova
532[14]	6.0[14]	1	53	650	12.3	..	2,018			..			Monaco
15,000	15.2	178	5,400	92,300	17.1	37	3,806	7.6[6]	98.0	98.5	97.5	8.6	Mongolia

Education (continued)

country	year	first level (primary)					general second level (secondary)					vocational second level[a]	
		schools	teachers[b]	students[c]	student/ teacher ratio	net enrollment ratio[d]	schools	teachers[b]	students[c]	student/ teacher ratio	net enrollment ratio[d]	schools	teachers[b]
Montenegro	2006–07	455	4,876	75,179	15.4	..	47	2,245	31,627	14.1	..	21	..
Morocco	2002–03	6,565[28]	135,199	4,101,157	30.3	90	1,664[28]	87,887	1,679,077	19.1	37	69[28]	5,013
Mozambique	2001–02	8,165	38,762	2,555,975	65.9	55	75[14]	13,916	381,619	27.4	12	25[14]	862
Myanmar (Burma)	2002–03	35,877[21]	149,001	4,889,325	32.8	84	2,091[21]	73,062	2,382,608	32.6	35	103[4]	2,462[4]
Namibia	2002–03	1,362[17]	14,330	404,783	28.2	78	114[13]	5,869	138,099	23.5	44	17[13]	56[2]
Nauru	2002	5	64	1,566	24.5	81	4	40	609	15.2	..	1	6[30]
Nepal	2001–02	24,943	96,659	3,853,618	39.9	71	11,453	57,165	1,690,198	30.0	..	..	1,025
Netherlands, The	2002–03	7,039	..	1,290,625	..	99	692	72,296	925,726	12.8	89	137	35,853
Netherlands Antilles	2002–03	83[29]	1,145	22,687	19.8	88	23[29]	639	9,180	14.4	68	10[29]	542
New Caledonia	2001	289	1,837	36,996	20.1	98	64	2,371	29,036	12.2	72	14[20]	..
New Zealand	2003	2,177	23,358	456,782	19.6	100	333	15,596	257,586	16.5	93	24	4,714
Nicaragua	2002–03	7,224[14]	26,226	923,391	35.2	86	451[13]	10,401	364,012	35.0	39	.	899
Niger	2001–02	5,975	18,441	760,987	41.3	38	193	2,259	81,731	36.2	6	49	1,375
Nigeria	2002	49,343	537,741	29,575,790	55.0	67	10,000	187,126	7,485,072	40.0	29	..	..
Northern Mariana Islands	2001–02	37[7]	728[7]	13,323[7]	18.3[7]	.	[7]	[7]	[7]	[7]	.	.	.
Norway	2002–03	3,248	42,177	432,618	10.3	100	696[5, 29]	44,230[5]	385,009[5]	8.7[5]	96	[5]	[5]
Oman	2002–03	294[29]	14,911	314,064	21.1	72	177[28]	16,941	279,302	16.5	69	15[29]	1,072[30]
akistan	2000–01	165,700[12]	373,900[12]	20,999,000[12]	56.2[12]	59	31,600	320,100	6,576,000	20.5	..	580	7,062
Palau	2001–02	23	235	3,033	12.9	96	6	132	1,168	8.8	..	..	..
Panama	2002–03	2,866[14]	17,296	419,904	24.3	100	417[14]	15,613	147,878	9.5	63	.	5,664
Papua New Guinea	1999	2,790[4]	16,297	594,444	36.5	74	135[3]	3,046	74,042	24.3	24	117[3]	878[2]
Paraguay	2002–03	7,456[17]	35,709	962,661	27.0	89	1,844[17]	43,835	474,538	10.8	51	..	..
Peru	2002	33,734	177,257	4,219,800	23.8	100	9,168	139,349	2,302,099	16.5	69	2,425[4]	12,293[4]
Philippines	2002–03	41,267	337,082	12,962,745	38.5	94	7,893	119,235	6,032,440	50.6	59	..	..
Poland	2002–03	14,765	273,562	2,983,070	10.9	98	6,776	230,611	2,714,203	11.8	92	7,129	84,551
Portugal	2002–03	11,910	69,109	767,862	11.1	100	664	74,185	660,419	8.9	85	218	13,117
Puerto Rico	1998–99	2,101[7]	39,328[4, 7]	350,714	..	..	[7]	[7]	258,841	..	..	..	..
Qatar[27]	2002–03	174[20]	5,684	66,473	11.7	95	123[4]	4,990	51,331	10.3	82	3[20]	121
Réunion	2002–03	357	.	76,954	.	..	119	6,343[21]	100,020	..	..	..	1,120[20]
Romania	2002–03	12,456	154,197	2,198,312	14.3	89	1,388	60,988	740,404	12.1	81	113	7,559
Russia	2001–02	66,833[7]	1,350,200[7]	19,363,173[7]	14.3[7]	90	[7]	[7]	[7]	[7]	..	3,872	..
Rwanda	2002–03	1,710[2]	27,319	1,636,563	59.9	87	.	7,056	189,153	26.8	8[2]	..	..
St Kitts and Nevis[27]	2001–02	24	301	5,608	18.6	100	7	389	4,445	11.4	95	..	..
St Lucia	2000–01	82	1,052	28,618	27.2	99	18	678	12,865	19.0	76	1	27
St Vincent and the Grenadines	2002–03	60	1,061	18,629	17.6	90	21	384	7,909	20.6	58	4	53
Samoa	2002–03	155[4]	1,121	30,164	26.9	98		1,074	22,941	21.4	62	..	..
San Marino	2002–03	14	242	1,343	5.5	.	7[5]	227[5]	2,162[5]	8.7[5]	.	[5]	[5]
São Tomé and Príncipe	2001–02	71[21]	881	28,780	32.7	97	11[21]	415[14]	7,327	..	29	..	11
Saudi Arabia	2002–03	12,815	198,181	2,342,214	11.8	54	10,270	165,152	1,927,009	11.7	53	95	6,128
Senegal	2002–03	5,670	26,325	1,287,093	48.9	58	579	7,601	306,026	40.3	16[14]	12[28]	384[28]
Serbia	2004–05	3,832[38]	38,894[38]	672,472[38]	17.3[38]	..	146	6,059	159,736	26.4	..	77	1,475
Seychelles	2003	26	675	9,477	14.0	100	12	552	7,551	13.7	100	11	193
Sierra Leone	2000–01	2,704	14,932	554,308	37.1	..	495	5,264	134,113	25.5	..	44[35]	709[35]
Singapore	2003	201[11]	12,025	299,939	24.9	93	180[11]	10,830	206,426	19.1	44	10[11]	1,956
Slovakia	2002	2,396	39,745[29]	602,360	.	86	220	6,259[29]	93,283	.	88	605	17,887
Slovenia	2002–03	811	6,884	87,085	12.7	93	143	8,482	103,538	12.2	93	.	5,986
Solomon Islands	2002	520[13]	2,514[13]	55,093	..	..	23[13]	618[13]	46,082	..	..	1[13]	..
Somalia	1990	1,125	8,208	377,000	20.9	10	82	2,109	44,000	20.3	3	21	498
South Africa	2000	17,213	183,639	6,266,223	34.1	89	10,547[39]	177,084[39]	5,588,866[39]	31.6[39]	66	187[13]	10,807[13]
Spain	2001–02	8,547	170,891	2,475,027	14.5	100	4,319[5]	264,484[5]	3,116,895[5]	11.8[5]	96	[5]	[5]
Sri Lanka	2000–01	10,977[7]	199,948[7]	4,337,161[7]	21.7[7]		[7]	[7]	[7]	[7]		36[21]	574
Sudan, The	1999–2000	11,923	117,151	3,137,494	26.8	54	1,694	21,114	401,424	19.0		.	761[14]
Suriname	2002–03	308[29]	3,324	64,659	19.5	97	141[29]	1,334	23,034	17.3	64	1	1,380
Swaziland	2001–02	541	6,594	212,064	32.2	75	182	3,647	61,335	16.8	32	5	228[13]
Sweden	2003–04	5,041[7]	110,157[7]	1,211,017[7]	11.0[7]	100	[7]	[7]	[7]	[7]	100	..	..
Switzerland	2001–02		39,363	536,423	13.6	99	.	36,767	375,424	10.2	87	..	11,239
Syria	2000	11,482	121,880	2,774,922	22.8	98	2,911	63,889	955,290	15.0	42	587	15,103
Taiwan	2003–04	2,638	102,793	1,912,791	18.4	.	1,192[5]	99,938[5]	1,745,073[5]	17.7[5]	.	[5]	[5]
Tajikistan	2001–02	660	100,200[7]	1,520,000[7]	15.2[7]	94	2,661	[7]	[7]	[7]	83	56	..
Tanzania[42]	2002–03	11,339[21]	112,860	5,981,338	53.0	82	491[13]	20,277	322,400	15.9	5	40[13]	1,062[20]
Thailand	2003–04	31,080	295,484	6,112,887	20.7	85	2,318[35]	194,298	4,385,297	22.6	..	679[35]	21,500
Togo	2002–03	4,701[21]	27,504	975,063	35.5	91	314[35]	9,001	334,864	37.2	27	..	653[14]
Tonga	1999	117	745	16,206	21.8	100	39	961	13,987	14.6	72	5	67
Trinidad and Tobago	2002–03	478[14]	7,623	141,036	18.5	91	101[14]	5,555	105,330	19.0	65	..	145
Tunisia	2001–02	4,518	60,566	1,325,707	21.9	97	1,356	57,821	1,074,391	18.6	..	..	23[20]
Turkey	2000	36,072	345,015	10,480,700	30.4	86	2,747	73,418	1,487,400	20.3	51	3,544	71,665
Turkmenistan	1995	1,900[7]	72,900[7]	940,600[7]	12.9[7]	.	[7]	[7]	[7]	[7]	79	78	..
Tuvalu	2001–02	12[21]	56	1,427	25.5		2[13]	36	912	25.3		1	10[3]
Uganda	2001	12,280	127,038	6,900,916	54.3		2,400	30,425	539,786	17.7	17	..	2,094[21]
Ukraine	2003–04	22,100[7]	551,000[7]	6,044,000[7]	11.0[7]	84	[7]	[7]	[7]	[7]	85	953	11,438[44]
United Arab Emirates	2001–02		18,704	285,473	15.3	83		17,563	224,740	12.8	71	9[14]	269
United Kingdom	2002–03	29,905[18]	262,390	4,488,162	17.1	100	..	326,095	4,404,569	13.5	95	..	157,751
United States	2002–03	118,531[7, 18]	1,667,417	24,848,518	14.9	92	[7]	1,599,303	23,854,458	14.9	88	.	..
Uruguay	2002	2,402	16,699	362,902	21.7	90	405	26,779	269,205	10.1	73	124	8,160
Uzbekistan	2001	9,788[7]	454,400[7]	6,076,400[7]	13.4[7]	..	[7]	[7]	[7]	[7]	..	440[20]	7,900
Vanuatu	2001–02	374[4]	1,241[7]	36,482	29.4	94	27[2]	[7]	8,743	..	28	2	80
Venezuela	2002–03	18,827[18]	186,658[1]	3,449,984	.	91	3,022[18]	61,781[1]	1,809,368	..	59	..	..
Vietnam	2002–03	13,092[13]	358,606	8,841,006	24.7	94	6,298[13]	351,900	8,955,994	25.4	65	451[13]	9,327
Virgin Islands (U.S.)	2000	289[7]	1,511[7]	25,620[7]	17.0[7]	.	[7]	[7]	[7]	[7]	..	—	—
West Bank[26]	2002–03	2,006[7]	35,287[7]	984,108[7]	27.9[7]	96	[7]	[7]	[7]	[7]	.	..	..
Western Sahara[27]	1995	40	925	32,257	34.9	.	13	1,267	10,541	8.3	..	..	..
Yemen[27]	2002–03	11,013[13]	113,812[18]	2,950,403	.	72	1,224[4]	14,083[18]	1,364,129	..	34	125[4]	1,406
Zambia	2002–03	4,221[21]	36,151	1,731,579	47.9	68	..	..	345,442	..	23	..	150
Zimbabwe	2003–04	4,706[21]	61,251	2,361,588	38.6	80	1,530[21]	33,964	758,229	22.3	34	25[2]	1,479[2]

[1]1997–98. [2]1992. [3]1990 [4]1995. [5]General second level includes vocational. [6]Age 15 and over. [7]Primary includes secondary [8]Primary includes lower secondary. [9]Upper secondary only. [10]College of the Bahamas only. [11]2000 [12]Includes preprimary education. [13]1994. [14]1996–97. [15]Age 19 and over. [16]2002. [17]1999. [18]2001–02. [19]1991. [20]1996. [21]1998. [22]Republic of Cyprus only. [23]Universities only [24]Data exclude 1,090,022 primary and 278,134 secondary students in the Al-Azhar education system. [25]Includes distance learning and 5,232 foreign students.

students[c]	student/ teacher ratio	third level (higher) institutions	teachers[b]	students[c]	student/ teacher ratio	gross enrollment ratio[d]	students per 100,000 population[d]	percent of population age 25 and over with post-secondary education[d]	literacy (2000–04) over age 15 total (%)	male (%)	female (%)	public expenditure on education (percent of GNP)[d]	country
...	...	5	906	12,903	14.2				97.3	99.2	95.5		Montenegro
143,692	28.9	68[21]	10,064	276,018	27.4	11	951		50.7	63.3	38.3	6.6	Morocco
20,880	24.2	3	954[14]	9,303[28]		1	54	0.2[26]	46.5	62.3	31.4	2.5	Mozambique
25,374[4]	10.3[4]	51[21]	17,089[21]	385,300[21]	22.5[21]	12	950	2.0	89.7	93.7	86.2	1.3	Myanmar (Burma)
1,503[13]	.	7[13]	931	13,536	14.5	8	686	4.0	85.0	86.8	83.5	7.1	Namibia
38[30]	6.3[30]	..							99.0				Nauru
20,546	20.0	2	4,925[19]	119,670		5	479	0.6	48.6	62.7	34.9	3.4	Nepal
489,444	13.7	12[23]	44,092	526,780	11.9	58	3,262	6.9[6]	100.0	100.0	100.0	5.3	Netherlands, The
6,088		1	340	2,286	6.7	14	1,295	11.4	96.7	96.7	96.7		Netherlands Antilles
5,916[20]		4[20]	55[11]	2,069[11]	37.6[11]	5	981	10.5[6]	98.2	96.8	95.5	11.6	New Caledonia
106,570	22.6	8[11]	13,360	184,000	13.8	74	4,600	39.1	100.0	100.0	100.0	7.1	New Zealand
18,939	21.1	108[30]	6,547	100,363	15.3	18	1,949	4.0	76.7	76.8	76.6	3.2	Nicaragua
18,400	13.4	2[21]	355[21]	5,569[21]	15.7[21]	2	56	0.2	14.4	19.6	9.4	2.4	Niger
	.	158	35,115	947,538	27.0	8	770		66.8	74.4	59.4	0.7	Nigeria
.	.	1[29]	504[29]	2,383[29]	4.7[29]		3,315	31.1	96.3	96.9	95.6		Northern Mariana Islands
[5]	[5]	71	17,903	212,335	11.9	81	4,679	18.7	100.0	100.0	100.0	7.6	Norway
16,472[30]	15.4[30]	1[23]	631	19,864	31.5	8	867	3.6[6]	74.4	82.0	65.4	4.8	Oman
75,000	10.6	1,187	41,673	1,087,999	25.6	3	777	2.5	48.6	81.7	35.2	1.8	Pakistan
.	.	1	25	598	23.9		3,054	10.0	97.6	98.3	96.6	10.7	Palau
103,350	18.2	14[14]	8,444	117,601	13.9	43	3,932	15.9	91.9	92.5	91.2	4.6	Panama
9,941[4]	12.9[2]	2[3]	815	13,761	16.9	2	264	.	57.3	63.4	50.9	2.4	Papua New Guinea
44,516	.	111[17]	1,135[17]	146,982		27	2,661	5.3[6]	91.6	93.1	90.2	4.4	Paraguay
270,576[4]	22.0[4]	2,161[11]	57,874[11]	1,495,957[11]	25.8[11]	32	5,764	20.4[6]	87.7	93.5	82.1	3.1	Peru
.	.	1,603[18]	109,979	2,427,211	22.1	30	3,046	8.0	92.6	92.5	92.7	2.9	Philippines
1,180,964	14.0	427	93,365	1,983,000	21.2	60	5,187	9.9	99.8	99.8	99.8	5.7	Poland
105,753	8.1	316	36,187	400,000	11.1	56	3,849	7.7	92.2	94.8	90.0	5.9	Portugal
...	.	44		171,625			4,539	28.7	94.1	93.9	94.4	7.8	Puerto Rico
557	4.6	1	650	7,826	12.0	22	1,146	13.3	89.2			3.6	Qatar[27]
13,547[20]	12.1[20]	1	286[21]	8,663[21]	30.3[21]		1,242	5.1[6]	88.4	86.3	90.2		Réunion
332,070	43.9	125	29,619	596,297	20.0	35	2,731	7.1	97.3	98.4	96.3	3.6	Romania
1,648,700		1,008	547,400	5,426,300	9.9	69	3,716	16.0[6]	99.4	99.8	99.2	3.8	Russia
..			1,348	20,393	15.1	3	250		64.0	70.5	58.8	2.8	Rwanda
		1	51[35]	394[35]	7.7[35]		949	8.9	90.9	90.0	90.0	3.7	St. Kitts and Nevis[27]
808[35]	23.7[35]	1	127	1,403	11.0		899	2.7[6]	90.1	89.5	90.6	8.2	St. Lucia
1,715	32.3	.						2.6[36]	96.0			10.5	St. Vincent and the Grenadines
..		1[21]	28[21]	328[21]	11.7[21]		191	10.3[6]	98.7	98.9	98.4	4.8	Samoa
[5]	[5]	1	27	950	35.6		3,338	7.0[37]	98.7	98.9	98.4	.	San Marino
40	3.6	1	27	183	6.8	1	128	1.9	73.0	85.0	62.0	3.8[14]	São Tomé and Príncipe
68,434	11.2	92	23,350	525,344	22.5	25	2,455		79.4	87.1	69.3	8.2	Saudi Arabia
3,897		22[3, 29]	963[23, 29]	22,157[23, 29]	23.0[23, 29]	4	226		39.3	51.1	29.2	3.7	Senegal
159,736	26.4		10,374	218,508	21.1								Serbia
1,652	8.6	.			.			4.6	91.9	91.4	92.3	5.7	Seychelles
21,454		1	1,198	8,795	7.3	2	194	1.5	29.6	39.8	20.5	3.8	Sierra Leone
23,708	12.1	8[11]	7,318[11]	111,538[11]	15.2[11]	39	2,776	17.8[6]	92.5	96.6	88.6	3.6	Singapore
217,849	12.2	20	13,166	152,182	11.6	34	2,829	9.5	99.7	99.7	99.6	4.4	Slovakia
86,638	14.5	49	3,109	87,205	28.0	68	4,369	10.4	99.7	99.7	99.6	6.1	Slovenia
9,560								2.6	54.1	62.4	44.9	3.4	Solomon Islands
10,400	9.7	1	54[19]	4,640[19]	8.5[19]	1	70		24.0	36.0	14.0	0.4	Somalia
140,531[13]	13.0[13]	21[23]	27,099[13]	617,897[13]	22.8[13]	15	1,664	8.5[6]	82.4	84.1	80.9	5.4	South Africa
[5]	[5]		98,587	1,508,116	15.3	62	3,703	13.5[40]	97.7	98.6	96.8	4.5	Spain
11,270	19.6	12	2,999	48,899	16.3	5	246	1.1	90.4	92.2	88.6	3.4	Sri Lanka
26,421[14]	34.7[14]	19	1,417[14]	52,260[14]	36.9[14]	7	272	0.8	59.0	69.2	49.9	1.4	Sudan, The
17,966	13.0	4	550	5,186[29]		12	1,126		92.2	93.6	90.7	3.5	Suriname
2,958[13]	13.0[13]	1	326	5,193	15.9	5	508	3.3	80.3	81.3	79.4	6.8	Swaziland
...	..	71	37,692	385,323	10.2	83	4,301	26.0[41]	100.0	100.0	100.0	7.7	Sweden
174,893	15.6		28,019	170,086	6.1	49	2,343	11.5	100.0	100.0	100.0	5.5	Switzerland
134,473	8.9	4	5,664	155,137	27.4	16	980		82.9	91.0	74.2	3.1	Syria
[5]	[5]	158	47,472	1,202,091	25.3		5,328	13.1[6]	94.6	97.6	91.4	5.2	Taiwan
29,600		35	6,100	118,400	19.4	16	1,875	11.7	99.5	99.7	99.3	2.9	Tajikistan
12,571[20]	11.8[20]		2,249	31,049	13.8	1	90	2.0	69.4	77.5	62.2	3.4[20]	Tanzania[42]
624,547	28.4	102[14]	65,548	2,251,453	34.3	38	3,558	5.1	92.6	94.9	90.5	4.7	Thailand
9,076[14]	13.8[14]	1	443[14]	11,639[14]	26.3[14]	4	317	1.3	53.0	68.5	38.3	2.7	Togo
755	11.3	1[2]	19[2]	225[2]	11.8[2]	4	234	2.8	98.9	98.8	99.0	5.0	Tonga
2,550	17.6	3[14]	969	12,316	12.7	9	965	3.4	98.5	99.0	97.9	4.6	Trinidad and Tobago
3,839[20]	16.2[20]	128	11,412	226,102	19.8	27	2,337	7.9[43]	74.3	83.4	65.3	6.7	Tunisia
875,200	12.2	1,273	67,880	1,607,400	23.7	28	2,384	10.8	88.3	95.7	81.1	3.7	Turkey
26,000	.	15		29,435[20]		22	689		98.8	99.3	98.3	3.9	Turkmenistan
58[19]		—	—	—	—	.	.	2.9[6]	95.0				Tuvalu
38,500[21]	18.4[21]		4,908	71,544	14.6	3	298	1.8	68.9	78.8	59.2	2.6	Uganda
326,213[44]	28.5[44]	1,007	177,644	2,269,800	12.8	62	4,761		99.6	99.7	99.2	5.5	Ukraine
1,667	6.2	4[14]	2,948	56,401	19.1	35	1,617	8.6[43]	77.3	75.6	80.7	2.4	United Arab Emirates
5,202,508	33.0	148	101,040	2,287,830	22.6	64	3,857		100.0	100.0	100.0	5.2	United Kingdom
...	.	4,197[30]	1,167,305	16,611,711	14.2	83	5,764	45.2	95.5	95.7	95.3	5.6	United States
65,567	8.0	6	10,524	98,798	9.4	37	3,063	17.2	97.7	97.3	98.1	2.6	Uruguay
214,500	27.2	61	18,400	183,600	10.0	16	732	.	99.3	99.6	98.9	7.9	Uzbekistan
892	11.2	1	27	675	25.0	4	351	5.2[6]	74.0	.	.	10.7	Vanuatu
56,746		14[18]	36,232[1]	983,217		40	3,879	10.0	93.0	93.3	92.7	5.2	Venezuela
309,807	33.2	104[13]	38,608	797,066	20.6	10	997	2.6	90.3	93.9	86.9	3.0[21]	Vietnam
—	—	1	266[14]	3,107		.	2,860	31.3				7.5[4]	Virgin Islands (U.S.)
...	..	36	2,286	83,408	36.5		2,443					.	West Bank[26]
1,222	.	—	..	..								..	Western Sahara[27]
15,074[18]	.	7[18]	3,429	184,072	53.7	11	953	2.7[42]	49.0	69.5	28.5	10.3	Yemen[27]
6,000	40.0	2[20]	640[20]	22,701[21]	.	2	242	1.5	67.9	76.1	59.7	2.1	Zambia
27,431[2]	18.5[2]	28[2]	3,581[4]	55,689		4	475	3.4	90.0	93.8	86.3	4.9	Zimbabwe

[26]Data include Gaza Strip and West Bank [27]Public schools only [28]1999–2000. [29]2000–01 [30]2001 [31]1988 [32]Government schools only; private education: 112 schools, 7,324 teachers, 128,204 students. [33]Includes 511 students abroad [34]Includes 5,688 students abroad [35]1993. [36]Employed only [37]Age 14 and over. [38]2003–04 [39]Includes combined and intermediate schools [40]Age 16 and over [41]Ages 16–74 [42]Mainland Tanzania only [43]Age 10 and over [44]2002–03.

BIBLIOGRAPHY AND SOURCES

The following list indicates the principal documentary sources used in the compilation of *Britannica World Data*. It is by no means a complete list, either for international or for national sources, but is indicative more of the range of materials to which reference has been made in preparing this compilation.

While *Britannica World Data* has long been based primarily on print sources, many rare in North American library collections, the burgeoning resources of the Internet can be accessed from any appropriately equipped personal computer (PC). At this writing, more than 100 national statistical offices had Internet sites and there were also sites for central banks, national information offices, individual ministries, and the like.

Because of the relative ease of access to these sites for PC users, uniform resource locators (URLs) for mainly official sites have been added to both country statements (at the end, in boldface) and individual Comparative National Statistics tables (at the end of the headnote) when a source providing comparable international data existed. Many sites exist that are narrower in coverage or less official and that may also serve the reader (on-line newspapers; full texts of national constitutions; business and bank sites) but space permitted the listing of only the top national and intergovernmental sites. Sites that are wholly or predominantly in a language other than English are so identified.

International Statistical Sources

Christian Research. *World Churches Handbook* (1997).

Comité Monétaire de la Zone Franc. *La Zone Franc: Rapport* (annual).

Europa Publications Ltd. *Africa South of the Sahara* (annual); *The Europa Year Book* (2 vol.; annual); *The Far East and Australasia* (annual); *The Middle East and North Africa* (annual).

Europe in Figures—Eurostat Yearbook.

Food and Agriculture Organization (FAO). *Trade Yearbook; Yearbook of Forest Products; State of the World's Forests 2003.*

Her Majesty's Stationery Office. *The Commonwealth Yearbook.*

Instituts d'Émission d'Outre-Mer et des Départements d'Outre-Mer (France). *Bulletin trimestriel; Rapport annuel.*

Inter-American Development Bank. *Economic and Social Progress in Latin America* (annual).

Inter-Parliamentary Union (IPU). *Chronicle of Parliamentary Elections and Developments* (annual).

International Air Transport Association. *World Air Transport Statistics* (annual).

International Civil Aviation Organization. *Civil Aviation Statistics of the World* (annual); *Digest of Statistics.*

International Institute for Strategic Studies. *The Military Balance* (annual).

International Monetary Fund (IMF). *Annual Report on Exchange Arrangements and Exchange Restrictions; Direction of Trade Statistics Yearbook; Government Finance Statistics Yearbook; International Financial Statistics* (monthly, with yearbook).

International Road Federation. *World Road Statistics* (annual).

International Telecommunication Union. *Yearbook of Statistics: Telecommunication Services* (annual).

Jane's Publishing Co., Ltd. *Jane's World Railways* (annual).

Keesing's Worldwide LLC. *Keesing's Record of World Events* (monthly except August).

Macmillan Press Ltd. *The Statesman's Year-Book.*

Middle East Economic Digest Ltd. *Middle East Economic Digest* (weekly).

Nordic Council of Ministers, *Nordic Statistical Yearbook* (annual).

Oceana Publications. *Constitutions of the Countries of the World; Constitutions of Dependencies and Territories.*

Oxford University Press. *World Christian Encyclopedia* (David B. Barrett, ed. [2001, 2 vol.]).

PennWell Publishing Co. *International Petroleum Encyclopedia* (annual).

René Moreux et Cie. *Marchés tropicaux & Méditerranéens* (weekly).

Routledge. *The Europa World of Learning*, 2 vols. (annual).

United Nations (UN). *Industrial Commodities Statistics Yearbook; Energy Statistics Yearbook; International Trade Statistics Yearbook* (2 vol.); *Monthly Bulletin of Statistics; Statistical Yearbook.*

United Nations Economic Commission for Latin America and the Caribbean (UNECLAC). *Economic Survey of Latin America and the Caribbean* (2 vol.; annual).

United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). *Statistical Yearbook for Asia and the Pacific.*

United Nations Economic and Social Commission for Western Asia (UNESCWA). *Demographic and Related Socio-Economic Data Sheets* (irreg.); *National Accounts Studies of the ESCWA Region* (irreg.); *The Population Situation in the ESCWA Region* (irreg.).

United Nations Industrial Development Organization (UNIDO). *International Yearbook of Industrial Statistics 2006.*

United States: Dept. of Health and Human Services, *Social Security Programs Throughout the World* (4 vol.; semiannual); Dept. of Interior, *Minerals Yearbook* (3 vol. in 6 parts); Dept. of State, *World Military Expenditure and Arms Transfers* (annual).

World Association of Newspapers. *World Press Trends* (annual).

The World Bank Group. *World Bank Atlas* (annual); *Global Development Finance* (2 vol.; annual); *World Development Report* (annual); *World Development Indicators* (annual).

World Tourism Organization. *Compendium of Tourism Statistics* (annual).

Internet Resources

African Development Bank (AfDB) http://www.afdb.org

AfDB Documents and Publications http://www.afdb.org/portal/page?_pageid=473,970659&_dad=portal&_schema=PORTAL

Air Transport World: World Airline Traffic Results 2006 http://www.atwonline.com/channels/dataAirlineEconomics/World_Airline_Report_2006.pdf

Asian Development Bank (ADB) http://www.adb.org/statistics

Asian Development Bank: *Key Indicators* (Asia and Pacific) http://www.adb.org/documents/books/key_indicators

Australian Department of Foreign Affairs and Trade http://www.dfat.gov.au/geo

Bank for International Settlements, central banks list http://www.bis.org/cbanks.htm

Banque des Etats de l'Afrique Centrale http://www.beac.int

Caribbean Community (CARICOM) Secretariat Statistics http://www.caricomstats.org

Caribbean Development Bank (CDB) http://www.caribank.org

Central Intelligence Agency (CIA) World Factbook https://www.cia.gov/library/publications/the_world_factbook

City Population (World): Thomas Brinkhoff http://www.citypopulation.de/index.html

Constitution Finder http://confinder.richmond.edu/country.php

Eastern Caribbean Central Bank (ECCB) http://www.eccb-centralbank.org

Economic Community of West African States (ECOWAS) http://www.ecowas.int

ECOWAS Statistics http://www.ecostat.org

Election Guide http://www.electionguide.org

Energy Information Administration (EIA): International Energy Annual (IEA) http://www.eia.doe.gov/iea

European Central Bank (ECB) http://www.ecb.int/stats/html/index.en.html

EUROSTAT Statistics in Focus http://epp.eurostat.cec.eu.int/

Europe in Figures—Eurostat Yearbook 2006–07 http://epp.eurostat.ec.europa.eu/

FAO statistics http://faostat.fao.org

GeoHive (World) http://geohive.com/default1.aspx

IMF publications http://www.imf.org/external/pubind.htm

International Household Survey Network: IHSN central survey catalog http://www.surveynetwork.org/home/?MI=activitiesLlvl2=catalog&lv3=surveys

International Development Statistics http://www.oecd.org/dac/stats/idsonline

International Labour Organization: LABORSTA database (World) http://laborsta.ilo.org

International Telecommunication Union (ITU) statistics http://www.itu.int/ITU-D/ict/statistics

IPU PARLINE Database http://www.ipu.org/parline-e/parlinesearch.asp

Law Library of Congress http://www.loc.gov/law/guide

Library of Congress Country Profiles http://lcweb2.loc.gov/frd/cs/profiles.html

National Geospatial-Intelligence Agency http://gnswww.nga.mil/geonames/GNS/index.jsp

Observatoire Économique et Statistique d'Afrique Sub Saharienne (AFRISTAT) http://www.afristat.org

OECD International Development Statistics (IDS) http://www.oecd.org/dac/stats/idsonline

Secretariat of the Pacific Community: Pacific Regional Information System (PRISM [Pacific]) http://www.spc.int/prism

Sénats du Monde http://www.senat.fr/senatsdumonde/pays.html

Statistical, Economic, and Social Research and Training Centre for Islamic Countries (SESRTCIC): Statistics http://www.sesrtcic.org/stat_database.php

Statoids http://www.statoids.com

Stockholm International Peace Research Institute (SIPRI): SIPRI Military Expenditure Database (World) http://first.sipri.org/contents/webmaster/databases

UNAIDS: Report on the Global AIDS Epidemic 2006 http://www.unaids.org/en

UNCTAD Handbook of Statistics: Remittances http://stats.unctad.org/statistics/handbook

UNCTAD World Investment Report 2007 http://www.unctad.org/en/docs/wir2007overview_en.pdf
UNECLAC Statistical Yearbook for Latin America and the Caribbean 2006 http://www.eclac.cl
UNESCAP Asia-Pacific in Figures 2004 http://www.unescap.org/stat/data/apif
UNESCAP Statistical Indicators for Asia and the Pacific 2005 http://www.unescap.org/stat/data/statind/pdf/index.asp
UNESCAP Statistics Division Data Centre http://www.unescap.org/stat/data/statind/pdf
UNESCWA Statistical Abstract http://www.escwa.un.org/
UNIDO statistics http://www.unido.org
United Nations Children's Fund (UNICEF [World]) http://www.unicef.org
United Nations Conference on Trade and Development (UNCTAD) Handbook of Statistics 2006–07 http://www.unctad.org/Templates/Page.asp?intItemID=1890
United Nations Development Programme (UNDP): Human Development Reports (World) http://hdr.undp.org
United Nations Economic and Social Development: World Population Prospects http://esa.un.org/unpp
United Nations Economic and Social Development: World Urbanization Prospects http://esa.un.org/unup
United Nations Educational, Scientific, and Cultural Organization (UNESCO): Institute for Statistics database (World) http://www.uis.unesco.org
UNESCO education tables http://stats.uis.unesco.org
UNESCO Global Education Digest http://www.uis.unesco.org/TEMPLATE/pdf/ged/2006/GED2006.pdf
United Nations Peacekeeping http://www.un.org/Depts/dpko
United Nations Statistics Division: Demographic Yearbook http://unstats.un.org/unsd/demographic
United Nations Statistics Division: National Accounts Main Aggregates Database http://unstats.org/unsd/snaama/Introduction.asp
United Nations Statistics Division: Population and Vital Statistics Report http://unstats.un.org/unsd/seriesa/introduction.asp
U.S. Census Bureau: International Data Base (IDB) http://www.census.gov/ipc/www/idb
U.S. Census Bureau, statistical agencies list http://www.census.gov/main/www/stat_int.html
U.S. Department of State Background Notes http://www.state.gov/r/pa/ei/bgn
U.S. Department of State International Religious Freedom Report 2007 http://www.state.gov/g/drl/rls/irf
U.S. Department of the Interior: Office of Insular Affairs (OIA) http://www.doi.gov/oia/index.html
OIA Statistics http://www.pacificweb.org
U.S. Geological Survey (USGS) mineral information http://minerals.usgs.gov/minerals/pubs/country
U.S. Agency for International Development (USAID) Demographic and Health Surveys (DHS) http://www.measuredhs.com
Women and Men in CARICOM Member States http://www.caricomstats.org/pdmpub.html
The World Bank Group: World Bank Database (World) http://devdata.worldbank.org
World Bank remittances tables http://siteresources.worldbank.org/EXTGEP2006/Resources/RemittancesDataGEP2006.xls
The World Gazetteer (World) http://www.world-gazetteer.com
World Health Organization (WHO) http://www.who.int/en
WHO Global Burden of Disease Estimates (World) http://www.who.int/healthinfo/bodestimates/en/index.html
WHO Global Health Atlas (World) http://who.int/globalatlas
WHO Pan American Health Organization (PAHO) http://www.paho.org
PAHO Health Situation in the Americas: Basic Indicators http://www.paho.org/english/dd/ais/BI-brochure-2005.pdf
PAHO Health Statistics from the Americas 2006 http://www.paho.org/English/DD/AIS/HSA2006.htm
WHO Regional Office for Africa http://www.afro.who.int
WHO Regional Office for Europe http://www.euro.who.int
WHO Regional Office for the Eastern Mediterranean http://www.emro.who.int/index.asp
WHO Regional Office for South-East Asia http://www.searo.who.int
WHO Regional Office for the Western Pacific http://www.wpro.who.int
WHO Statistical Information System http://www.who.int/whosis/en
World Military Guide http://www.globalsecurity.org/military/world/index.html
World Statesmen http://www.worldstatesmen.org

National Statistical Sources

Afghanistan. *Afghanistan Statistical Yearbook; Islamic Republic of Afghanistan: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).
Albania. *Population and Housing Census 2001; Statistical Yearbook of Albania; Albania in Figures* (annual); *Albania: Selected Issues* (IMF Staff Country Report [2006]).
Algeria. Bank *Rapport annuel; Annuaire statistique* (irregular); *Recensement général de la population et de l'habitat, 1998; Algeria: Statistical Appendix* (IMF Staff Country Report [2007]).
American Samoa. *American Samoa at a Glance; Report on the State of the Island* (U.S. Department of the Interior [annual]); *2000 Census of Population and Housing* (U.S.); *American Samoa Statistical Yearbook.*
Andorra. *Anuari Estadístic* (annual); Andorra Economic Report; *Andorra in Figures* (annual).
Angola. National Bank *Indicadores* (annual); *Angola: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]); *Perfil estatistico de Angola* (annual).
Antigua. *Antigua and Barbuda: Statistical Appendix* (IMF Staff Country Report [2006]); *Statistical Yearbook; 2001 Population and Housing Census.*
Argentina. *Statistical Yearbook of the Argentine Republic; Censo nacional de población, hogares, y vivienda* 2001.
Armenia. *Statistical Yearbook of Armenia; Socio-Economic Situation of the Republic of Armenia* (annual); *Armenia: Selected Issues* (IMF Staff Country Report [2006]).
Aruba. *Statistical Yearbook;* Central Bank *Bulletin* (quarterly); Central Bank *Annual Report; Fourth Population and Housing Census October 14, 2000.*
Australia. *Australia at a Glance* (annual); *Monthly Summary of Statistics; Social Indicators* (annual); *Demographic Statistical Yearbook* (monthly); *Year Book Australia; 2006 Census of Population and Housing; Australian Social Trends,* 2007.
Austria. *Grosszählung 2001* (General Census 2001). *Sozialstatistische Daten* (irreg.); *Statistisches Jahrbuch für die Republik Österreich* (annual).
Azerbaijan. *Azerbaijan in Figures* (annual); *Statistical Yearbook of Azerbaijan.*
Bahamas, The. *Census of Population and Housing 2000; Statistical Abstract* (annual); *Quarterly Statistical Digest;* Central Bank of the Bahamas *Annual Report.*
Bahrain. *Statistical Abstract* (annual); *The Population, Housing, Buildings, and Establishments Census 2001; Bahrain in Figures* (annual).
Bangladesh. *Bangladesh Population Census, 2001; Statistical Yearbook of Bangladesh;* Central Bank *Annual Report.*
Barbados. *Barbados Economic Report* (annual); *Monthly Digest of Statistics; Annual Statistical Digest;* Central Bank *Annual Report; Barbados Population and Housing Census 2000.*
Belarus. *Statistical Yearbook of the Republic of Belarus; Population Census 1999; The Republic of Belarus in Figures* (annual); *Republic of Belarus: Statistical Appendix* (IMF Staff Country Report [2007]).
Belgium. *Annuaire statistique de la Belgique* (annual) *Recensement de la population et des logements au 1er oct. 2001; Statistical Bulletin* (quarterly).
Belize. *Abstract of Statistics* (annual); *Belize Economic Survey* (annual); Central Bank *Annual Report and Accounts; 2000 Population Census: Major Findings. Belize: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).
Benin. *Annuaire statistique* (annual); *Recensement général de la population et de l'habitation* (2002); *Rapports annuel de la Zone franc.*
Bermuda. *Bermuda Digest of Statistics* (annual); *Bermuda Facts and Figures* (annual); *The 2000 Census of Population and Housing; Quarterly Bulletin of Statistics.*
Bhutan. *Statistical Yearbook of Bhutan; Population and Housing Census of Bhutan 2005;* Royal Monetary Authority of Bhutan *Monthly Bulletin.*
Bolivia. *Anuario estadístico* (annual); *Censo de población y vivienda 2001; Compendio estadístico* (annual); *Bolivia: Selected Issues* (IMF Staff Country Report [2007]); *Estadísticas socioeconómicas* (annual); Banco Central de Bolivia Mensual Bulletin.
Bosnia and Herzegovina. Central Bank *Annual Report;* Central Bank *Bulletin* (quarterly). *Bosnia and Herzegovina: Selected Issues* (IMF Staff Country Report [2007]).
Botswana. *Statistical Bulletin* (quarterly); Bank *Annual Report; 2001 Population and Housing Census: Botswana: Statistical Appendix* (IMF Staff Country Report [2007]).
Brazil. *Anuário Estatístico do Brasil* (annual); *Censo Demográfico 2000.*
Brunei. *Brunei Statistical Yearbook; Brunei Darussalam Population and Housing Census 2001; Brunei Economic Bulletin* (quarterly); *Statistical Appendix* (IMF Staff Country Report [2006]).
Bulgaria. *Bulgaria 2005—Social-Economic Development; Prebroyavaneto na naselenieto kŭm 01.03.2001 godina* (Census of Population of March 1, 2001); *Statistical Reference Book of the Republic of Bulgaria* (annual); *Bulgaria: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).
Burkina Faso. *Burkina Faso: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2005]); *Recensement général de la population du 10 au 20 decembre 1996.*
Burundi. Banque de la Republique du Burundi *Rapport Annuel* (annual); *Annuaire statistique* (annual); *Recensement général de la population, 2005: Burundi: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).
Cambodia. *1998 Population Census of Cambodia; Cambodia: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]); *Cambodia Statistical Yearbook.*
Cameroon. *Cameroon Statistical Yearbook; Cameroon: Statistical Appendix* (IMF Staff Country Report [2007]); *Recensement général de la population et de l'habitat 1987.*
Canada. *Canada Year Book* (biennial); *Census Canada 2006: Population; Canada at a Glance* (annual).
Cayman Islands. *Annual Economic Report 2006; Overseas Trade Report 2006; Labour Force Survey 2006.*
Cape Verde. Bank *Boletim de Estatisticas Mensal; Cape Verde: Statistical Appendix* (IMF Staff Country Report [2006]); *O Recenseamento Geral da População e Habitação 2000; Cabo Verde en numeros* (annual).
Central African Republic. *Annuaire statistique* (annual); *Central African Republic: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2004]); *Recensement général de la population 2003.*
Chad. *Bulletin Trimestriel de Conjecture* (quarterly); *Annuaire statistique* (annual); *Recensement general de la population et de l'habitat 1993; Chad: Statistical Appendix* (IMF Staff Country Report [2007]).
Chile. *Statistical Synthesis of Chile* (annual); Central Bank *Annual Report; Chile XVII censo nacional de población y VI de vivienda, 24 de abril 2002; Quarterly Economic Indicators; Compendio estadístico* (annual).
China, People's Republic of. *China Statistical Yearbook; 2000 Population Census of the People's Republic of China.*
Colombia. *Colombia estadística* (annual); *Censo 93 informacion de vivienda; Colombia: Selected Issues* (IMF Staff Country Report [2006]).

Comoros. Central Bank *Rapport Annuel* (annual); *Recensement général de la population et de l'habitat 15 septembre 2003; Union of the Comoros: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).

Congo, Dem. Rep. of the (Zaire). *Dem. Rep. of the Congo: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]).

Congo, Rep. of the. *Annuaire statistique* (annual); *Recensement général de la population et de l'habitat de 1984; Republic of Congo: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]).

Costa Rica. *Anuario estadístico* (annual); *Costa Rica at a Glance* (annual); *IX censo nacional de población y V de viviendas, 2000.*

Côte d'Ivoire. *Côte d'Ivoire: Statistical Appendix* (IMF Staff Country Report [2004]); *Recensement général de la population et de l'habitat 1998.*

Croatia. *Monthly Statistical Review; Census of Population, Households and Dwellings 31st March 2001; Statistical Yearbook. Republic of Croatia: Selected Issues* (IMF Staff Country Report [2007]).

Cuba. *Anuario estadístico* (annual); *Censo de población y viviendas, 2002.*

Cyprus. Central Bank *Annual Report; Cyprus in Figures* (annual); *Census of Industrial Production* (annual); *Census of Population 2001; Economic Report* (annual); *Statistical Abstract* (annual).

Czech Republic. *Czech Republic in Figures* (annual); *Statistical Yearbook of the Czech Republic.*

Denmark. *Statistical Yearbook; Denmark in Figures* (annual).

Djibouti. *Annuaire statistique de Djibouti* (annual); Central Bank *Rapport Annuel* (annual).

Dominica. *Dominica: Statistical Appendix* (IMF Staff Country Report [2007]); *Population and Housing Census 2001; Statistical Digest* (irregular).

Dominican Republic. Central Bank *Informe de la Economía Dominicana* (annual); *Cifras Dominicanas* (irregular); *VIII censo nacional de población y vivienda, 2002.*

East Timor. National Census 2004; *Economic Bulletin* (quarterly); *Democratic Republic of Timor-Leste: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]).

Ecuador. *Serie estadística* (quinquennial); *VI censo de población y V de vivienda 2001; Ecuador: Selected Issues* (IMF Staff Country Report [2006]).

Egypt. *Monthly Bulletin of Statistics; Statistical Indicators about Egypt; Census Population, Housing, and Establishment, 2006; Statistical Yearbook.*

El Salvador. *Annual Economic Indicators; Censos nacionales: V censo de población y IV de vivienda (1992); El Salvador en cifras* (annual).

Equatorial Guinea. *Censos nacionales, I de población y I de vivienda—2001; Republic of Equatorial Guinea: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).

Eritrea. *Eritrea: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2003]).

Estonia. *Monthly Bulletin of Estonian Statistics; 2000 Population and Housing Census; Statistical Yearbook of Estonia; The 2006 National Statistics.*

Ethiopia. *1994 Population and Housing Census of Ethiopia; Ethiopia Statistical Abstract* (annual); National Bank of Ethiopia *Annual Report; The Federal Democratic Republic of Ethiopia: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]); *Ethiopia Demographic and Health Survey 2005; The 2005 National Labour Force Survey.*

Faroe Islands. *Nordic Statistical Yearbook; Faroe Islands Information Memorandum* 2005; *Statistical Bulletin* (annual); *Faroe Islands in Figures* (annual).

Fiji. *Key Statistics* (quarterly); *Quarterly Review; Current Economic Statistics* (quarterly); *Fiji Facts and Figures* (annual); *2007 Census of the Population and Housing.*

Finland. *Economic Survey* (annual); *Population Census 2000 Handbook; Statistical Yearbook of Finland; Finland in Figures* (annual).

France. *Annuaire statistique de la France* (annual); *Données sociales* (triennial); *Tableaux de l'Economie Française* (annual).

French Guiana. *Chiffres clés 2005—Guyane. Recensement général de la population de 1999; Tableaux economiques regionaux: Guyane* (biennial).

French Polynesia. *Résultats du recensement général de la population de la Polynésie Française, 2002; Tableaux de l'economie polynesienne* (irreg.); *Polynésie Francaise en Bref* (annual); *Polynesia at a Glance* (annual); *Te avei'a: Bulletin d'information statistique* (monthly); *Année 2006 des Resultats Mediocres.*

Gabon. *Recensement général de la population et de l'habitat 1993; Situation économique, financière et sociale de la République Gabonaise* (annual).

Gambia, The. *National Population and Housing Census 2003; The Gambia: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]); *Atlas of The Gambia; Quarterly Bulletin.*

Gaza Strip. *Judaea, Samaria, and Gaza Area Statistics Quarterly; Palestinian Statistical Abstract.*

Georgia. *First General National Census* (2002); *Statistical Yearbook of Georgia;* National Bank *Bulletin of Monetary and Banking Statistics* (annual).

Germany. *Statistisches Jahrbuch für die Bundesrepublik Deutschland* (annual); *Germany Facts and Trends.*

Ghana. *Ghana: Selected Issues* (IMF Staff Country Report [2007]); *Population Census of Ghana, 2000; Quarterly Economic Bulletin; Quarterly Digest of Statistics.*

Greece. *Recensement de la population et des habitations, 2001;* Bank *Annual Report;* Bank *Monthly Statistical Bulletin; Statistical Yearbook of Greece.*

Greenland. *Greenland in Figures* (annual); *Greenland* (statistical yearbook); *Grønlands befolk-ning* (Greenland Population [annual]).

Grenada. *Abstract of Statistics* (annual); *Grenada: Statistical Appendix* (IMF Staff Country Report [2005]); *2001 Population and Housing Census.*

Guadeloupe. *Guadeloupe en faits et chiffres* (annual); *Recensement général de la population de 1999; Guadeloupe; Tableaux economiques regionaux: Guadeloupe* (biennial); Institut d'emission des départements d'Outre Mer La Guadeloupe Rapport Annuel.

Guam. *Guam Annual Economic Review; Guam Statistical Yearbook; 2000 Census of Population and Housing (U.S.).*

Guatemala. *Boletín estadístico* (monthly); *Anuario estadística* (annual); *Instituto nacional de estadística censos nationales XI de población y VI de habitación 2002;* Banco de Guatemala *Annual Report.*

Guernsey. *Guernsey Census 2001; Statistical Digest* (annual); *States of Guernsey Facts and Figures* (annual); *Economic and Statistics Review* (annual).

Guinea. *Recensement général de la population et de l'habitat 1996; Guinea: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]); Central Bank *Annual Report.*

Guinea-Bissau. *Guinea-Bissau: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]); *Recenseamento Geral da População e da Habitação, 1991.*

Guyana. Bank *Annual Report and Statement of Accounts; Statistical Bulletin* (quarterly); *2002 Population and Housing Census; Guyana: Statistical Annex* (IMF Staff Country Report [2001]); *Tableaux Economique Regionaux de la Guyana* (biennial).

Haiti. Bank *Rapport Annuel* (annual); *Indicateurs Economiques et Financiers* (monthly); *Résultats préliminaires du 4eme recensement général de population et d'habitat* (August 2003); *Haiti: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]).

Honduras. *Anuario estadístico* (annual); *Censo nacional de población y vivienda, 2001; Honduras en cifras* (annual).

Hong Kong. *Annual Digest of Statistics; Hong Kong in Figures* (annual); *Hong Kong* (annual); *Hong Kong 2001 Population Census; Hong Kong Social and Economic Trends* (biennial).

Hungary. *Statistical Yearbook of Hungary; 2001, Evi népszámlálás* (Census of Population 2001).

Iceland. *Statistical Yearbook of Iceland; Iceland in Figures* (annual).

India. *Statistical Pocket Book of India* (annual); *Monthly Abstract of Statistics; Census of India, 2001; Economic Survey* (annual); *Statistical Abstract* (annual).

Indonesia. Bank *Annual Report; Indonesia: An Official Handbook* (irreg.); *Hasil Sensus penduduk Indonesia, 2000* (Census of Population); *Statistical Yearbook of Indonesia; Indonesia: Selected Issues* (IMF Staff Country Report [2007]).

Iran. Central Bank *Annual Review; National Census of Population and Housing, October 2006; Iran Statistical Yearbook; Islamic Republic of Iran: Statistical Appendix* (IMF Staff Country Report [2007]).

Iraq. *Census of Population Oct. 1997; Central Bank of Iraq Annual Bulletin; Statistical Bulletin 2003* (special issue).

Ireland. *Census of Population of Ireland, 2006; National Income and Expenditure* (annual); *Statistical Yearbook of Ireland.*

Isle of Man. *Annual Report and Statistical Review; Census Report 2001; Isle of Man Digest of Economic and Social Statistics* (annual).

Israel. *Israel in Figures* (annual); *Monthly Bulletin of Statistics; 1995 Census of Population and Housing; Statistical Abstract* (annual).

Italy. *Italy in Figures* (annual); *Italian Statistical Yearbook; Monthly Statistical Bulletin; Statistica agrarie; Statistiche demografiche* (4 parts); *Statistiche dell'istruzione; 14° Censimento generale della popolazione e delle Abitazioni 21 Ottobre 2001.*

Jamaica. Bank *Annual Report; Economic and Social Survey* (annual); *Statistical Abstract* (annual); *Statistical Digest* (monthly); *Statistical Yearbook of Jamaica; Population Census 2001; Jamaica: Selected Issues* (IMF Staff Country Report [2006]).

Japan. *Japan in Figures* (annual); *Japan Statistical Yearbook; Statistical Indicators on Social Life* (annual); *2005 Population Census of Japan.*

Jersey. *Report of the Census for 2001; Statistical Review* (annual); *Jersey in Figures* (annual).

Jordan. *Population and Housing Census 2004;* Central Bank *Annual Report; Statistical Yearbook; Jordan in Figures* (annual).

Kazakhstan. *Statistical Yearbook of Kazakhstan; 1999 Population Census.*

Kenya. *Kenya: Facts and Figures* (annual); *Economic Survey* (annual); *Population Census 1999;* Central Bank *Statistical Bulletin; Statistical Abstract* (annual).

Kiribati. *Annual Abstract of Statistics; Kiribati Population Census 2005.*

Korea, North. *Population Census 1993; North Korea: A Country Study* (1994); *The Population of North Korea* (1990); *Economic and Social Status of South and North Korea* (annual).

Korea, South. *Korea Statistical Yearbook; Social Indicators in Korea* (annual); *2000 Population and Housing Census.*

Kosovo. Central Bank *Monthly Statistics Bulletin; Agricultural Household Survey; Kosovo in Figures.*

Kuwait. Central Bank *Quarterly Statistical Bulletin; Annual Statistical Abstract; General Census of Population and Housing and Buildings 1995; Kuwait: Statistical Appendix* (IMF Staff Country Report [2006]).

Kyrgyzstan. *Kyrgyz Republic: Statistical Appendix* (IMF Staff Country Report [2005]); *Statistichesky Yezhegodnik Kyrgyzstana* (Statistical Yearbook of Kyrgyzstan); *Population Census 1999;* National Bank of the Kyrgyz Republic *Monthly Bulletin.*

Laos. *Lao People's Democratic Republic: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]); *Statistics Yearbook 1975–2005; 2005 Population Census.*

Latvia. *Statistical Yearbook of Latvia; Latvijas Republikas 2000 Iedzivotāju Skaits* (2000 Census of Population of the Republic of Latvia).

Lebanon. Central Bank *Annual Report; Statistical Year Book 2000–2005; Lebanon: Selected Issues* (IMF Staff Country Report [2006]).

Lesotho. *Kingdom of Lesotho: Statistical Appendix* (IMF Staff Country Report [2006]); *Statistical Yearbook; 2006 Population Census;* Central Bank *Annual Report.*

Liberia. Central Bank *Annual Report; Financial Statistical Report; Economic Survey* (annual);

Liberia: Statistical Appendix (IMF Staff Country Report [2006]).

Libya. *Libya Population Census, 2006; Socialist People's Libyan Arab Jamahiriya: Statistical Appendix* (IMF Staff Country Report [2007]).

Liechtenstein. *Statistisches Jahrbuch* (annual); *Volkszählung, 2000* (Census of Population); *Liechtenstein in Figures* (annual).

Lithuania. Central Bank *Monthly Bulletin; Gyventojų ir Būstų Surašymu Skypūs 2001* (Population and Housing Census 2001); *Statistical Yearbook of Lithuania; Lithuania in Figures* (annual).

Luxembourg. *Chiffres-clés de Luxembourg* (annual); *Annuaire statistique* (annual); *Bulletin du STATEC* (monthly); *Recensement général de la population du 15 février 2001.*

Macau. *Yearbook of Statistics; Monthly Bulletin of Statistics; Macao in Figures* (annual); *XIV Recenseamento Geral da População, 2006.*

Macedonia. *Population Census 2002; Former Yugoslav Republic of Macedonia: Selected Issues* (IMF Staff Country Report [2006]); *Statistical Yearbook of the Republic of Macedonia;* National Bank *Annual Report.*

Madagascar. *Republic of Madagascar: Selected Issues* (IMF Staff Country Report [2007]); *Recensement général de la population et de l'habitat, août 1993; Situation économique.*

Malawi. *Malawi in Figures* (annual); *Statistical Yearbook; Financial and Economic Review; 1998 Population and Housing Census; Malawi Statistical Yearbook; Malawi Yearbook; Malawi: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2004]).

Malaysia. *Monthly Statistical Bulletin; Population and Housing Census of Malaysia 2000; Yearbook of Statistics; Malaysia: Statistical Appendix* (IMF Staff Country Report [2005]).

Maldives. *Population and Housing Census of Maldives 2006; Statistical Year Book of Maldives; Maldives at a Glance;* Maldives Monetary Authority *Annual Report.*

Mali. *Annuaire statistique du Mali* (annual); *Recensement general de la population et de l'habitat (du 1er au 9 mars 1998); Mali: Statistical Annex* (IMF Staff Country Report [2006]).

Malta. *Population and Housing Census 2005;* Central Bank *Quarterly Review; Annual Abstract of Statistics; Quarterly Digest of Statistics; Malta in Figures* (annual).

Marshall Islands. *Marshall Islands Statistical Yearbook; Report on the State of the Islands* (U.S. Department of the Interior [annual]); *Quarterly Bulletin of Statistics; Population and Housing Census 1999; Republic of Marshall Islands: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).

Martinique. *Martinique en Faits et Chiffres; Recensement de la population de 1999; Martinique; Tableaux economiques regionaux: Martinique* (biennial).

Mauritania. *Recensement général de la population et de l'habitat 2000; Annuaire Statistique* (annual); Central Bank *Annual Report; Islamic Republic of Mauritania: Statistical Appendix* (IMF Staff Country Report [2006]).

Mauritius. *Annual Digest of Statistics; 2000 Housing and Population Census of Mauritius; Mauritius in Figures* (annual); *Mauritius: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).

Mayotte. *Bulletin Trimestriel* (quarterly) and *Rapport Annuel* (Institut d'Emission, France; annual); *Recensement de la population de Mayotte: Juillet 2002.*

Mexico. *Anuario estadístico* (annual); *XII Censo general de población y vivienda, 2005; Anuario estadístico de los Estados Unidos Mexicanos* (annual).

Micronesia. *Federated States of Micronesia: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]); *FSM Statistical Yearbook* (annual); *Population Census 2000.*

Moldova. National Bank *Annual Report; Republic of Moldova: Statistical Appendix* (IMF Staff Country Report [2006]); *Republica Moldova in Cifre* (annual); *Population Census 2004.*

Monaco. *Recensement général de la population 2000; Monaco en chiffres* (annual).

Mongolia. *Mongolian Statistical Yearbook* (annual); *Mongolia: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]); *Monthly Bulletin of Statistics; 2000 Population and Housing Census of Mongolia.*

Montenegro. *Census of Population, Households, and Dwellings 2003; Statistical Yearbook; Montenegro in Figures;* Central Bank *Quarterly Report;* Chief Economist *Annual Report.*

Morocco. *Annuaire statistique du Maroc* (annual); *Le Maroc en Chiffres* (annual); Central Bank *Annual Report; Recensement général de la population et de l'habitat de 2004; Morocco in Figures* (annual).

Mozambique. *Statistical Yearbook; Republic of Mozambique: Selected Issues* (IMF Staff Country Report [2007]); *II Recenseamento Geral da População e habitação, 1997; Mozambique in Figures* (annual).

Myanmar (Burma). *Report to the Pyithu Hhuttaw on the Financial, Social, and Economic Conditions for 20*** (annual); *Statistical Abstract* (irreg.); *1983 Population Census.*

Namibia. *2001 Population and Housing Census;* Bank of Namibia *Quarterly Bulletin; Statistical/Economic Review* (annual); *Namibia in Figures* (annual); *Namibia: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).

Nauru. *Population Profile* (irreg.); *2002 Population and Housing Census.*

Nepal. *Economic Survey* (annual); *Statistical Yearbook of Nepal; National Population Census 2001; Nepal: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]); *Nepal Statistical Pocketbook* (annual).

Netherlands, The. *Statistical Yearbook of the Netherlands; Monthly Bulletin of Statistics.*

Netherlands Antilles. Central Bank *Quarterly Bulletin; Fourth Population and Housing Census Netherlands Antilles 2001; Statistical Yearbook of the Netherlands Antilles.*

New Caledonia. *Images de la population de la Nouvelle-Calédonie principaux resultats du recensement 2004; Tableaux bilan economique* (annual); *New Caledonia Facts and Figures* (annual).

New Zealand. *2006 New Zealand Census of Population and Dwellings; New Zealand Official Yearbook.*

Nicaragua. *VIII censo de población y IV vivienda 2005;* Banco Central de Nicaragua *Nicaragua en Cifras; Compendio Estadístico* (annual); *Nicaragua: Selected Issues* (IMF Staff Country Report [2006]).

Niger. *Annuaire statistique* (annual); *Niger: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]); *2ème Recensement général de la population 2001.*

Nigeria. *Annual Abstract of Statistics; Nigeria: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2005]); *National Population and Housing Census March 2006.*

Northern Mariana Islands. *CNMI Population Profile; Statistical Yearbook* (irregular); *Report on the State of the Islands* (U.S. Department of the Interior [annual]); *2000 Census of Population and Housing* (U.S.).

Norway. *Folke-og boligtelling 2001* (Population and Housing Census); *Industristatistikk* (annual); *Statistical Yearbook of Norway; Monthly Bulletin of Statistics.*

Oman. *General Census of Population, Housing, and Establishments* (2003); *Statistical Yearbook; Bank of Oman Annual Report.*

Pakistan. *Economic Survey* (annual); *Pakistan Statistical Yearbook; Population Census of Pakistan, 1998.*

Palau. *Statistical Yearbook; Census 2005; Republic of Palau: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).

Panama. *Indicadores económicos y sociales* (annual); *X censo nacional de poblacion y vivienda realizados el 14 de mayo del 2000; Panama en cifras* (annual); *Panama: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).

Papua New Guinea. Bank *Quarterly Economic Bulletin; Papua New Guinea: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]); *Summary of Statistics* (annual); *2000 National Population Census.*

Paraguay. *Informe Económico* (monthly); *Anuario estadístico del Paraguay* (annual); *Censo nacional de población y viviendas, 2002; Paraguay: Statistical Appendix* (IMF Staff Country Report [2003]).

Peru. *Perú en Cifras* (annual); *Censos nacionales; X de población; V de vivienda 2005; Compendio estadístico* (3 vol.; annual); *Informe estadístico* (annual); *Peru: Selected Issues* (IMF Staff Country Report [2006]).

Philippines. *The Philippines in Figures* (annual); *Philippine Statistical Yearbook; 2000 Census of Population and Housing.*

Poland. *Narodowy spis powszechny 2002* (National Population and Housing Census); *Statistical Bulletin* (monthly); *Statistical Yearbook of the Republic of Poland; Demographic Yearbook of Poland; Concise Statistical Yearbook.*

Portugal. *Anuário Estatístico* (annual); *XIV Recenseamento Geral da População; IV Recenseamento Geral da Habitação, 2001; Economic Bulletin* (quarterly).

Puerto Rico. *Puerto Rico in Figures* (annual); *Estadísticas socioeconomicas* (annual); *Informe económico al gobernador* (Economic Report to the Governor [annual]); *2000 Census of Population and Housing* (U.S.); Government Development Bank *Economic Indicators* (monthly).

Qatar. *Qatar in Figures* (annual); *Annual Statistical Abstract; Economic Survey of Qatar* (annual); *Qatar Year Book;* Central Bank *Annual Report; Population and Housing Census* 2004.

Réunion. *La Réunion en Bref; Recensement général de la population de 1999; Tableau Economique de la Réunion* (biennial).

Romania. *Romanian Statistical Yearbook; Census of Population and Housing March 27, 2002; Romania in Figures* (annual).

Russia. *Russia in Figures* (annual); *Current Statistical Survey* (quarterly); *Russia* (annual pocket statistical handbook); *2002 All-Russian Population Census;* Russian Federation: *Selected Issues* (IMF Staff Country Report [2007]).

Rwanda. *Bulletin de Statistique: Supplement Annuel* (annual); National Bank *Annual Report, Recensement général de la population et de l'habitat 2002; Rwanda: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2004]).

St. Kitts and Nevis. *Annual Digest of Statistics; St. Kitts and Nevis: Statistical Appendix* (IMF Staff Country Report [2007]); *2001 Population Census.*

St. Lucia. *Annual Statistical Digest; St. Lucia: Statistical Appendix* (IMF Staff Country Report [2006]); *2001 Population and Housing Census.*

St. Vincent and the Grenadines. *Digest of Statistics* (annual); *Population and Housing Census 2001; St. Vincent and the Grenadines: Statistical Appendix* (IMF Staff Country Report [2006]).

Samoa (Western Samoa). *Annual Statistical Abstract;* Central Bank *Quarterly Bulletin; Census of Population and Housing, 2006; Samoa: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]).

San Marino. *Bollettino di Statistica* (quarterly); *Relazione Economico Statistica* (annual); *Annuario Statistico Demografico* (irreg.); *San Marino: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2004]).

São Tomé and Príncipe. *1º Recenseamento Geral da População e da Habitação 2001; Democratic Republic of São Tomé and Príncipe: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]).

Saudi Arabia. *Saudi Arabian Monetary Agency: Annual Report; Saudi Arabia Population and Housing Census 2004*

Senegal. *Recensement de la population et de l'habitat 2002; Situation économique du Senegal* (annual); *Senegal: Selected Issues* (IMF Staff Country Report [2007]).

Serbia. National Bank *Statistical Bulletin* (monthly); *Census of Population, Households, and Housing 2002; Monthly Statistical Review;* National Bank *Annual Report; Statistical Pocket Book* (annual); *Statistical Yearbook; Republic of Serbia: Selected Issues* (IMF Staff Country Report [2006]).

Seychelles. *Statistical Abstract* (annual); Central Bank *Annual Report; Seychelles in Figures* (annual); *National Population and Housing Census 2002.*

Sierra Leone. *Sierra Leone: Statistical Appendix* (IMF Staff Country Report [2007]); Bank *Annual*

Report; Annual Statistical Digest; Population and Housing Census 2004.

Singapore. *Singapore in Figures* (annual); *Census of Population, 2000; Singapore Yearbook; Yearbook of Statistics Singapore; Economic Survey of Singapore* (annual); *Monthly Statistical Bulletin; Singapore: Selected Issues* (IMF Staff Country Report [2006]).

Slovakia. *Sčítanie Obyvatel'ov, Domov a Bov 2001* (Population and Housing Census 2001); *Statistical Yearbook of the Slovak Republic; Slovak Republic in Figures* (annual); *Slovak Republic: Selected Issues* (IMF Staff Country Report [2007]).

Slovenia. *Slovenija Popis 2002* (Slovenia Population Census 2002); *Slovenia in Figures* (annual); Bank *Annual Report; Statistical Yearbook of the Republic of Slovenia; Republic of Slovenia: Selected Issues* (IMF Staff Country Report [2007]).

Solomon Islands. *Solomon Islands 1999 Population Census;* Central Bank *Annual Report; Solomon Islands: Statistical Appendix* (IMF Staff Country Report [2007]).

Somalia. *Socio-Economic Survey 2002* (The World Bank Report No. 1, Somalia Watching Brief, 2003).

South Africa. Reserve Bank *Quarterly Report; The People of South Africa Population Census, 2001; Bulletin of Statistics* (quarterly); *Statistics in Brief; South Africa: Official Yearbook of the Republic of South Africa.*

Spain. *Spain in Figures* (annual); *Anuario estadístico* (annual); *Population and Housing Census 2001; Boletín mensual de estadística.*

Sri Lanka. *Census of Population and Housing, 2001; Sri Lanka Statistical Abstract* (irreg.); Central Bank *Annual Report; Statistical Pocketbook of the Democratic Socialist Republic of Sri Lanka* (annual); *Sri Lanka: Selected Issues* (IMF Staff Country Report [2006]).

Sudan, The. Central Bank *Annual Report; Fourth Population Census, 1993; Sudan Statistical Yearbook; Sudan in Figures* (annual); *Sudan: Statistical Appendix* (IMF Staff Country Report [2000]).

Suriname. *Population and Housing Census 2004; Statistisch Jaarboek van Suriname* (annual); *Surname: Statistical Appendix* (IMF Staff Country Report [2006]).

Swaziland. *Annual Statistical Bulletin; Report on the 1997 Swaziland Population Census;* Central Bank *Annual Report; The Kingdom of Swaziland: Statistical Appendix* (IMF Staff Country Report [2006]).

Sweden. *Folk-och bostadsräkningen, 2005* (Population and Housing Census); *Statistisk årsbok for Sverige* (Statistical Yearbook of Sweden).

Switzerland. *Switzerland in Figures* (annual); *Monthly Statistical Bulletin; Recensement fédéral de la population, 2000; Statistical Yearbook of Switzerland—Statistical Data in a Nutshell* (English); *Statistical Data on Switzerland* (annual).

Syria. *General Census of Housing and Inhabitants, 1994; Statistical Abstract* (annual); Central Bank *Quarterly Bulletin.*

Taiwan. *Statistical Abstract* (annual); *Statistical Yearbook of the Republic of China; Taiwan Statistical Data Book* (annual); *1990 Census of Population and Housing; Monthly Bulletin of Statistics.*

Tajikistan. *General Population Census of the Republic of Tajikistan 2000; Republic of Tajikistan: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2005]).

Tanzania. *Tanzania: Selected Issues and Statistical Annex* (IMF Staff Country Report [2004]); *Tanzania in Figures* (annual); *Tanzania Statistical Abstract* (irreg.); *2002 Population Census; Economic Bulletin* (quarterly).

Thailand. *Statistical Handbook of Thailand* (annual); *Statistical Yearbook; Population and Housing Census 2000; Thailand: Selected Issues* (IMF Staff Country Report [2007]).

Togo. *Annuaire statistique du Togo* (annual); *Recensement général de la population et de l'habitat 1993; Togo: Statistical Appendix* (IMF Staff Country Report [2007]).

Tonga. *Population Census, 2006; Tonga: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2007]).

Trinidad and Tobago. Central Bank *Annual Economic Survey; 2000 Population and Housing Census; Trinidad and Tobago: Statistical Appendix* (IMF Staff Country Report [2007]); *Annual Statistical Digest.*

Tunisia. Central Bank *Annual Report;* Central Bank *Financial Statistics Bulletin; Annuaire statistique de la Tunisie* (annual); *Recensement général de la population et des logements, 2004; Tunisia: Selected Issues* (IMF Staff Country Report [2007]).

Turkey. *2000 Genel Nüfus Sayımı* (2000 Census of Population); Central Bank *Quarterly Bulletin; Statistical Yearbook of Turkey.*

Turkmenistan. *1995 Population and Housing Census of the Republic of Turkmenistan; Turkmenistan v tsifrakh* (Turkmenistan in Figures [annual]).

Tuvalu. *Tuvalu Country Profile 2003; Annual Statistical Report; 2002 Population and Housing Census; Statistical Report 2005.*

Uganda. *2002 National Population and Housing Census; Uganda: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2005]); *Statistical Abstract* (annual).

Ukraine. National Bank *Annual Report; Perepys Naselennya 2001* (Population Census 2001); *Ukraine in Figures* (annual); *Statistical Yearbook of Ukraine.*

United Arab Emirates. *Statistical Yearbook* (Abu Dhabi); *Population, Housing, and Establishments Census 2005; United Arab Emirates: Statistical Appendix* (IMF Staff Country Report [2006]); Central Bank *Report* (annual); *UAE in Figures* (annual).

United Kingdom. *Annual Abstract of Statistics; Britain: An Official Handbook* (annual); *Census 2001; General Household Survey* series (annual); *Monthly Bulletin of Statistics.*

United States. *Agricultural Statistics* (annual); *Current Population Reports; Digest of Education Statistics* (annual); *Minerals Yearbook* (3 vol. in 6 parts); *Statistical Abstract* (annual); *U.S. Exports: SIC-Based Products* (annual); *U.S. Imports: SIC-Based Products* (annual); *Vital and Health Statistics* (series 1–20); *2000 Census of Population and Housing.*

Uruguay. *Uruguay en Cifras* (annual); Central Bank *Informe año; Anuario estadístico* (annual); *VIII Censo general de poblacion IV de hogares y VI de viviendas, 2004; Uruguay: Selected Issues* (IMF Staff Country Report [2006]).

Uzbekistan. *Republic of Uzbekistan: Recent Economic Developments* (IMF Staff Country Report [2000]); *Uzbekistan in Figures* (annual).

Vanuatu. *National Population Census 1999; Vanuatu Statistical Yearbook; Vanuatu: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2005]); Reserve Bank *Quarterly Economic Review.*

Venezuela. *Venezuela en Cifras* (annual); *Anuario estadístico* (annual); *Censo general de la población y vivienda 2001; Encuesta de hogares por muestreo* (annual); *Encuesta industrial* (annual); Central Bank *Informe económico* (annual).

Vietnam. *Statistical Year-book; Tong Dieu Tra Dan So Viet Nam—1999* (Vietnam Population Census—1999); *Vietnam: Statistical Appendix* (IMF Staff Country Report [2006]); *Population and AIDS Indicator Survey 2005.*

Virgin Islands of the United States. *Statistical Digest* (irregular); *2000 Census of Population and Housing* (U.S.); *U.S. Virgin Islands Economic Indicators* (annual); *U.S. Virgin Islands Economic Review and Industry Outlook.*

West Bank. *Population, Housing and Establishment Census—1997; Palestinian Statistical Abstract.*

Western Sahara. *Recensement général de la population et de l'habitat* (2004 [Morocco]).

Yemen. *Population of Yemen: 2004 Census; Republic of Yemen: Statistical Appendix* (IMF Staff Country Report [2005]); Central Bank *Annual Report.*

Zambia. *Zambia: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2006]); *2000 Census of Population, Housing, Agriculture.*

Zimbabwe. *Population Census 2002; Statistical Yearbook* (irreg.); *Zimbabwe: Selected Issues and Statistical Appendix* (IMF Staff Country Report [2005]).

Index

This index covers both *Britannica Book of the Year* (cumulative for 10 years) and *Britannica World Data*. Biographies and obituaries are cumulative for 5 years.

Entries of major article topics in the *Book of the Year* are cumulative for 10 years; an accompanying year in **dark type** gives the year the reference appears, and the accompanying page number in light type shows the page on which the reference appears. For example, "military affairs **09:**270; **08:**270; **07:**258; **06:**247; **05:**248; **04:**248; **03:**277; **02:**278; **01:**276; **00:**267" indicates that military affairs appeared every year from **2000** through **2009.** Other references that appear with a page number but without a year are references for the current yearbook.

Indented entries under a topic refer by page number to some other places in the yearbook text where the topic is discussed. Names of people covered in biographies and obituaries are usually followed by the abbreviation "(biog.)" or "(obit.)" with the year in **dark type** and a page number in light type, e.g., Obama, Barack, biographies **09:**96; **08:**95, or Richardson, Ian (obit.) **08:**151. In the rare case where a person has both a biography and an obituary, both words appear under the main entry and are alphabetized accordingly, e.g.:

Fossett, Steve
biography **06:**79
obituary **08:**127

References to illustrations are by page number and are preceded by the abbreviation *il.*

The index uses word-by-word alphabetization (treating a word as one or more characters separated by a space from the next word). Please note that "St." is treated as "Saint." "Mc" is alphabetized as "Mc" rather than "Mac."

A

Abbas, Abu, *or* Muhammad Abbas (obit.) **05:**98
Abbas, Mahmoud 416
Abbas, Youssouf Saleh 382
Abbé Pierre, *or* Henri-Antoine Grouès (obit.) **08:**113
Abbott, John: *see* Hunter, Evan
'Abd al-Rahman 'Arif: *see* 'Arif, 'Abd al-Rahman
Abdallahi, Sidi Mohamed Ould Cheikh 435
Abdel Shafi, Haidar (obit.) **08:**113
Abdullah, King, *or* Crown Prince Abdullah, *or* 'Abdullah ibn 'Abd al-'Aziz al Sa'ud
biography **06:**67
religion 299
Saudi Arabia 458, *il.*
Abdullah II
Iraq 414
Jordan 421
Abe, Shinzo
biography **07:**69
Japan 419
Abelson, Philip Hauge (obit.) **05:**98
Abhisit Vejjajiva 473, *il.*
Abidjan (C.I.) 388
Abkhazia (rep., Georgia)
Belarus 372
Georgia 401
military affairs 270
Russia 454
Abobora, Lucia: *see* Santos, Lucia de Jesus dos
Aboriginal, Australian (people): *see* Australian Aborigine
Aborigine, Australian (people): *see* Australian Aborigine
abortion
Mexico 437
Nicaragua 443
U.S. state governments 486
Uruguay 488, *il.*
Abrahamian, Ara 331
Abramovitz, Max (obit.) **05:**98
"Abschaffung der Arten, Die" (Dath) 261
Abstract Expressionism 210
ABT (Am. ballet co.): *see* American Ballet Theatre
Abu Dhabi (U.A.E.) 479
Abu-Ghazala, Abd al-Halim (obit.) **09:**113
Abu Ghraib prison (Iraq) 355
Abu Sayyaf 450
Abuja (Nig.) 444
AC Milan (It. football team) 316
Academy Award
Film Awards *table* 286
Accra (Ghana) 404
Accreditation Commission for Acupuncture and Oriental Medicine (Am. org.)
traditional Chinese medicine 186
Ackermann, Ronny 324
"Action/Abstraction: Pollock, de Kooning, and American Art" (art) 212
acupressure (Chin. med. technique)
traditional Chinese medicine 187
acupuncture and Oriental medicine, *or* AOM
traditional Chinese medicine 186
Adair, Red, *or* Paul Neal Adair (obit.) **05:**98
"Adam und Evelyn" (Schulze) 261
Adamec, Ladislav (obit.) **08:**113
Adamkus, Valdas 431
Adams, Don, *or* Donald James Yarmy (obit.) **06:**98
Adams, Eddie, *or* Edward Thomas Adams (obit.) **05:**98
Adams, Edie, *or* Elizabeth Edith Enke
obituary **09:**113
popular music 277
Adams, Gerry 416
Addis Ababa (Eth.) 397
Adeniran, Sade 260
Adichie, Chimamanda Ngozi (biog.) **08:**69
Adiga, Aravind 254
Adlington, Rebecca
Beijing 2008 Olympic Games 194
swimming 326
adolescence
gang violence 402
adoption
Congo, Republic of the 388
Guatemala 406
"Adoration" (motion picture) 285
"Adulthood" (motion picture) 285
Advanced Micro Devices, *or* AMD (Am. co.)
computer companies 220
advertising
computers and information systems 220
Affinati, Eraldo 264
Afghanistan **09:**363; **08:**363; **07:**357; **06:**359; **05:**359; **04:**358; **03:**390; **02:**384; **01:**387; **00:**378
archaeology 202
education 229
France 400
Germany 403
India 411
military affairs 270
Pakistan 447
U.S. election of 2008 179
U.S. military bases and Taliban control *map* **02:**384
United Kingdom 481
United Nations 354
United States 484
see also WORLD DATA
AFL (Austl. sports org.): *see* Australian rules football
Africa
anthropology 201
association football 316
China 385
diamond trade controversy (sidebar) **01:**390, *map*
education 229
health and disease 243
India 411
military affairs 270
motion pictures 289
popular music 276
struggle against AIDS (special report) **00:**450, *map*
United Nations 354
Africa Command (U.S. org.)
Liberia 430
Africa Cup of Nations (2008)
Ghana 404
African American
U.S. election of 2008 176
African Development Bank
Gabon 401
African literature
literature in English 260
African National Congress, *or* ANC (pol. party, S.Af.) 463
African Nations Cup (assoc. football) 316
African Party for the Independence of Guinea-Bissau and Cape Verde, *or* PAIGC (pol. party, C.Verde) 407
African Union, *or* AU
Comoros 387
Mauritania 435
multinational and regional organizations 358
Somalia 462
United Nations 354
African Union/United Nations Hybrid Operation in Darfur, *or* UNAMID
Sudan, The 466, 467
United Nations 354
African Union Mission in The Sudan, *or* AMIS
Darfur crisis 467
Afwerki, Isaias 397
"Agent Zigzag" (Macintyre) 255
Ager, Shana: *see* Alexander, Shana
Agnelli, Umberto (obit.) **05:**98
Agosto, Benjamin 323
agriculture **07:**164; **06:**144; **05:**144; **04:**146; **03:**146; **02:**152; **01:**146; **00:**128
ancient grains (sidebar) **06:**145
Cuba 390
genetically modified foods (special report) **01:**150
Laos 427
livestock and disease (special report) **02:**154
meteorology and climate 228
Samoa 457
seed banks (sidebar) **09:**235
United Nations 354
United States 484
see also livestock
Agriculture, U.S. Department of, *or* USDA
colony collapse disorder 249
Aguiar e Silva, Vítor Manuel de
Portuguese literature 266
Aguilar, Antonio, *or* Toni Aguilar, *or* Tony Aguilar, *or* Pascual Antonio Aguilar Barraza (obit.) **08:**113
Aguila, Gorky
Cuba 390
Ahern, Bertie, *or* Bartholemew Ahern 415
Ahmadinejad, Mahmoud
Bahrain 370
biography **06:**67
Iran 413
Turkey 476
Ahmed, Fakhruddin
Bangladesh 371
Ahmed, Iajuddin
Bangladesh 371
Ahn Hyun Soo (biog.) **07:**69
Ahtisaari, Martti
Nobel Prize 64, 399
AIA: *see* American Institute of Architects
AIDS (disease): *see* HIV/AIDS
AIG (Am. corp.): *see* American International Group, Inc.
Aiken, Joan Delano (obit.) **05:**98
Ainslie, Ben
sailing *il.* 323
air pollution
China 384
environment 236
Airbus (Eur. consortium)
business 215
aircraft
business 215
airline industry
Belgium 373
business 215
Italy 419
Palau 447
Vanuatu 489
airport
Civil Engineering Projects *table* 206
Akhund, Dadullah: *see* Dadullah, Mullah
Aki, Keiiti (obit.) **06:**98
Akihito (emp. of Japan) 419
Akilov, Akil 472
Akinola, Peter, *or* Peter Jasper Akinola (biog.) **08:**69
AKP (pol. party, Tur.): *see* Justice and Development Party
Akutagawa Prize, *or* Akutagawa Ryunosuke Sho, *or* Ryūnosuke Akutagawa Prize
Japanese literature 269
Literary Prizes *table* 257
AL (baseball): *see* American League
al-Aswānī, 'Alā', *or* Alaa Al Aswany (biog.) **06:**68
Alaska (state, U.S.)
Arctic Regions 362
U.S. state governments 485
ALBA (internat. org.): *see* Bolivarian Alternative for the Americas
Albania **09:**363; **08:**363; **07:**357; **06:**360; **05:**360; **04:**359; **03:**391; **02:**385; **01:**387; **00:**379
see also WORLD DATA

Albanian (people)
Kosovo 426, *map*, *il.*
Albarado, Lawrence
"Citizen Journalism: A News [R]evolution" (special report) **09:**180
Albee, Edward, *or* Edward Franklin Albee 283, *il.*
Albert, Eddie, *or* Edward Albert Heimberger (obit.) **06:**98
Albert II 372
Albert II, Prince, *or* Alhert-Alexandre-Louis-Pierre de Grimaldi (biog.) **06:**68
Monaco 438
Alckmin, Geraldo 376
Alcoa Inc. (Am. co.)
Brunei 377
business 217
Aleksey II, *or* Aleksei II, *or* Aleksy II, *or* Alexy II, *or* Aleksey Mikhailovich Ridiger, *or* Aleksey Mikhailovich Rudiger
obituary **09:**113
religion 299
Russia 453
Aleut (people)
Arctic Regions 362
Alexander, Lloyd (obit.) **08:**113
Alexander, Mary: *see* Yard, Molly
Alexander, Shana, *or* Shana Ager (obit.) **06:**98
Alexander, Steve
"Digital Consumer Electronics Boom" (special report) **07:**188
Alexis, Jacques-Édouard 408
Alexy II: *see* Aleksey II
Alfaguara Prize (lit. award)
Spanish literature 265
Algeria **09:**364; **08:**364; **07:**358; **06:**360; **05:**361; **04:**360; **03:**391; **02:**386; **01:**388; **00:**380
see also WORLD DATA
Algiers (Alg.) 364
"Alinghi" (yacht) 323
Alitalia (It. airline)
business 215
Italy 419
Alito, Samuel (biog.) **07:**70
Aliyev, Ilham 369
All Blacks (N.Z. rugby team) 318
All England Championships (badminton)
Sporting Record *tables* 332
"All My Sons" (play) 283
All People's Congress (pol. party, S.L.) 460
All Points West Music and Arts Festival (Am. festival) *il.* 276
All-Star Game (baseball) 307
Allawi, Ayad (biog.) **05:**67
Allen, Dave, *or* David Tynan O'Mahoney (obit.) **06:**98
Allen, Jay Presson, *or* Jacqueline Presson (obit.) **07:**107
Allen, Paula Gunn, *or* Paula Marie Francis (obit.) **09:**113
Allen, Phylicia Ayers: *see* Rashad, Phylicia
Allen, Ray 307, *il.* 308
Allen, Woody
classical music 274
motion pictures 284
Alliance for Chile (pol. org. Chile)
Chile 383
Alliance for the Future of Austria, *or* BZÖ (pol. party, Aus.)
Austria 369
Allyson, June, *or* Ella Geisman (obit.) **07:**107
Alonso, Alherto Julio Rayneri (obit.) **08:**114
Alonso, Fernando *il.* 461
Alonso, Xabi *il.* 315
ALP (pol. party, Austl.): *see* Australian Lahor Party
Alpine skiing **09:**324; **08:**325; **07:**319; **06:**320; **05:**320; **04:**316; **03:**349; **02:**344; **01:**342; **00:**340
Sporting Record *tables* 346
Alsop, Marin (biog.) **08:**70
Alston, Richard 280
Altenherger, Alida Maria Laura von: *see* Valli, Alida
alternative energy
Bahamas, The 370
Saint Kitts and Nevis 456
Altman, Robert (obit.) **07:**107
Altria Group, Inc. (Am. co.) 218
aluminum
Brunei 377
business 217
Alvin Ailey American Dance Theater (Am. dance co.) 278, *il.*
Alzheimer disease
botany 250
health and disease 245
sidebar **02:**225
Amadou, Hama 444
Amadou and Mariam (Malian mus. group)
biography **07:**70
popular music 276, *il.*
Amaral, Ana Luísa 266
Amazon Fund
wildlife conservation 238
Amazon rainforest (reg., S.Am.)
wildlife conservation 238
AMD (Am. co.): *see* Advanced Micro Devices
amendment (constitutional law)
Algeria 364
Amerada Hess, *or* Hess Corp. (Am. corp.) 456
America, Bank of (Am. bank)
financial crisis of 2008 171
"America, America" (Canin) 258
America Online, *or* AOL (Am. co.)
computer companies 221
American Ballet Theatre, *or* ABT (Am. ballet co.) 278
American Civil War (U.S. hist.)
archaeology 203
American Craft Museum (mus., N.Y., N.Y., U.S.): *see* Arts and Design, Museum of
American Dance Festival 278
American football: *see* football
"American Idol" (Am. television program) 277
American Indian: *see* Indian, American
American Institute of Architects, *or* AIA 204
American International Group, Inc., *or* AIG (Am. corp.)
financial crisis of 2008 172
American League, *or* AL (baseball)
baseball 306
Sporting Record *tables* 333
American literature **09:**258; **08:**255; **07:**238; **06:**224; **05:**224; **04:**224; **03:**246; **02:**244; **01:**244; **00:**232
American Presidential Election: *see* United States Presidential Election of 2008
American Samoa
dependent states 360
"American Teen" (motion picture)
documentary films 289
America's Cup
sailing 323
Sporting Record *tables* 345
Amir, Mohammad Ajmal
Mumbai attack *il.* 446
AMIS: *see* African Union Mission in The Sudan
Amman (Jor.) 421
Amnesty International (internat. org.)
Bahamas, The 370
education 230
"amore e d'odio, D' " (Citrulelli)
Italian literature 263
amphibian 253
Amsterdam (Neth.) 442
Amte, Baba, *or* Murlidhar Devidas Amte (obit.) **09:**114
amygdala (genet.) 251
"An suan" (Mai Jia) 269
Anaheim Ducks (Am. hockey team) 321
Anand, Mulk Raj (obit.) **05:**99
Anand, Vijay, *or* Goldie Anand (obit.) **05:**99
Ananiashvili, Nina 278
"Anatomy of Wings, The" (Foxlee)
literature in English 261
ANC (pol. party, S.Af.): *see* African National Congress
ancestral domain
Philippines 449
ancient grain
agriculture (sidebar) **06:**145
Andean Community (S.Am. org.)
multinational and regional organizations 358
Anderson, Carl, *or* Carlton Earl Anderson (obit.) **05:**99
Anderson, E. S., *or* Ephraim Saul Anderson (obit.) **07:**107
Anderson, Jack, *or* Jackson Northman Anderson (obit.) **06:**98
Anderson, Paul Thomas
Film Awards *table* 286
Anderson, William Robert (obit.) **08:**114
Andorra **09:**365; **08:**365; **07:**359; **06:**361; **05:**361; **04:**360; **03:**392; **02:**386; **01:**389; **00:**381
see also WORLD DATA
Andorra la Vella (And.) 365
Andrade, Eugénio de, *or* José Fontinhas (obit.) **06:**98
André, Bernard Joseph: *see* Geoffrion, Bernie
Andsnes, Leif Ove (biog.) **08:**70
Angeles, Victoria de los, *or* Victoria Gómez Cima (obit.) **06:**98
Angelini, Anacleto (obit.) **08:**114
Anglican Communion
religion 298, *tables* 302, 303
special report **09:**188
Angola **09:**365; **08:**365; **07:**359; **06:**361; **05:**361; **04:**361; **03:**392; **02:**386; **01:**389; **00:**381
see also WORLD DATA
Angula, Nahas 441
Anheuser-Busch InBev (Belg. co.)
Belgium 373
animals, cruelty to
Saint Kitts and Nevis 456
animation
animé (sidebar) **01:**298
computer-generated characters (sidebar) **04:**265
motion pictures 284
Anjouan (is., Com.) 360, 386
Ankara (Tur.) 475
Ansip, Andrus 397
Antananarivo (Mad.) 432
Antarctic Treaty Consultative Meeting, *or* ATCM 360
Antarctica **09:**360; **08:**360; **07:**354; **06:**356; **05:**356; **04:**355; **03:**387; **02:**381; **01:**384; **00:**375
disintegration of Larsen Ice Shelf *map* **03:**387
disintegration of Wilkins Ice Shelf *il.* 361
paleontology 253
Anthrasimias
anthropology 200
Anthropocene (geol.) 225
Anthropoidea
anthropology 200
anthropology **09:**200; **08:**202; **07:**167; **06:**147; **05:**147; **04:**149; **03:**150; **02:**158; **01:**152; **00:**133
Neanderthals (sidehar) **05:**149
Anti-Monopoly Law (2008, China)
China 385
Antigua and Barbuda **09:**366; **08:**366; **07:**360; **06:**362; **05:**362; **04:**361; **03:**393; **02:**387; **01:**391; **00:**382
see also WORLD DATA
antimatter
particle physics 291
antimissile defense system
Czech Republic 392
antique **03:**169; **02:**172; **01:**167; **00:**149
search for hidden treasures (sidebar) **02:**174
antiterrorism law
Egypt 395
Japan 419
antitrust law
computer companies 220
Antoinette Perry Award (Am. thea. award): *see* Tony Award
Antonioni, Michelangelo (obit.) **08:**114
Antunes, António Lobo
Portuguese literature 266
Anvers Island (isl., Antarc.) 360
anxiety disorder
genetics 251
AOL (Am. co.): *see* America Online
AOM: *see* acupuncture and Oriental medicine
Apatow, Judd (biog.) **08:**71
APEC (internat. org.): *see* Asia-Pacific Economic Cooperation
aphelion
astronomy *table* 294
Apia (Sam.) 457
Apis mellifera: *see* domestic honeybee
apparel industry: *see* clothing and footwear industry
Appel, Karel, *or* Christiaan Karel Appel (obit.) **07:**108
apple
seed banks (sidebar) **09:**235
Apple Computer, Inc. (Am. co.) 220
Appleby, R. Scott
"A Serious Fracture in the Anglican Church" (special report) **09:**188
"Roman Catholicism at a Crossroads" (special report) **06:**280
"Sunni-Shi'ite Division Within Islam, The" (special report) **08:**178
applied chemistry **09:**291; **08:**289; **07:**279; **06:**268; **05:**270; **04:**271; **03:**262
Aptidon, Hassan Gouled (obit.) **07:**108
AQIM (Alg. militant group): *see* Qaeda in the Islamic Maghreb, al-
Arab League 358
Arabic language 268
Arabic literature **09:**268; **08:**268; **07:**248; **06:**236; **05:**237; **04:**237; **03:**259; **02:**258; **01:**258; **00:**246
Arafat, Yasir, *or* Muhammad 'Abd ar-Ra'ūf al-Qudwah al-Husaynī (obit.) **05:**99
Arapasu, Toader: *see* Teoctist
Arbour, Louise (biog.) **05:**67
Arcand, Denys (biog.) **05:**67
Arcelor Mittal, *or* ArcelorMittal (Lux. co.) 217
Kazakhstan 423

archaeology **09:**201; **08:**203; **07:**168; **06:**148; **05:**148; **04:**150; **03:**152; **02:**160; **01:**154; **00:**135
Cyprus 391, *il.*
archery **03:**317; **02:**316; **01:**314; **00:**306
Sporting Record *tables* 332
architecture **09:**204; **08:**206; **07:**171; **06:**151; **05:**152; **04:**153; **03:**155; **02:**163; **01:**157; **00:**139
China 384
"Green Architecture: Building for the 21st Century" (special report) **08:**192
rebuilding the World Trade Center (sidebar) **04:**155
Arctic **09:**362; **08:**361; **07:**356; **06:**357; **05:**357; **04:**356; **03:**388; **02:**382; **01:**386; **00:**377
Arctic Monitoring and Assessment Program 362
Arctic Ocean 362
ARENA (pol. party, El Sal.): *see* National Republican Alliance
Arena Football League 317
Ares (spacecraft)
launch vehicles 297
Arfons, Arthur Eugene (obit.) **08:**115
Argentina **09:**366; **08:**366; **07:**360; **06:**362; **05:**362; **04:**362; **03:**393; **02:**388; **01:**391; **00:**382
association football 316
basketball 308
Latin American literature 265
motion pictures 288
stock markets *table* 218
see also WORLD DATA
Arias Sánchez, Oscar 388
'Arif, 'Abd al-Rahman (obit.) **08:**115
Arizin, Paul (obit.) **07:**108
Arizona (state, U.S.) 486
Arizona Diamondbacks (baseball team) 306
Arkansas (state, U.S.) 485
ArkivMusic (online co.) 274
Arman, *or* Armand Pierre Arman, *or* Armand Pierre Fernandez (obit.) **06:**99
Armenia **09:**367; **08:**366; **07:**361, **06:**363; **05:**364; **04:**362; **03:**395; **02:**388; **01:**392; **00:**383
Azerbaijan 370
Turkey 476
see also WORLD DATA
arms control **08:**270; **07:**258; **06:**247; **05:**248; **04:**248; **03:**277; **02:**281; **01:**276; **00:**267
military affairs 270
"Army, The" (art) 211, *il.*
Arnold, Eddy, *or* Richard Edward Arnold, *or* the Tennessee Plowboy
obituary **09:**114
popular music 277
Arnold, Sir Malcolm Henry (obit.) **07:**108
Arnulfista Party (pol. party, Pan.)
Panama 447
Arosemena Monroy, Carlos Julio (obit.) **05:**99
ARPANET
DARPA (sidebar) **09:**272
Arpino, Gerald, *or* Gerald Peter Arpino (obit.) **09:**114
"arquipélago da insónia, O" (Antunes) 266
Arroyo, Gloria Macapaga 449
Arshawsky, Arthur: *see* Shaw, Artie
art **09:**209; **08:**211; **07:**176; **06:**155; **05:**156; **04:**157; **03:**159; **02:**167; **01:**162; **00:**144
redefining art (special report) **03:**162
see also architecture
"Art and China's Revolution" (art) art exhibitions 212
Art Basel (art fair) 211
art collection **03:**159; **02:**167; **01:**162; **00:**144
art exhibition **09:**211; **08:**212; **07:**178; **06:**157; **05:**157; **04:**158; **03:**160; **02:**168; **01:**163; **00:**145
Art Institute of Chicago (museum, Chicago, Ill., U.S.) 212
"Arthur" (tropical depression) 373
Arthur, Owen 371
artificial satellite: *see* satellite
artiodactyl
paleontology 252
Arts and Design, Museum of, *or* American Craft Museum, *or* Museum of Contemporary Crafts, *or* MAD (mus., N.Y., N.Y., U.S.)
architecture 205
Artsakh (reg., Azerbaijan): *see* Nagorno-Karabakh
Arzumanyan, Alexander 367
Asada, Mao 322
Asashoryu 331
"Ascent of Money: A Financial History of the World, The" (Ferguson) 255
ASEAN *or* Southeast Asian Nations, Association of (internat. org.)
India 411
multinational and regional organizations 358
Asena, Duygu (obit.) **07:**108
Ashaiqir, Ibrahim al-: *see* Jaafari, Ibrahim al-
Ashdown, Paddy 375
Ashgabat (Turkmenistan) 476
"Ashita no niji" (Setouchi) 269
Ashour, Rami 325
Ashton, Baroness 480
Asia
association football 316
education 229
financial crisis of 2008 175
malaria 244
military affairs 270
motion pictures 289
Asia-Pacific Economic Cooperation, *or* APEC (internat. org.) 357
Asian corn borer moth, *or* Ostrinia furnacalis 248
Asian Development Bank (internat. org.)
Pakistan 447
Asmara (Eritrea) 397
Aso, Taro
biography **09:**69
Japan 419
"asombroso viaje de Pomponio Flato, El" (Mendoza) 264
Assad, Bashar al-
Iran 413
Syria 470
Turkey 476
assassination
Cambodia 378
East Timor 394
Syria 470
association football: *see* football
Astana (Kazakhstan) 422
"Astérix aux Jeux Olympiques" (motion picture) 285
Astley, Thea Beatrice May (obit.) **05:**99
Astor, Brooke Russell, *or* Roberta Brooke Russell (obit.) **08:**115
Astrid Lindgren Memorial Award for Literature
Literary Prizes *table* 256
astronomy **09:**294; **08:**292; **07:**282; **06:**273; **05:**272; **04:**273; **03:**264; **02:**264; **01:**263; **00:**252
astronomical events *table* 294
Pluto (sidebar) **07:**283
Asunción (Par.) 448
ATCM: *see* Antarctic Treaty Consultative Meeting
atheism
religion *tables* 302, 303
Athens (Gr.) 405, *il.*
Athey, Susan, *or* Susan Carleton Athey (biog.) **08:**71
athletics, *or* track and field **09:**328; **08:**329; **07:**323; **06:**325, **05:**325; **04:**320; **03:**354; **02:**348; **01:**347; **00:**345
Beijing 2008 Olympic Games 194
Sporting Record *tables* 349
Atkins, Dame Eileen 280
Atkinson, Theodore Frederick (obit.) **06:**99
Atlantic Ocean
dependent states 358
meteorology and climate 228
"Atlantis" (space shuttle)
space exploration *table* 296
ATM: *see* automated teller machine
"Atmospheric Disturbances" (Galchen) 260
atom chip
condensed-matter physics 293
atom laser
condensed-matter physics 293
ATV (spacecraft): *see* Autonomous Transfer Vehicle
AU (intergovernmental org., Af.): *see* African Union
AUC (Colom. org.): *see* United Self-Defense Forces of Colombia
auction **03:**167; **02:**171; **01:**166; **00:**148
art 209
Auerbach, Ellen (obit.) **05:**99
Auerbach, Red, *or* Arnold Jacob Auerbach (obit.) **07:**108
Aung San Suu Kyi 440
Auroo, Rosemarie Timotea: *see* Yuro, Timi
Australia **09:**368; **08:**367; **07:**361; **06:**363; **05:**364; **04:**363; **03:**395; **02:**389; **01:**392; **00:**384
education 230
elections (sidebar) **08:**368
environment 233
immigration backlash (special report) **03:**396
international relations
Christmas Island 360
East Timor 394
Nauru 441
Papua New Guinea 448
Solomon Islands 462
Tuvalu 477
Vanuatu 489
military affairs 270
motion pictures 285
sports
Beijing 2008 Olympic Games 194
cricket 311
swimming 326
stock markets *table* 218
see also WORLD DATA
"Australia" (motion picture) 285
Australian Aborigine (people)
Australia 368
education 230
Australian Fair Pay Commission
Australia 368
Australian Labor Party, *or* ALP (pol. party, Austl.) 368
Australian literature 261
Australian National Antarctic program
Antarctica 361
Australian Open (tennis)
Sporting Record *tables* 349
tennis 327
Australian rules football **09:**318; **08:**319; **07:**314; **06:**311; **05:**313; **04:**309; **03:**240; **02:**338; **01:**335; **00:**330
Sporting Record *tables* 342
Austria **09:**369; **08:**369; **07:**363; **06:**365; **05:**366; **04:**365; **03:**399; **02:**391, **01:**394; **00:**385
see also WORLD DATA
Austrian People's Party, *or* ÖVP (pol. party, Aus.) 369
autofiction 262
automated teller machine, *or* ATM
computer crime 222
automobile industry
business 214
classical music 274
financial crisis of 2008 173, 175
Germany 404
hybrid cars (sidebar) **05:**193
Internet access 219
Japan 421
United States 483
automobile racing **09:**304, **08:**302; **07:**294; **06:**293; **05:**291; **04:**290; **03:**317; **02:**316; **01:**314; **00:**307
driver safety (sidebar) **02:**318
Sporting Record *tables* 332
Autonomous Transfer Vehicle, *or* ATV
space exploration 297
Avedon, Richard
obituary **05:**100
photography 213
Aventis Prize (lit.): *see* Royal Society Prize for Science Books
avian flu, *or* avian influenza, *or* bird flu
"Bird Flu—The Next Human Pandemic?" (sidebar) **06:**490
health and disease 243, *il.*
Togo 474
United Nations 356
aviation, *or* flight
disasters 56
Honduras 409
see also airline industry
Ávila, Eliécer 390
Awakening Councils, *or* Sons of Iraq (U.S.-backed Sunni militia in Iraq) 414
Awami League (pol. party, Bangla.)
Bangladesh 371
"Away from Her" (motion picture)
Film Awards *table* 286
Axelrod, Julius (obit.) **05:**100
Axton, Estelle Stewart (obit.) **05:**100
Aytmatov, Chingiz, *or* Chingiz Torekulovich Aytmatov (obit.) **09:**114
Azcona, Rafael (obit.) **09:**115
Azerbaijan **09:**369; **08:**369; **07:**363; **06:**365; **05:**366; **04:**365; **03:**399; **02:**391; **01:**395; **00:**386
Armenia 367
see also WORLD DATA
Aziz, Mohamed Ould Abdel 435

B

B meson
particle physics 291
Ba Jin, *or* Li Yaotang (obit.) **06:**99
Bacar, Mohamed 360, 387
Bachelet, Michelle
biography **07:**70
Chile 382
Backus, John Warner (obit.) **08:**115
Bacon, Francis 209

Badawi, Datuk Seri Abdullah Ahmad
biography **05:**68
Brunei 377
Malaysia 433
badminton **06:**294; **05:**297; **04:**292; **03:**319; **02:**319; **01:**316; **00:**309
Sporting Record *tables* 332
Bae Yong Jun (biog.) **07:**71
Bagaxoko, Amadou 276, *il.*
Baghdad (Iraq) 414
Baghdasaryan, Artur 367
Baha'i faith
religion *tables* 302, 303
Bahamas, The **09:**370; **08:**370; **07:**364; **06:**366; **05:**367; **04:**366; **03:**400; **02:**392; **01:**396; **00:**386
see also WORLD DATA
Bahamas Oil Refining Co. (Venez. co.): *see* BORCO
Babcall, John N. (obit.) **06:**99
Bahrain **09:**370; **08:**370; **07:**364, **06:**366; **05:**367; **04:**366; **03:**400; **02:**392; **01:**396; **00:**386
see also WORLD DATA
Bahujan Samaj Party, *or* BSP (pol. party, India) 410
Bailey, Derek (obit.) **06:**99
Bailey, Jerry (biog.) **05:**68
Bainimarama, Voreqe, *or* Frank Bainimarama, *or* Josaia Voreqe Bainimarama
biography **08:**72
Fiji 398
Bakassi Peninsula (penin., Af.)
Cameroon 379
Baker, Etta Lucille Reid (obit.) **07:**108
Bakiyev, Kurmanbek, *or* Kurmanbek Salivevich Bakiyev
biography **06:**68
Kyrgyzstan 427
Bakker, Tammy Faye: *see* Messner, Tammy Faye
Baku (Azerbaijan) 369
"Balas de plata" (Mendoza) 265
Baldry, Long John, *or* John William Baldry (obit.) **06:**99
Bale, Christian, *or* Christian Charles Philip Bale
biography **09:**69
motion pictures 284, *il.*
Bali Road Map process (UN)
climate change 356
Balkenende, Jan Peter 442
Ballantyne, Sir Frederick
Saint Vincent and the Grenadines 456
Ballet of the Vienna State Opera (Aus. dance co.) 280
"Balloon Dog (Magenta)" (art)
art exhibitions 212, *il.*
Baltic Marine Environment Protection Commission, *or* HELCOM (Eur. org.)
environment 236
Bamako (Mali) 434
Ban Ki-moon
biography **07:**71
Chad 382
Gabon 401
Nepal 442
United Nations 354
banana
banana war (sidebar) **00:**176
Bancroft, Anne, *or* Anna Maria Louisa Italiano (obit.) **06:**100
Banda, Rupiah 491
Bandar Seri Begawan (Brun.) 377
banditry (theft): *see* brigandage
Bangkok (Thai.) 473
protest *vs.* 45, 51, 198
Bangladesh **09:**371; **08:**371; **07:**364; **06:**367; **05:**368; **04:**367; **03:**400; **02:**392; **01:**396; **00:**387
see also WORLD DATA
Bangladesh Nationalist Party, *or* BNP (pol. party, Bangladesh) 371
Bangui (Cent.Af.Rep.) 382
Banjul (Gam.) 401
bank, *or* banking **03:**199; **02:**201; **01:**199; **00:**186
Belgium 373
China 385
European Union 357
financial crisis of 2008 170
Grenada 406
Iceland 410
Ireland 416
Liechtenstein 430
Netherlands, The 442
Sweden 469
Switzerland 469
Tajikistan 472
Trinidad and Tobago 475
Ukraine 479
United Arab Emirates 479
United Kingdom 480
United States 482
see also derivative
bankruptcy 215, 419
Banks, Russell 258
Banks, Tyra (biog.) **06:**69
Banksy
art 209
biography **08:**72
Barbados **09:**371; **08:**371; **07:**365; **06:**367; **05:**368; **04:**367; **03:**401; **02:**393; **01:**397; **00:**387
see also WORLD DATA
Barbados Labour Party, *or* BLP (pol. party, Barb.) 371
Barbary macaque 358, *il.*
Barbera, Joseph Roland (obit.) **07:**108
Barclays PLC (Br. bank)
financial crisis of 2008 174
Bardem, Javier
biography **09:**70
Film Awards *table* 286
Barenboim, Daniel 273
Barfuss, Lukas 261
Barker, Ronnie, *or* Ronald William George Barker (obit.) **06:**100
Barnato Walker, Diana (obit.) **09:**115
Barnes, Clive (obit.) **09:**115
Barnes, Peter (obit.) **05:**100
Barnett, Etta Moten: *see* Moten, Etta
Barneys New York (Am. co.)
fashions 240
Baron Cohen, Sacha (biog.) **08:**73
Baronova, Irina (obit.) **09:**115
Barre, Raymond-Octave-Joseph (obit.) **08:**115
Barré-Sinoussi, Françoise
Nobel Prize 68, *il.*
Barrett, Syd, *or* Roger Keith Barrett (obit.) **07:**109
Barretto, Ray, *or* Raymond Barretto (obit.) **07:**109
Barrow, Dean
Belize 373
Barrow, John D., *or* John David Barrow (biog.) **07:**72
Barrymore, John Drew (obit.) **05:**100
Bartholomew I
religion 299, *il.*
Barton, Richard N. (biog.) **07:**72
Basayev, Shamil Salmanovich (obit.) **07:**109
baseball **09:**306; **08:**304; **07:**300; **06:**295; **05:**297; **04:**292; **03:**319; **02:**319; **01:**317; **00:**310
Sporting Record *tables* 333
World Baseball Classic (sidebar) **07:**301
Basescu, Traian
Romania 452
Bashir, Omar Hassan Ahmad al-
Arab League 358
biography **09:**70
human rights 355
Sudan, The 466, 467
basketball **09:**307; **08:**306; **07:**302; **06:**297; **05:**300; **04:**294, **03:**322; **02:**321; **01:**319; **00:**312
Sporting Record *tables* 333
Basra (Iraq) 414
Basri, Driss (obit.) **08:**116
Basseterre (St.Kitts) 456
bat
paleontology 252
Batata, *or* Paulino Salgado Valdez (obit.) **05:**100
Bates, Otha Ellas: *see* Diddley, Bo
battlefield medicine (special report) **08:**176
Baudrillard, Jean (obit.) **08:**116
Bauer, Lukas 324
Baugh, Cecil Archibald (obit.) **06:**100
Baugh, Sammy, *or* Samuel Adrian Baugh, *or* Slingin' Sammy 115
Bayar, Sanjaagiin 438
Bayreuth Festival (Ger. mus. festival) 273
BCS (football): *see* Bowl Championship Series
Bear Stearns (Am. co.)
financial crisis of 2008 171, 482
Beatrix (q. of Neth.) 442
"Beautiful Inside My Head Forever" (art) 209
Becher, Bernd (obit.) **08:**116
Beckett, Margaret, *or* Margaret Jackson (biog.) **07:**73
Beckwith, David C.
"U.S. Election of 2008, The" (special report) **09:**176
"U.S. Election of 2004, The" (special report) **05:**484
bedrock
geology and geochemistry 225, *il.*
beef
South Korean protests 425
beekeeping
colony collapse disorder (sidebar) **09:**249
Beene, Geoffrey (obit.) **05:**100
beer
Belgium 373
Begg-Smith, Dale 324
Behr, Edward Samuel (obit.) **08:**116
Beijing (China)
air pollution 236
China 383
Olympic Games
architecture 204
art 210
Beijing Capital International Airport (airport, Beijing, China) 204
Beijing 2008 Olympic Games, *or* Games of the XXIX Olympiad
air pollution 236
architecture 204
baseball 307
basketball 308
China 384
cycling 312
diving 326
gymnastics 320
Olympic torch *il.* 19
sailing 323
Singapore 460
Slovenia 462
special report **09:**194
swimming 325
tennis 328
Thailand 473
Togo 474
track and field 328
volleyball 330
weightlifting 331
wrestling 331
Beirut (Leb.) 428
Béjart, Maurice, *or* Maurice-Jean Berger
dance 279
obituary **08:**117
Bekele, Kenenisa 194, 329
Bel Geddes, Barbara (obit.) **06:**100
Belarus **09:**372; **08:**372; **07:**365; **06:**368; **05:**368; **04:**368; **03:**402; **02:**393; **01:**397; **00:**388
see also WORLD DATA
Belbin, Tanith 323
Belgium **09:**372; **08:**372; **07:**366; **06:**368; **05:**369; **04:**368; **03:**402; **02:**394; **01:**399; **00:**388
Antarctica 361
financial crisis of 2008 174
Luxembourg 431
motion pictures 285
see also WORLD DATA
Belgrade (Serbia) 459
Belize **09:**373; **08:**373; **07:**367; **06:**369; **05:**370; **04:**369; **03:**403; **02:**395; **01:**399; **00:**389
see also WORLD DATA
Belkhadem, Abdelaziz
Algeria 364
Bell, Carey, *or* Carey Bell Harrington (obit.) **08:**117
Bell, Joshua (biog.) **08:**73
Bell, Mary Hayley (obit.) **06:**100
Bellow, Saul, *or* Solomon Bellows (obit.) **06:**100
Belmont Stakes (Am. horse race)
Sporting Record *tables* 338
Thoroughbred racing 312
Belmopan (Belize) 373
"Beluga SkySails" (mil. ship)
military technology 271, *il.*
Bement, Arden (biog.) **05:**69
Bemer, Robert William (obit.) **05:**100
Ben-Aharon, Yitzhak, *or* Yitzhak Nussboim (obit.) **07:**109
Ben Ali, Zine al-Abidine 475
Benchley, Peter Bradford (obit.) **07:**109
Benedict XVI, *or* Joseph Alois Ratzinger, *or* Joseph Cardinal Ratzinger (pope)
biography **06:**69
religion 299, *il.* 300
Vatican City State 489, *il.*
"Benefits Supervisor Sleeping" (art) 209, *il.*
Benenson, Peter James Henry Solomon (obit.) **06:**100
Benin **09:**373; **08:**373; **07:**367; **06:**369; **05:**370; **04:**370; **03:**403; **02:**395; **01:**400; **00:**390
Burkina Faso 378
see also WORLD DATA
Benjamin, Andre (biog.) **05:**87
Bennett, Alan (biog.) **06:**70
Bennett-Coverly, Louise, *or* Miss Lou (obit.) **07:**109
Benson, Obie, *or* Renaldo Benson (obit.) **06:**101
Bentsen, Lloyd Millard, Jr. (obit.) **07:**110
Benveniste, Jacques (obit.) **05:**101
Berberian, Ara (obit.) **06:**101
Berdymukhammedov, Gurbanguly, *or* Gurbanguly Myliktulievich Berdymukhammedov
biography **08:**74
Turkmenistan 476
Berenstain, Stan, *or* Stanley Melvin Berenstain (obit.) **06:**101
Berg, Patty, *or* Patricia Jane Berg (obit.) **07:**110

Berger, Maurice-Jean: *see* Béjart, Maurice
Berger, Óscar, *or* Óscar Berger Perdomo 406
Bergman, Ingmar, *or* Ernst Ingmar Bergman (obit.) **08:**117
Bergström, Sune Karl (obit.) **05:**101
Bering Strait (str., Pac.O.) 203
Berisha, Sali 363
Berksbire Hathaway Inc. (Am. co.) business 218
Berlin (Ger.) 402
Berlin Biennial for Contemporary Art 211
Berlin International Film Festival Film Awards *table* 286
Berlin Marathon
Sporting Record *tables* 350
track and field 330
Berlusconi, Silvio
Italy 417
Libya 430, *il.*
Berman, Lazar Naumovich (obit.) **06:**101
Bermuda 359
Bermuda Race
Sporting Record *tables* 345
Bern (Switz.) 469
Bernal, Gael García (biog.) **08:**74
Bernanke, Ben, *or* Benjamin Shalom Bernanke
biography **06:**70
financial crisis of 2008 173
Bernhard, Prince, *or* Bernhard Leopold Frederik Everhard Julius Coert Karel Godfried Pieter, prince of The Netherlands, prince of Lippe-Biesterfeld (obit.) **05:**101
Bernier, Maxime 380
Bernstein, Elmer (obit.) **05:**101
Bernstein, Leonard 273
Berrocal, Fernando 388
Berry, Jan, *or* William Jan Berry (obit.) **05:**101
Berto, Andre 311
Berton, Pierre (obit.) **05:**102
Bertone, Tarcisio Cardinal 489
Bessmertnova, Natalya Igorvevna (obit.) **09:**116
Best, George (obit.) **06:**101
Best Buy (Am. co.) 221
beta-amyloid 250
Betancourt, Ingrid
biography **09:**71
hostage rescue 386, *il.*
Bethe, Hans Albrecht (obit.) **06:**101
Betulinskaya, Anna Yurvevna: *see* Marly, Anna
Bevel, the Rev. James Luther (obit.) **09:**116
Beyoncé, *or* Beyoncé Giselle Knowles (biog.) **05:**69
Bharatiya Janata Party, *or* BJP (pol. party, India) 410
BHP Billiton (Austrl. co.) 217
Suriname 468
Bhumibol Adulyadej
biography **07:**73
Thailand 473
Bhutan **09:**374; **08:**373; **07:**368; **06:**370; **05:**370; **04:**370; **03:**404; **02:**395; **01:**400; **00:**390
see also WORLD DATA
Bhutan Peace and Prosperity Party (pol. party, Bhut.) 374
Bhutto, Benazir (obit.) **08:**117
"Bibliotekar" (Yelizarov) 267
Bibliotheca Alexandrina (sidebar) **02:**233
Bidart, Frank 259
Biden, Joe, *or* Joseph Robinette Biden
biography **09:**71
U.S. election of 2008 178
"Bienvenue chez les Ch'tis" (motion picture): *see* "Welcome to the Sticks"
Big Book Prize
Literary Prizes *table* 257
"Big Brown" (racehorse) 312
Big Three (automobile indus.) 214
Bill and Melinda Gates Foundation (Am. org.)
education 231
food aid 183
billiards **06:**298; **05:**301; **04:**296; **03:**324; **02:**323; **01:**321; **00:**315
Sporting Record *tables* 334
Billings, John James (obit.) **08:**118
bimolecular nucleophilic substitution reaction 291
biochemistry **09:**291
biodiversity
Antarctica 361
biofuel
"Biofuels—The Next Great Source of Energy?" (special report) **08:**174
environment 236
skyrocketing food prices 182
Biological Diversity, Convention on wildlife conservation 238
biological warfare
weapons of mass destruction (sidebar) **04:**249
bipedalism
anthropology 200
bird
avian influenza (sidebar) **06:**490
bird flu: *see* avian flu
Bird's Nest (stadium, Beijing, China): *see* National Stadium
Birla, Krishna Kumar (obit.) **09:**116
birth rate, *or* fertility rate, *or* natality, *or* reproductive rate
Germany 403
"Birthday Party, The" (play) 282
Bishkek (Kyrgyzstan) 427
Bishop, Eric: *see* Foxx, Jamie
Bishop, Joey, *or* Joseph Abraham Gottlieb (obit.) **08:**118
Bissau (Guinea-Bissau) 407
Bissoondath, Neil 260, *il.*
Biva, Paul 379
Bjelke-Petersen, Sir Johannes (obit.) **06:**101
BJP (pol. party, India): *see* Bharativa Janata Party
"Black Balloon, The" (motion picture) 285
Black Tiger, the: *see* Zaki, Ahmed
"Blacks A Fake" (racehorse) 314
Blackwell, Mr., *or* Richard Sylvan Selzer (obit.) **09:**147
Blagojevich, Rod 487, *il.*
Blair, Tony, *or* Anthony Charles Lynton Blair
biography **06:**70
Ireland 416
"Tony Blair: A 10-Year Retrospective" (special report) **08:**198
United Kingdom 479
Blais, Marie-Claire 263
Blanco Party, *or* PN (pol. party, Urug.) 488
Blankers-Koen, Fanny, *or* Francina Elsje Koen
obituary **05:**102
Blantyre (Malawi) 433
Blige, Mary J. 277, *il.*
"Blindness" (motion picture) 288
Portuguese literature 266
Bloc Québécois, *or* BQ (pol. party, Can.) 379
Bloemfontein, *or* Mangaung (S.Af.)
South Africa 463
blog, *or* Web log
citizen journalism (special report) **09:**180
Internet 221
sidebar **03:**273
"Blonde Bombshell, The": *see* Hutton, Betty
"Bloomsbury Ballerina: Lydia Lopokova, Imperial Dancer and Mrs John Maynard Keynes, The" (Mackrell) 255
Blow, Isabella, *or* Isabella Delves Broughton (obit.) **08:**118
BLP (pol. party, Barb.): *see* Barbados Labour Party
Blu-ray DVD 224
Blue Planet Prize 237
BMW Welt (bldg., Munich, Ger.)
architecture 208, *il.*
BN (pol. party, Mal.): *see* National Front
BNP (pol. party, Bangladesh): *see* Bangladesh Nationalist Party
Bo Yibo, *or* Bo Shucun (obit.) **08:**118
bobsledding, *or* bobsleigh **09:**309; **08:**307; **07:**304; **06:**299; **05:**302; **04:**297; **03:**325; **02:**324, **01:**322; **00:**316
Sporting Record *tables* 334
Boc, Emil 452
Boca Juniors (Arg. football team) 316
"Body of Lies" (motion picture) 284
Boeing Co. (Am. co.) 215, *il.*
Bogotá (Colom.) 386
BOJ (bank, Japan): *see* Japan, Bank of
Bolin, Bert (obit.) **08:**118
Bolivarian Alternative for the Americas, *or* ALBA (internat. org.)
Dominica 393
Honduras 409, *il.*
Bolivia **09:**374; **08:**374; **07:**368; **06:**370; **05:**371; **04:**370; **03:**404; **02:**396; **01:**400; **00:**390
Bolivia 203, *il.*
Chile 383
see also WORLD DATA
Bolkiah Mu'izzaddin Waddaulah, Sir Haji Hassanal 377
Bollingen Prize
Literary Prizes *table* 256
Bollywood (sidebar) **00:**284
Bologna Process 232
Bolshoi Ballet (Russ. ballet co.) 280
Bolt, Usain
Beijing 2008 Olympic Games 194
biography **09:**72
track and field 328, *il.* 329
Bolton, John R., *or* John Robert Bolton (biog.) **06:**71
Bondi, Sir Hermann (obit.) **06:**101
Bondy, Egon, *or* Zbynek Fiser (obit.) **08:**118
"Bone China" (Tearne) 254
Bongo Ondimba, Omar, *or* Albert-Bernard Bongo 401
Boni, Thomas Yavi 373
Bonn, *or* Bonnburg (Ger.) 402
book **07:**256; **06:**245; **05:**246; **04:**244; **03:**275; **02:**276; **01:**274; **00:**264
manuals for "dummies" (sidebar) **00:**266
"Book of Murder, The," *or* "La muerte lenta de Luciana B" (Martinez) 265
book publishing: *see* publishing
Bookeen Cybook
new technology *il.* 224
Booker Prize: *see* Man Booker Prize
Boorstin, Daniel Joseph (obit.) **05:**102
Booth, Wayne Clayson (obit.) **06:**102
Borba, Emilinha (obit.) **06:**102
BORCO, *or* Bahamas Oil Refining Co. (Venez. co.) 370
borrowing (fin.): *see* credit
Boselager, Count Philipp von (obit.) **09:**116
Boskovski, Ljube 432
Bosnia and Herzegovina **09:**375; **08:**375; **07:**369; **06:**371; **05:**371; **04:**371; **03:**405; **02:**397; **01:**401; **00:**391
see also WORLD DATA
"Bosque quemado" (Brodsky) 265
Bossi, Umberto 418
Boston Celtics (basketball team) 307, *il.* 308
Boston Marathon
Sporting Record *tables* 350
Boston Red Sox (baseball team) 306
botany **09:**248; **08:**249; **07:**225; **06:**216; **05:**216; **04:**216; **03:**238; **02:**236; **01:**235; **00:**224
Botha, P. W., *or* Pieter Willem Botha (obit.) **07:**110
Botox (sidebar) **03:**224
Botswana **09:**375; **08:**375; **07:**369; **06:**372; **05:**372; **04:**371; **03:**405; **02:**397; **01:**401; **00:**392
see also WORLD DATA
Bott, Raoul (obit.) **06:**102
Bottom, Mary Ellen: *see* Solt, Mary Ellen
Bouasone Bouphavanh 427
Boukpeti, Benjamin 474, *il.* 473
Bourgeaud, Gilbert: *see* Denard, Bob
Bourne, Matthew 280
Bouteflika, Abdelaziz 364
Bouterse, Dési 468
"Boutès" (Quignard) 262
Bovespa: *see* São Paulo Stock Market
bovine spongiform encephalopathy, *or* BSE, *or* mad-cow disease
British agriculture (special report) **02:**154
South Korea 425
Bowl Championship Series, *or* BCS (football) 316
bowling **06:**300; **05:**303; **04:**298; **03:**326; **02:**325; **01:**322; **00:**316
Sporting Record *tables* 334
Bowman, Christopher
ice skating 323
obituary **09:**116
"Box: Dunkelkammergeschichten, Die" (Grass) 261
"boxeador polaco, El" (Halfon) 265
boxing **09:**310; **08:**308; **07:**305; **06:**301; **05:**304, **04:**299; **03:**327; **02:**326; **01:**323; **00:**317
"Alphabet Soup of Champions" (sidebar) **06:**302
corruption (sidebar) **01:**324
Sporting Record *tables* 334
"Boy in the Striped Pyjamas, The" (motion picture) 285
boycott
Azerbaijan 370
Boyd, Edward Francis (obit.) **08:**119
Boyer, Clete, *or* Cletis Leroy Boyer (obit.) **08:**119
Boyle, Danny 284
Boyle, Peter Lawrence (obit.) **07:**110
Bozizé, François 382
BP Plc, *or* British Petroleum PLC (Br. corp.) 217

BQ (pol. party, Can.): *see* Bloc Québecois
"Bra Gib": *see* Kente, Gibson
Bradford, Sam 317
Bradford and Bingley (bank, U.K.)
United Kingdom 480
Bradley, Ed (obit.) **07:**111
Bradshaw, Richard James (obit.) **08:**119
Brady, Tom, *or* Thomas Edward Patrick Brady, Jr. (biog.) **05:**69
Brahimi, Lakhdar (biog.) **05:**70
Braid, Alexandra: *see* Ripley, Alexandra
Brainin, Norbert (obit.) **06:**102
Branagh, Kenneth 281
Branco, Joaquim Rafael 457
Brando, Marlon (obit.) **05:**102
Branigan, Laura (obit.) **05:**103
Branson, Sir Richard
"WhiteKnightToo" *il.* 35
Brant, Henry Dreyfuss
classical music 275
obituary **09:**116
Brasília (Braz.) 376
Bratislava (Slovakia) 461
Brazil **09:**376; **08:**376; **07:**370; **06:**372; **05:**373; **04:**372; **03:**406; **02:**398; **01:**402; **00:**392
500th anniversary (sidebar) **01:**403
association football 316
Colombia 386
ferry disaster *il.* 57
Guatemala 406
motion pictures 288
stock markets *table* 218
Venezuela 490
volleyball 331
wildlife conservation 238
see also WORLD DATA
Brazilian literature **09:**266; **08:**266; **07:**246; **06:**233; **05:**234; **04:**234; **03:**256; **02:**254; **01:**254; **00:**242
Brazzaville (Congo, Rep.) 388
"Breakfast at Tiffany's" (Capote)
Japanese literature 269
"Breaking Dawn" (Meyer) *il.* 36
Breasley, Scobie, *or* Arthur Edward Breasley (obit.) **07:**111
breast cancer
health and disease 244
traditional Chinese medicine 187
"Breath" (Winton) 261
Brecht, George, *or* George MacDiarmid (obit.) **09:**117
Breeders' Cup World Thoroughbred Championship (horse racing) 313
Breuning, Olaf 211, *il.*
"breve y maravillosa vida de Óscar Wao, La" (Díaz): *see* "Brief Wondrous Life of Oscar Wao, The"
Brewer, Teresa (obit.) **08:**119
Brialy, Jean-Claude (obit.) **08:**119
bribery
China 385
Greece 405
Grenada 406
Indonesia 413
"Brideshead Revisited" (motion picture) 285
bridge
Civil Engineering Projects *table* 206
Bridgetown (Barb.) 371
"Brief Encounter" (thea.) 281
"Brief Wondrous Life of Oscar Wao, The," *or* "La breve y maravillosa vida de Óscar Wao" (Díaz)
American literature 259, *il.*
Latin American literature 265
brigandage, *or* banditry (theft)
Central African Republic 382
"Brillant Avenir, Un" (Cusset) 262
Brin, Sergey (biog.) **05:**70
Bristol Old Vic (Br. thea. co.) 280
Britain: *see* United Kingdom
British Academy of Film and Television Awards
Film Awards *table* 286
British Columbia (prov., Can.) 379
British Open (golf) 319
Sporting Record *tables* 342
British Petroleum PLC (Br. corp.): *see* BP Plc
Brizola, Leonel de Moura (obit.) **05:**103
Broca, Philippe de (obit.) **05:**103
Brock, Peter (obit.) **07:**111
Brodie, Ian 381
broken symmetry
Nobel Prize 67
Bromley, David Allan (obit.) **06:**102
Bromley, Kristan 309
Bronfman, Edward Maurice (obit.) **06:**102
Bronhill, June, *or* Gough, June (obit.) **06:**102
Brooks, Leon Eric "Kix" (biog.) **08:**74
Brooks & Dunn (biog.) **08:**74
Brooks-Randolph, Angie Elisabeth (obit.) **08:**120
Brott, Alexander (obit.) **06:**103
Broughton, Isabella Delves: *see* Blow, Isabella
Brovarnik, Herbert: *see* Brown, Herbert
Brown, Bill, *or* William Alfred Brown (obit.) **09:**117
Brown, Dan (biog.) **05:**71
Brown, Elizabeth Iona (obit.) **05:**103
Brown, Gatemouth, *or* Clarence Brown (obit.) **06:**103
Brown, Gordon
biography **08:**75
environment 233
European Union 357
Mumbai terrorist attack 193
United Kingdom 479, *il.* 480
Brown, Herbert, *or* Herbert Brovarnik (obit.) **05:**103
Brown, James (obit.) **07:**111
Brown, Nappy 277
Brown, Oscar Cicero, Jr. (obit.) **06:**103
Brown, Roosevelt (obit.) **05:**103
Brown, Ruth, *or* Miss Rhythm, *or* Ruth Weston (obit.) **07:**112
Brown, William Alfred: *see* Brown, Bill
Browne, Jackson 277
Browne, Roscoe Lee (obit.) **08:**120
Bruce, Robert Arthur (obit.) **05:**103
Bruckheimer, Jerry, *or* Jerome Bruckheimer (biog.) **06:**71
Brundtland, Gro Harlem 237
Brunei **09:**377; **08:**377; **07:**371; **06:**373; **05:**374; **04:**373; **03:**407; **02:**399; **01:**403; **00:**393
see also WORLD DATA
Brunell, Laura
"Feminism Reimagined: The Third Wave" (special report) **08:**196
Bruni-Sarkozy, Carla
fashions 241
France 399, *il.*
photography 213
Brussels (Belg.) 372
Brussels Airlines, *or* SABENA World Airlines (Belg. airline)
Belgium 373
Bryant, Kobe 308
Bryce, Quenton
Australia 368
BSE: *see* bovine spongiform encephalopathy
BSP (pol. party, India): *see* Bahujan Samaj Party
Bublé, Michael (biog.) **07:**74
Bucharest (Rom.) 452
Bucher, Lloyd Mark, *or* Pete Bucher (obit.) **05:**103
Buchheim, Lothar-Günther (obit.) **08:**120
Büchner Prize, *or* Georg-Büchner-Preis
Literary Prizes *table* 257
Buchwald, Art (obit.) **08:**120
Buckley, William Frank, Jr. (obit.) **09:**117
Buckovski, Vlado
Macedonia 432
Budapest (Hung.) 409
Buddhism
religion 298, *tables* 302, 303
"Budte kak deti" (Sharov)
Russian literature 267
Buena Vista Social Club 276
Buenos Aires (Arg.) 366
Buffalo Sabres (Am. hockey team) 321
Buffett, Warren Edward
financial crisis of 2008 171
building
Civil Engineering Projects *table* 206
Bujones, Fernando (obit.) **06:**103
Bujumbura (Buru.) 378
Bulgaria **09:**377; **08:**377; **07:**371; **06:**373; **05:**374; **04:**373; **03:**407; **02:**399; **01:**404; **00:**394
see also WORLD DATA
Bullock, Alan Louis Charles (obit.) **05:**104
Burarrawanga, George (Australian Aboriginal musician): *see* Rrurrambu, George
Burchfield, Robert William (obit.) **05:**104
Burity da Silva, Antonio *il.* 365
Burjanadze, Nino 401
Burkina Faso **09:**378; **08:**378; **07:**372; **06:**374; **05:**375; **04:**374; **03:**408; **02:**400; **01:**404; **00:**394
Benin 373
see also WORLD DATA
Burma: *see* Myanmar
Burnett, John S.
"Piracy on the High Seas" (special report) **06:**210
Burnett, Mark (biog.) **05:**71
Burns, Ken (biog.) **08:**75
Burns, Richard (obit.) **06:**103
Burnside, R. L., *or* Robert Lee Burnside (obit.) **06:**103
Burris, Henry 318
Burton, Tim
Film Awards *table* 286
Burundi **09:**378; **08:**378; **07:**372; **06:**374; **05:**375; **04:**374; **03:**408; **02:**400; **01:**405; **00:**394
see also WORLD DATA
Busch, Frederick Matthew (obit.) **07:**112
Bush, George W., *or* George Walker Bush
Australia 368
Bahrain 370
biography **05:**71
Burkina Faso 373
"Bush, Iraq, and the World" (special report) **04:**412
China 385
election of 2004 (special report) **05:**484
financial crisis of 2008 171
Ghana 404
Israel 417
Liberia 430
Lithuania 431
motion pictures 284
Pakistan 447
Pope Benedict's U.S. visit 489
Rwanda 455
Saudi Arabia 458
South Korea 425
Tanzania 472
U.S. election of 2008 177
United States 482, *il.* 484
Venezuela 490
Vietnam 491
Bush, Laura, *or* Laura Lane Welch (biog.) **06:**72
Bushmen (people) 376
business **09:**214; **08:**216; **07:**185; **06:**180; **05:**183; **04:**182; **03:**200; **02:**203; **01:**201; **00:**187
Butcher, Susan Howlet (obit.) **07:**112
Butler, Octavia Estelle (obit.) **07:**112
Butler, Richard Girnt (obit.) **05:**104
Buttle, Jeff 322
Buttons, Red, *or* Aaron Chwatt (obit.) **07:**112
Butzner, Jane: *see* Jacobs, Jane
Byatt, A. S., *or* Antonia Susan Byatt, *or* Antonia Susan Drabble
biography **05:**72
English literature 255
BYT (pol. party, Ukraine): *see* Yuliya Tymoshenko Bloc
BZÖ (pol. party, Aus.): *see* Alliance for the Future of Austria

C

Cabrera Infante, Guillermo
Latin American literature 265
obituary **06:**103
CACC (Chin. co.): *see* Commercial Aircraft Corp. of China
Caceres, Felipe 375
Cachao (obit.) **09:**117
Cadman, Chuck
Canada 380
"Cafés de la mémoire" (Thomas)
French literature 262
CAFTA-DR: *see* Central America–Dominican Republic Free Trade Agreement
"Cage aux folles, La" (mus. thea.)
theatre 282
Cahill, Joe, *or* Joseph Cahill (obit.) **05:**104
Cai Guo-Qiang
art 210, 211
biography **09:**72
Caine Prize for African Writing
Literary Prizes *table* 257
literature 261
Cairo (Egy.) 395
Calatrava, Santiago, *or* Santiago Calatrava Valls (biog.) **05:**72
Caldecott Medal
Literary Prizes *table* 257
Calder, Angus Lindsay (obit.) **09:**117
Calderón, Felipe, *or* Felipe de Jesús Calderón Hinojosa
biography **07:**74
Mexico 436
Caldwell, Sarah (obit.) **07:**113
calendar **09:**8; **08:**8; **06:**8; **05:**8
Calgary Stampeders (Can. football team) 317
California (state, U.S.) 485
environment 234
California Academy of Sciences, *or* CAS (inst., San Francisco, Calif., U.S.) 205, *il.*
California Greenhouse Gas Emissions Project 234

Callaghan of Cardiff, Leonard James Callaghan, Baron (obit.) **06:**104
Calvo Sotelo y Bustelo, Leopoldo (obit.) **09:**118
Calzaghe, Joe 310
Camara, Moussa Dadis 407
Camberg, Muriel Sarah: *see* Spark, Dame Muriel
Cambodia **09:**378; **08:**378; **07:**372; **06:**374; **05:**375; **04:**374; **03:**409; **02:**401; **01:**405; **00:**395
  popular music 276
  skyrocketing food prices 183
  Thailand 473
  see also WORLD DATA
Cambodian People's Party, *or* CPP (pol. party, Camb.) 378
Cameron, David, *or* David William Donald Cameron (biog.) **06:**72
Cameroon **09:**379; **08:**379; **07:**373; **06:**375; **05:**376; **04:**375; **03:**409; **02:**401; **01:**406; **00:**396
  see also WORLD DATA
Camilla, duchess of Cornwall, *or* Camilla Parker Bowles, *or* Camilla Rosemary Shand (biog.) **06:**73
Caminer, David, *or* David Treisman (obit.) **09:**118
Caminiti, Kenneth Gene (obit.) **05:**104
Camões Prize, *or* Premio Luis da Camões da Literatura
  Brazilian literature 266
  Literary Prizes *table* 257
Camorra (It. secret soc.) 418
Camp, Madeleine L'Engle: *see* L'Engle, Madeleine
Camp David, *or* Shangri-La (presidential retreat, Maryland, U.S.) 425
campaign, *or* political campaign (pol.)
  blogging 180, 222
Campaign 08: *see* United States Presidential Election of 2008
Campaign 2008: *see* United States Presidential Election of 2008
Campbell, John D. (biog.) **08:**76
Campbell, Sir Menzies (biog.) **07:**75
Campiello Prize (lit. award) 263
Canada **09:**379; **08:**379; **07:**374; **06:**375; **05:**376; **04:**376; **03:**409; **02:**401; **01:**406; **00:**397
  arts and entertainment
    dance 279
    motion pictures 285, *table* 287
    theatre 283
  education 230
  international relations
    Arctic Regions 362
    Cuba 390
    El Salvador 396
  "Nunavut: The Birth of a New Territory" (special report) **00:**398
  prescription drugs (sidebar) **04:**377
  sports
    curling 312
    ice hockey 322
    ice skating 322
    Thoroughbred racing 314
  stock markets *table* 218
  "The Vikings of 2000" (sidebar) **01:**409
  see also WORLD DATA
Canadian football **09:**317; **08:**319; **07:**313; **06:**311; **05:**313; **04:**309; **03:**339; **02:**337; **01:**335; **00:**328
Canadian literature (English) **09:**260; **08:**259; **07:**240; **06:**226; **05:**226; **04:**226; **03:**248; **02:**246; **01:**246; **00:**234
Canadian literature (French) **09:**263; **08:**263; **07:**243; **06:**231; **05:**231; **04:**231; **03:**252; **02:**251; **01:**251; **00:**239
canal
  Civil Engineering Projects *table* 207
Canberra (A.C.T., Austl.) 368
cancer 244
Cannavaro, Fabio (biog.) **07:**75
Cannes Film Festival
  Film Awards *table* 286
Cannon, Curt: *see* Hunter, Evan
Cantalupo, Jim, *or* James Richard Cantalupo (obit.) **05:**104
Cantwell, Christian 328
Capa, Cornell, *or* Kornel Friedmann (obit.) **09:**118
Capa, Robert
  photography 213
Capaldi, Jim, *or* Nicola James Capaldi (obit.) **06:**104
Cape Town (S.Af.) 463
Cape Verde **09:**381; **08:**381; **07:**375; **06:**377; **05:**378; **04:**378; **03:**412; **02:**404; **01:**410; **00:**401
  see also WORLD DATA
capital punishment: *see* death penalty
"cappello pieno di ciliege, Un" (Fallaci) 263
Cappuccilli, Piero (obit.) **06:**104
Captain Kangaroo: *see* Keeshan, Bob
Captain Kidd: *see* Kidd, William
Caracas (Venez.) 490
carbohydrate
  "Craze for Curbing Carbs, The" (sidebar) **05:**145
carbon (chem. element) 290, *il.*
carbon capture and storage
  environment 233
carbon dioxide
  environment 234
carbon trading: *see* emissions trading
Cardoso, Ruth, *or* Ruth Vilaça Corrêa Leite Cardoso (obit.) **09:**118
Carey, Mariah (biog.) **07:**76
Carey, Peter
  literature 261
Carey, Ron, *or* Ronald Robert Carey (obit.) **09:**118
Caribbean Community and Common Market, *or* Caricom
  Barbados 371
  Dominican Republic 394
  El Salvador 396
  Trinidad and Tobago 475
Caribbean Islands: *see* West Indies
Caribbean Series (baseball) 307
  Sporting Record *tables* 333
carjacking (crime)
  Portugal 451
Carl XVI Gustaf 469
Carleson, Lennart (biog.) **07:**76
Carlin, George, *or* George Dennis Patrick Carlin (obit.) **09:**118
Carlisle, Kitty, *or* Kitty Carlisle Hart, *or* Catherine Conn (obit.) **08:**120
Carneiro, Enéas Ferreira (obit.) **08:**121
Caroline, Princess
  Monaco 438
carom billiards **06:**298; **05:**301; **04:**296; **03:**324; **02:**323; **01:**321; **00:**315
Carrasquel, Chico, *or* Alfonso Carrasquel Colón (obit.) **06:**104
Carrell, Rudi, *or* Rudolf Wijbrand Kesselaar (obit.) **07:**113
Carrier, Robert, *or* Robert Carrier MacMahon (obit.) **07:**113
Carroll, Steven 261
Carson, Johnny, *or* John William Carson (obit.) **06:**104
Cartan, Henri, *or* Henri-Paul Cartan (obit.) **09:**119
Carter, Dwayne Michael, Jr.: *see* Lil Wayne
Carter, Elliott
  classical music 273
Carter, Janette (obit.) **07:**113
Carter, Jimmy **04:**6
Carter, John Charlton: *see* Heston, Charlton
Cartier Bresson, Henri (obit.) **05:**104
cartoon film: *see* animation
Carvalho, Apolônio Pinto de (obit.) **06:**105
CAS (inst., San Francisco, Calif., U.S.): *see* California Academy of Sciences
"casa de Dostoievsky, La" (Edwards) 265
Casas, Julio 390
Casavella, Francisco 264
Casey, Albert Vincent (obit.) **05:**105
casino
  U.S. state governments 487
cassava
  archaeology 203
Cassel, Jean-Pierre, *or* Jean-Pierre Crochon (obit.) **08:**121
Cassini, Oleg, *or* Oleg Cassini Loiewski (obit.) **07:**113
Cassini-Huygens (spacecraft) 294
  space exploration *il.* 296
Castries (St. Lucia, W.I.) 456
Castro Ruz, Fidel 390
Castro Ruz, Raúl
  biography **08:**76
  Cuba 390
"Casualty Figures: How Five Men Survived the First World War" (Barrett) 255
catalyst
  applied chemistry 291
Cattelan, Maurizio (biog.) **07:**77
caucus (pol.)
  U.S. election of 2008 177
Caulfield, Patrick Joseph (obit.) **06:**105
Cavaco Silva, Aníbal 451
Cave, Hugh Barnett (obit.) **05:**105
Cavic, Milorad 325, *il.* 326
Cayman Islands 359
Cavmmi, Dorival (obit.) **09:**119
Cavrol, Jean-Raphael-Marie-Noel (obit.) **06:**105
CCD (biol.): *see* colony collapse disorder
CCS (Chin. co.): *see* Chambishi Copper Smelter
CD: *see* compact disc
CDC (U.S.): *see* Centers for Disease Control and Prevention
CDU (pol. party, Ger.): *see* Christian Democratic Union
"Ce que le jour doit à la nuit" (Khadra) 262, 268
cellular telephone, *or* cell phone, *or* mobile phone
  Afghanistan 363
  computers and information systems 219
  Costa Rica 388
  Cuba 390
  text messaging (sidebar) **06:**165
  U.S. state governments 487
  wireless revolution (special report) **03:**178
Celvapan (drug) 243
censorship
  Cameroon 379
census
  U.S. Census of 2000 (special report) **02:**514, *maps* 515
Census of Marine Life (special report) **07:**226
Centers for Disease Control and Prevention, *or* CDC (U.S.)
  health and disease 243
Central African Republic **09:**382; **08:**382; **07:**376; **06:**377; **05:**379; **04:**378; **03:**412; **02:**404; **01:**410; **00:**401
  United Nations 354
  see also WORLD DATA
Central America–Dominican Republic Free Trade Agreement, *or* CAFTA-DR
  Costa Rica 388
  El Salvador 396
  Nicaragua 443
Central Asia
  military affairs 270
Central Committee (Chin. pol. body)
  China 384
Central Kalahari Game Reserve (park, Bots.)
  Botswana 376
Centre Party (pol. party, Est.)
  Estonia 397
Centre Party (pol. party, Fin.)
  Finland 399
centrifuge
  Iran's uranium enrichment 413
Cerberus Capital Management (Am. co.)
  automobile industry 214
Cerén (archae. site, El Sal.)
  archaeology 203
CERN, *or* European Organization for Nuclear Research (Eur. research laboratory)
  Large Hadron Collider 292
  particle physics 291
Cervantes Prize for Hispanic Literature, *or* Premio Cervantes
  Literary Prizes *table* 257
  Spanish literature 264
Cervarix
  health and disease 244
cervical cancer
  health and disease 244
Césaire, Aimé-Fernand-David (obit.) **09:**119
Cetinje (Montenegro)
  Montenegro 439
Ceyrekgil, Ayshe Leyla: *see* Gencer, Leyla
CFL (Can. sports org.): *see* Canadian football
Chabon, Michael
  American literature 259
Chacón, Carme
  Spain *il.* 465
Chad **09:**382; **08:**382; **07:**376; **06:**378; **05:**379; **04:**379; **03:**413; **02:**404; **01:**410; **00:**402
  Sudan, The 466
  see also WORLD DATA
Chagaev, Ruslan
  boxing 310
Chagos Archipelago
  dependent states 360
Chagos Refugee Group
  dependent states 360
  Mauritius 436
Chahine, Gabriel Youssef (obit.) **09:**119
Challie, Martin
  Nobel Prize 66, *il.*
Chalmers, Mario 308
Chamberlain, Owen (obit.) **07:**113
Chambishi Copper Smelter, *or* CCS (Chin. co.)
  Zambia 492
chameleon 247
Champ Car World Series (auto racing) 305

"Champagne" (Proulx) 263, *il.*
Chan, Margaret (biog.) **07:**77
Chandler, Otis (obit.) **07:**114
Chandravaan-1
space probes 297, 411
Chanel (Fr. co.)
art 209, *il.* 210
fashions 239, *il.* 241
Chang, Iris Shun-Ru (obit.) **05:**105
Chang Chi-fu: *see* Khun Sa
Chang Chun-hsiung 471
"Changeling" (motion picture) 284
Chaovarat Chanweerakul473
Charisse, Cyd, *or* Tula Ellice Finklea (obit.) **09:**120
Charles, Dame Mary Eugenia (obit.) **06:**105
Charles, Pierre (obit.) **05:**105
Charles, Ray, *or* "the Genius," *or* Ray Charles Robinson (obit.) **05:**105
Charles, William John (obit.) **05:**105
charter school (sidebar) **04:**188
Chase, Merrill Wallace (obit.) **05:**105
Chauhan, Jagjit Singh (obit.) **08:**121
Chavarri del Castillo, Zoila Augusta Emperatriz: *see* Sumac, Yma
Chávez, Hugo, *or* Hugo Rafael Chávez Frías
biography **06:**73
Chile 383
Colombia 386
Dominica 393
El Salvador 396
Latin American leaders (special report) **06:**488
Saint Vincent and the Grenadines 457
Venezuela 490
CHDI (internat. org.): *see* Clinton-Hunter Development Initiative
"Che" (motion picture) 284
cheating (special report) **03:**206
Chelsea Football Club (Br. football club) 315
Cheltenham Festival (horse racing) steeplechasing 314
chemical industry
business 217
environment 234
chemical reaction
applied chemistry 291
chemical weapon
"Defining Weapons of Mass Destruction" (sidebar) **04:**249
chemistry **09:**290; **08:**289; **07:**279; **06:**268; **05:**269; **04:**270; **03:**261; **02:**261; **01:**260; **00:**248
Chen Chunlin 213
Chen Liangyu 385
Chen Ruolin 327
Chen Shui-bian 471
Chen Yifei (obit.) **06:**105
Chendytes lawi (bird) 202
Chennai Super Kings (Indian cricket org.) 311
Chern, Shiing-shen (obit.) **05:**106
Chernobyl accident (U.S.S.R.) 237
Chertoff, Michael (biog.) **06:**73
Cheruiyot, Robert Kipkoech (biog.) **07:**78
Chesney, Kenny 277, *il.*
chess **06:**302; **05:**305; **04:**300; **03:**328; **02:**326; **01:**325; **00:**318
Sporting Record *tables* 336
"Chi bi" (motion picture): *see* "Red Cliff"
Chicago (Ill., U.S.)
jazz 275, *il.*
Chicago Black Hawks (Am. hockey team)
ice hockey 321
Chicago Cubs (Am. baseball team) 306
Chicago International Film Festival
Film Awards *table* 287
Chicago Marathon
Sporting Record *tables* 350
Chicago White Sox (baseball team) 306
child
education 229
health and disease 242
HIV 356
Lesotho 429
Madagascar 432
Nepalese military camps 442
obesity (sidebar) **06:**203
Philippines *il.* 450
U.S. state governments 487
see also childhood
Child, Julia Carolyn McWilliams, *or* Julia McWilliams (obit.) **05:**106
child labour
Uzbekistan 488
child marriage
Yemen 491, *il.*
childhood
obesity (sidebar) **06:**203
childhood obesity: *see* obesity
children: *see* child
Chile **09:**382; **08:**382; **07:**377; **06:**378; **05:**380; **04:**379; **03:**413; **02:**405; **01:**411; **00:**402
education *il.* 232
El Salvador 396
see also WORLD DATA
China **09:**383; **08:**383; **07:**377; **06:**379; **05:**380; **04:**380; **03:**414; **02:**406; **01:**412; **00:**403
art 209
business 215, *table* 218
earthquake *il.* 384
emergence as superpower (special report) **00:**406
environment 233
financial crisis of 2008 170, 175
food and drug safety 242
"Games of the XXIX Olympiad" (special report) **09:**194
diving 326
gymnastics 320
weightlifting 331, 194
geology 225
geophysics 226
international relations
Good Neighbour Policy (sidebar) **06:**381
Angola 366
Antarctica 360
Australia 368
Congo, Democratic Republic of the 387
Cuba 390
Gabon 401
Germany 403
Japan 421
Malawi 433
Mauritius 436
Myanmar 441
New Zealand 443
North Korea 421
Russia 455
South Korea 425
Taiwan 471
Venezuela 490
Vietnam 491
literature 268
motion pictures 289
"Perils of China's Explosive Growth, The" (special report) **08:**180
photography 213
religion 298
return of Macau (sidebar) **02:**374
skyrocketing food prices 182
space exploration 296
traditional Chinese medicine 186
train collision *il.* 60
see also WORLD DATA
China Appeal for Early Recovery Support (U.N) 355
China Investment Corp. (Chin. wealth fund) 385
China National Petroleum Corp., *or* CNPC (Chin. corp.) 444
Chinese boxing (martial art): *see* tai chi chuan
Chinese literature **09:**268; **08:**269; **07:**248; **06:**238; **05:**238; **04:**237; **03:**260; **02:**259; **01:**259; **00:**246
Chinese medicine (special report) **09:**186
Chinese torrent frog, *or* Odorrana tormota 248
Chipp, Don, *or* Donald Leslie Chipp (obit.) **07:**114
"Chiquita" (Orlando Rodríguez) 265
Chisholm, Shirley Anita St. Hill (obit.) **06:**105
Chisinau (Moldova) 438
Chodorov, Jerome (obit.) **05:**106
Choi Jin-sil 425
Choi Kyu Hah (obit.) **07:**114
cholera
Guinea-Bissau 407
health and disease 243
Zimbabwe 492, *il.* 244
cholesterol 245
Chopra, B. R., *or* Baldev Raj Chopra (obit.) **09:**120
Choummaly Sayasone 427
CHP (pol. party, Tur.): *see* Republican People's Party
Christian and Democratic Union–Czech People's Party, *or* KDU-CSL (pol. party, Czech Rep.) 391
Christian Democratic Party (pol. party, Belg.) 372
Christian Democratic Party, *or* Partido Demócrata Cristiano (pol. party, Chile) 383
Christian Democratic Union, *or* CDU (pol. party, Ger.) 402
Christianity
growth in non-Western countries (special report) **02:**306
Iraq 414
religion 298, *tables* 302, 303
Roman Catholic Church scandal (sidebar) **03:**304
Christie, Julie 241
Film Awards *table* 286
Christie's (auction house, London, U.K.) 209
Christmas Island 360
"Christmas Tale, A," *or* "Un Conte de Noël" (motion picture) 285
Christodoulos, *or* Christos Paraskevaidis
obituary **09:**120
religion 301
Christofias, Dimitris
biography **09:**73
Cyprus 391
Chrome 224
chronic kidney disease, *or* CKD 246
Chrysler LLC, *or* DaimlerChrysler AG (Am. co.)
business 214
financial crisis of 2008 175
Internet access 219
Chudinov, Igor 427
Chufu: *see* Khun Sa
Chung Se Yung, *or* Pony Chung (obit.) **06:**106
Church, Dorothea Towles (obit.) **07:**114
church and state
religion 300
Turkish education 232
Chwatt, Aaron: *see* Buttons, Red
Cielo, César 325
cigarette: *see* smoking; tobacco
Cima, Victoria Gómez: *see* Angeles, Victoria de los
Cinquin, Madeleine: *see* Sister Emmanuelle
CIS (internat. org.): *see* Commonwealth of Independent States
Citigroup (Am. co.)
financial crisis of 2008 172
citizen journalism, *or* participatory journalism (special report) **09:**180
Civic Democratic Party, *or* ODS (pol. party, Czech Rep.) 391
Civic Platform, *or* PO (pol. party, Pol.) 450
civil engineering **09:**204; **08:**206; **07:**171; **06:**151; **05:**152; **04:**153; **03:**155; **02:**163; **01:**157; **00:**139
civil rights, *or* civil liberties
security vs. civil liberties (special report) **03:**312
see also human rights
civil union: *see* same-sex union
civil war
Liberia 430
Sri Lanka 466
Uganda 477
CKD (disease): *see* chronic kidney disease
Claiborne, Liz, *or* Anne Elisabeth Jane Claiborne, *or* Elisabeth Claiborne Ortenberg (obit.) **08:**121
Clark, Helen 442
Clark, Janet H.
"Skyrocketing Food Prices: A Global Crisis" **09:**182
Clark, Kenneth Bancroft (obit.) **06:**106
Clarke, Sir Arthur Charles (obit.) **09:**120
Clarke, Charles 479
"Class, The," *or* "Entre les murs" (motion picture) 285
classical music **09:**273; **08:**272; **07:**262; **06:**250; **05:**253; **04:**252; **03:**283; **02:**282; **01:**281; **00:**272
conductors (sidebar) **04:**253
Claus, Hugo Maurice Julien
Belgium 373
obituary **09:**121
Claxton, William
photography 213
Clay, Bryan 328
Cleave, Chris
English literature 254
Clegg, Nick, *or* Nicholas Peter William Clegg (biog.) **09:**73
"Clemenceau" (ship) 236
Clements, Vassar (obit.) **06:**106
Cleveland Orchestra (Am. orchestra) 274
Clézio, Jean-Marie-Gustave, le: *see* Le Clézio, Jean-Marie-Gustave
climate **09:**227; **08:**229; **07:**200; **06:**169; **05:**170; **04:**171; **03:**183; **02:**186; **01:**184; **00:**168
climate change
Arctic Regions 362
Australia 368
botany 250
"Climate Change—The Global Effects" (special report) **08:**170
environment 234
European Union 399
geology 226
Japan 421
Kyoto Protocol (special report) **06:**194

meteorology and climate 227
multinational and regional organizations 358
United Nations 356
zoology 247
clinical trial
health and disease 245
Clinton, Bill
impeachment and trial (sidebar) **00:**513
U.S. election of 2008 177
Clinton, Hillary Rodham
North American Free Trade Agreement 381
U.S. election of 2008 (special report) **09:**177
Clinton-Hunter Development Initiative, *or* CHDI (internat. org.)
Rwanda 455
Clooney, George (biog.) **07:**78
clothing and footwear industry **04:**198; **03:**218; **02:**219; **01:**215; **00:**203
see also fashion
cloud computing 220
Clough, Brian Howard (obit.) **05:**106
Cluster Munitions, Convention on (internat. agreement) 270
Clutha, Janet Paterson Frame: *see* Frame, Janet Paterson
CNDP (Congolese rebel group): *see* National Congress for the Defense of the Congolese People
CNPC (Chin. corp.): *see* China National Petroleum Corp.
coal
fossil fuels (sidebar) **09:**216
Cobos, Julio 366
coca
Peru 449
cocaine
Bolivia 375
Guatemala 406, *il.*
Guinea-Bissau 407
Mali 434
Venezuela 490
Cochran, Johnnie L., Jr.
obituary **06:**106
"Cockroach" (Hage) 260
Coelho, Paulo 266, *il.*
Coen, Ethan
Film Awards *table* 286
Coen, Joel
Film Awards *table* 286
Coffin, the Rev. William Sloane, Jr. (obit.) **07:**114
Cohen, Elizabeth: *see* Comden, Betty
Cohen, Isidore (obit.) **06:**106
Cohen, Jacob: *see* Dangerfield, Rodney
Cohen, Paul Joseph (obit.) **08:**122
Cohen, Shear-Yashuv 300, *il.*
Colbert, Stephen (biog.) **07:**79
Coldplay (biog.) **06:**74
Coleman, Cy, *or* Seymour Kaufman (obit.) **05:**106
collagen
paleontology 252
collectible **03:**169; **02:**172; **01:**167; **00:**149
antiques and hidden treasures (sidebar) **02:**174
Collective Security Treaty Organization
Uzbekistan 488
college sports
basketball 308
football 316
Sporting Record *tables* 333
wrestling 331
Collier, Johnnie Lucille Ann: *see* Miller, Ann
Collins, Hunt: *see* Hunter, Evan
Colom, Álvaro, *or* Álvaro Colom Caballeros 406
Colombia **09:**386; **08:**385; **07:**380; **06:**382; **05:**383; **04:**382; **03:**416; **02:**408; **01:**415; **00:**408
Dominican Republic 394
Ecuador 394
military affairs 270
see also WORLD DATA
Colombo (Sri Lanka) 466
colony collapse disorder, *or* CCD (sidebar) **09:**249
Colorado Party (pol. party, Par.) 448
Colorado Party, *or* CP (pol. party, Urug.) 488
Colorado Plateau (plat., U.S.) 225
Coltrane, Alice, *or* Alice McLeod, *or* Turiya Sagittinanda (obit.) **08:**122
Columbia University (univ., N.Y.C., N.Y., U.S.) 232
Comcast Corp. (Am. corp.) 221
Comden, Betty, *or* Elizabeth Cohen (obit.) **07:**114
Comencini, Luigi (obit.) **08:**122
Commercial Aircraft Corp. of China, *or* CACC (Chin. co.) 217
Commonwealth, The, *or* Commonwealth of Nations (assoc. of states) **03:**382; **02:**376; **01:**378; **00:**370
Pakistan 447
Commonwealth of Independent States, *or* CIS (internat. org.)
Georgia 402
Commonwealth Writers' Prize, *or* CWP 260, *table* 256
communism
Cuba 390
Communist Party of China, *or* CPC (pol. party, China) 384
Communist Party of Nepal (Maoist) (pol. party, Nepal) 442
Communist Party of Sweden (pol. party, Swed.): *see* Left Party
Communists of the Republic of Moldova, Party of, *or* PCRM (pol. party, Moldova) 438
Community Reinvestment Act (1977, U.S.)
financial crisis of 2008 172
Comoros **09:**386; **08:**387; **07:**381; **06:**383; **05:**383; **04:**383; **03:**417; **02:**409; **01:**415; **00:**408
dependent states 360
see also WORLD DATA
compact disc, *or* CD 274
Compact of Free Association (Oceanic-U.S. relations)
Marshall Islands 435
Micronesia 437
Compaoré, Blaise 378
Compton, Sir John George Melvin (obit.) **08:**122
computer **09:**219; **08:**220; **07:**191; **06:**160; **05:**161; **04:**162; **03:**170; **02:**175; **01:**171; **00:**151
consumer electronics (special report) **07:**188
Cuba *il.* 390
genealogy on the Internet (sidebar) **04:**167
quantum physics 292
social networking (sidebar) **08:**225
text messaging (sidebar) **06:**165
computer animation: *see* animation
computer crime 222
computer game, *or* electronic game **09:**223; **08:**226; **07:**197; **06:**166; **05:**166; **04:**168
online gaming (sidebar) **07:**196
computer hacker: *see* hacker
computer security 222
Comte, Michael 213
Conakry (Guin.) 407
Concertación (pol. party, Chile) 382
"Concerto DSCH" (ballet) 278
condensed-matter physics 293
conductor
"Conductors Play Musical Chairs" (sidebar) **04:**253
condylarth
paleontology 253
Congo, Democratic Republic of the, *or* DRC **09:**387; **08:**387; **07:**381; **06:**384; **05:**384; **04:**384; **03:**418; **02:**410; **01:**415; **00:**409
military affairs 270
multinational and regional organizations 358
United Nations 354
wildlife conservation 237
see also WORLD DATA
Congo, Republic of the **09:**388; **08:**388; **07:**382; **06:**384; **05:**384; **04:**384; **03:**418; **02:**410; **01:**416; **00:**410
see also WORLD DATA
Congress of South African Trade Unions, *or* COSATU (S.Af. org.) 464
Congress of the People (pol. party, S.Af.) 463
Congress of the United States
computers and information systems 223
education 232
financial crisis of 2008 172
Libya 430
Mexico 437
United States 482
United States (sidebar) **07:**481
Congress Party (pol. party, India) 411
Conn, Catherine: *see* Carlisle, Kitty
Connecticut (state, U.S.) 485
Conner, Bruce (obit.) **09:**121
Conservative Party (pol. party, Den.) 392
Conservative Party, *or* National Union of Conservative and Unionist Associations, *or* Tories, *or* Tory Party (pol. party, U.K.) 479
Conservative Party of Canada, *or* CPC (pol. party, Can.) 379
consolidation (bus.) 217
constitution
Algeria 364
Bhutan 374
Bolivia 374
Cameroon 379
Colombia 386
Ecuador 394
"European Union's Proposed Constitution, The" (sidebar) **06:**353
France 400
Maldives 434
Myanmar 440
Nauru 441
Romania 452
Russia 453
Turkmenistan *il.* 477
U.S. state governments 485
Venezuela 490
Constitution of Europe: *see* European Constitution
Constitutional Court (Ger. govt.) 403
Constitutionalist Liberal Party, *or* PLC (pol. party, Nic.) 443
construction
Gulf Cooperation Council (sidebar) **08:**477
Ireland 415
Spain 465
see also civil engineering
consumer electronics
Cuba 390
"Digital Consumer Electronics Boom" (special report) **07:**188
consumer price index, *or* CPI
Belize 373
China 385
Jordan 422
skyrocketing food prices 182
Taiwan 471
Turkey 476
United States 483
"Contact: George Rodger's War Photographs" (phot. exhibit) 213
Contador, Alberto 312
Conté, Lansana
Guinea 407
obituary **09:**121
"Conte de Noël, Un" (motion picture): *see* "Christmas Tale, A"
Contemporary Art, Museum of, *or* MCA (museum, Chicago, Ill., U.S.) 212
Contemporary Crafts, Museum of (mus., N.Y., N.Y., U.S.): *see* Arts and Design, Museum of
contract bridge **03:**329; **02:**328, **01:**325; **00:**319
"Conversion, The" (Olshan) 258
Cook, Alicia Augello: *see* Keys, Alicia
Cook, Beryl, *or* Beryl Frances Lansley (obit.) **09:**121
Cook, Robin, *or* Robert Finlayson Cook (obit.) **06:**106
Cook Islands 360
cookbook 255
Cooke, Alistair, *or* Alfred Alistair Cooke (obit.) **05:**106
Coombs, Robin, *or* Robert Royston Amos Coombs (obit.) **07:**115
Cooper, Gordon, Jr., *or* Leroy Gordon Cooper, Jr. (obit.) **05:**107
Copenhagen (Den.) 392
copper
business 217
Chile 383
Zambia 492
Copper, Bob, *or* Robert James Copper (obit.) **05:**107
"Copper Thunderbird": *see* Mortisseau, Norval
copyright
computers and information systems 220
"Coral: A Pessimist in Paradise" (Jones) 255
"Corduroy Mansion" (McCall Smith) 255
Corella, Angel 279
corn, *or* maize
Lesotho 429
Malawi 433
skyrocketing food prices 182
Cornell, Don, *or* Luigi Francisco Varlaro (obit.) **05:**107
Cornell University (univ., Ithaca, N.Y., U.S.) 232
Cornioley, Pearl, *or* Cecile Pearl Witherington (obit.) **09:**121
Correa Delgado, Rafael, *or* Rafael Correa
biography **09:**74
Colombia 386
Ecuador 394, *il.*
Correia, Carlos 407
corruption
Armenia 367
Bangladesh 371
Bosnia and Herzegovina 375
Bulgaria 377

Chad 382
China 385
Colombia 386
Croatia 389, *il.*
Czech Republic 392
Dominican Republic 394
Egypt 395
Fiji 398
Guatemala 406
Guyana 407
Indonesia 412
Kenya 423
Kyrgyzstan 427
Macedonia 432
Malaysia 433
Mali 434
Nigeria 444
Qatar 452
Romania 452
Russia 453
São Tomé and Príncipe 457
Serbia 459
Sierra Leone 460
South Africa 463
Switzerland 470
Tanzania 472
Thailand 473
Vietnam 491
Corruption Eradication Commission, *or* KPK (Indon. com.) 412
Cort, Errol 366
COSATU (S.Af. org.): *see* Congress of South African Trade Unions
cosmology 295
Costa Book of the Year Award, *or* Whitbread Book of the Year Award
English literature 255
Literary Prizes *table* 256
Costa Rica **09:**388; **08:**388; **07:**382; **06:**385; **05:**385; **04:**385; **03:**419; **02:**411; **01:**417; **00:**411
see also WORLD DATA
costume jewelry 240
Côte d'Ivoire **09:**388; **08:**388; **07:**383; **06:**385; **05:**385; **04:**385; **03:**419; **02:**411; **01:**417; **00:**411
Burkina Faso 378
see also WORLD DATA
Cotillard, Marion
biography **09:**74
Film Awards *table* 286
Cotonou (Benin)373
Cotto, Miguel 311
cotton
Benin 373
Couchepin, Pascal 469
Coucouzis, Demetrios: *see* Iakovos
Coughlin, Natalie
Beijing 2008 Olympic Games 194
swimming 326
Couillard, Julie 380
Coulter, Ann, *or* Ann Hart Coulter (biog.) **06:**74
Council of Europe: *see* Europe, Council of
Counsilman, Doc, *or* James Edward Counsilman (obit.) **05:**107
"Count of Concord, The" (Delbanco) 258
country music
music developments (sidebar) **01:**286
popular music 277
Countrywide Financial Corp. (Am. corp.)
financial crisis of 2008 171
coup
Comoros 387
Guinea 407
Mauritania 435
Courage, Alexander 275
Court, Hazel (obit.) **09:**121
court decision **07:**219; **06:**206; **05:**208; **04:**208; **03:**226; **02:**227; **01:**225; **00:**213
Courtin-Clarins, Jacques, *or* Jacques Courtin (obit.) **08:**122
Coventry, Kirsty
swimming 326
Cowell, Simon, *or* Simon Phillip Cowell (biog.) **07:**79
Cowen, Brian
biography **09:**74
Ireland 415
Cowry Forces for an Emerging Benin (pol. party, Benin) 373
Cox, Archibald (obit.) **05:**107
CP (pol. party, Urug.): *see* Colorado Party
CPC (pol. party, Can.): *see* Conservative Party of Canada
CPC (pol. party, China): *see* Communist Party of China
CPI (econ.): *see* consumer price index
CPMF (Braz. tax): *see* Provisional Contribution on Financial Transactions
CPP (pol. party, Camb.): *see* Cambodian People's Party
Craig, Daniel
motion pictures 284
Craig, Molly: *see* Kelly, Molly
Crane, Eva, *or* Ethel Eva Widdowson (obit.) **08:**122
Crawford, Martha Sharp: *see* von Bulow, Sunny
credit, *or* borrowing, *or* lending, *or* loan, *or* money lending (fin.)
financial crisis of 2008 170, 173, 421
credit default swap (fin.)
financial crisis of 2008 171
Credit Suisse Group (Swiss bank)
financial crisis of 2008 174
Switzerland 470
Creeley, Robert White (obit.) **06:**106
Cresswell, Helen (obit.) **06:**106
Crichton, Michael, *or* John Michael Crichton (obit.) **09:**122
Crick, Francis Harry Compton (obit.) **05:**107
cricket **09:**311; **08:**310; **07:**306; **06:**303; **05:**305; **04:**300; **03:**329; **02:**328; **01:**326; **00:**320
2003 World Cup (sidebar) **04:**301
2007 World Cup (sidebar) **08:**311
Sporting Record *tables* 336
crime **06:**208; **05:**209; **04:**209; **03:**228; **02:**229; **01:**226; **00:**214
Benin 373
Guatemala 406
Italy 418
Uruguay 488
see also organized crime
critical temperature
solid-state chemistry 290
Croatia **09:**389; **08:**389; **07:**383; **06:**386; **05:**386; **04:**386; **03:**420; **02:**412; **01:**418; **00:**411
European Union 357
see also WORLD DATA
Croatian Democratic Union, *or* HDZ (pol. party, Croatia) 389
Croatian Peasant Party, *or* HSS (pol. party, Croatia) 389
Crochon, Jean-Pierre: *see* Cassel, Jean-Pierre
Crosby, Sidney 321, *il.*
cross-country **09:**330; **08:**330; **07:**324; **06:**326; **05:**326; **04:**322; **03:**355; **02:**349; **01:**348; **00:**346
Sporting Record *tables* 351
Crossfield, Scott, *or* Albert Scott Crossfield (obit.) **07:**115
Crowe, William James, Jr. (obit.) **08:**123
crude oil
business 217
fossil fuels (sidebar) **09:**216
cruelty to animals: *see* animals, cruelty to
Crumley, James, *or* James Arthur Crumley (obit.) **09:**122
"Crusaders" (Kelly) 255
Cruse, Harold Wright (obit.) **06:**107
Crvenkovski, Branko 431
CSKA Sofia (Bulg. football team) 316
CSSD (pol. party, Czech Rep.): *see* Czech Social Democratic Party
Cuba **09:**390; **08:**390; **07:**384; **06:**387; **05:**386; **04:**387; **03:**420; **02:**413; **01:**419; **00:**411
association football 316
baseball 307
Jamaica 419
popular music 276
Saint Lucia 456
see also WORLD DATA
Cuche, Didier 324
Cullman, Joseph Frederick, III (obit.) **05:**108
Cullum, Jamie (biog.) **07:**80
cultural anthropology **03:**151; **02:**159; **01:**152; **00:**133
Cumhuriyet Halk Partisi (pol. party, Tur.): *see* Republican People's Party
Cummings, Constance, *or* Constance Halverstadt (obit.) **06:**107
Cummings, John: *see* Ramone, Johnny
Cunhal, Álvaro Barreirinhas (obit.) **06:**107
Cunningham, Agnes, *or* Sis Cunningham (obit.) **05:**108
Curien, Hubert (obit.) **06:**107
"Curious Case of Benjamin Button, The" (motion picture) 284
"Curlin" (racehorse) 313
curling **09:**312; **08:**312; **07:**307; **06:**304; **05:**306; **04:**302; **03:**330; **02:**329; **01:**327; **00:**321
Sporting Record *tables* 337
currency
dollar
Australian 368
euro 182
forint 409
hryvnya 479
krónur 410
ruble 373, 454
yen 421, *il.* 420
Curtis Cup (golf) 320, *il.* 319
customs duty: *see* tariff
Cutter, Susan L.
"Preparing for Emergencies" (special report) **06:**182
Cvetkovic, Mirko 459
CWP (lit.): *see* Commonwealth Writers' Prize
Cy Young Award (baseball) 306
cyberwarfare
computer security 222
cycling **09:**312; **08:**312; **07:**307; **06:**304; **05:**307; **04:**302; **03:**331; **02:**330; **01:**328; **00:**321
Sporting Record *tables* 338
Cyclone Ivan (storm, 2008) *il.* 432
Cyclone Nargis (storm, 2008)
Myanmar 440, *il.* 441
skyrocketing food prices 182
Cyprus **09:**391; **08:**391; **07:**385; **06:**387; **05:**388; **04:**387; **03:**421; **02:**414; **01:**419; **00:**411
see also WORLD DATA
Cyrus, Miley, *or* Destiny Hope Cyrus, *or* Miley Ray Cyrus (biog.) **09:**75
Czech Republic **09:**391; **08:**391; **07:**385; **06:**388; **05:**388; **04:**338; **03:**422; **02:**414; **01:**420; **00:**411
motion pictures 288
U.S. missile defense system 455
see also WORLD DATA
Czech Social Democratic Party, *or* CSSD (pol. party, Czech Rep.) 391
Czerwinski, Edward Joseph (obit.) **06:**107

D

"da minha rua, Os" (Ondjaki) 265
da Silva, José Bezerra (obit.) **06:**107
Dacres, Desmond Adolphus: *see* Dekker, Desmond
Dadullah, Mullah, *or* Dadullah Akhund (obit.) **08:**123
"Dafātir al-tadwīn" (Ghīṭānī) 268, *il.*
Dahabi, Nader 421
Dahal, Pushpa Kamal: *see* Prachanda
Dahlbeck, Eva (obit.) **09:**122
Dai Ailian (obit.) **07:**115
Daimler, *or* DaimlerChrysler (Ger. co.) 214
DaimlerChrysler AG (Ger.-Am. co.): *see* Chrysler LLC
Dakar (Sen.) 458
Dalai Lama 471
D'Alesandro, Nancy Patricia: *see* Pelosi, Nancy
Dalhausser, Phil 331, *il.*
Dalitz, Richard Henry (obit.) **07:**115
Dallaire, Roméo (biog.) **06:**75
Dalle, François Léon Marie-Joseph (obit.) **06:**107
Dalton, Katharina Dorothea Kuipers (obit.) **05:**108
dam
Civil Engineering Projects *table* 206
Damari, Shoshana (obit.) **07:**115
Damascus (Syr.) 470
Danby, Ken, *or* Kenneth Edison Danby (obit.) **08:**123
dance **09:**278; **08:**276; **07:**266; **06:**254; **05:**257; **04:**257; **03:**287; **02:**286; **01:**286; **00:**278
Dancer, Stanley Franklin (obit.) **06:**107
Dangerfield, Rodney, *or* Jacob Cohen (obit.) **05:**108
Daniel, Mary Margaret Truman: *see* Truman, Margaret
Danish literature **06:**229; **05:**229; **04:**228; **03:**250; **02:**249; **01:**249; **00:**237
Danish People's Party, *or* DF, *or* DPP (pol. party, Den.) 392
Danny Grossman Dance Company (Can. dance co.) 279
Dantzig, George (obit.) **06:**107
Danziger, Paula (obit.) **05:**108
D'Aquino, Iva Toguri, *or* Ikuko Toguri, *or* Tokyo Rose (obit.) **07:**115
Dar es Salaam (Tan.) 472
Dardenne, Jean-Pierre (biog.) **06:**75
Dardenne, Luc (biog.) **06:**75
Darfur (reg., Sud.)
Albania 364
Chad 382
military affairs 270
multinational and regional organizations 358
sidebar **09:**467
Sudan, The 466, *map* 468
United Nations 354

Darfur Peace Agreement 467
"Dark Knight, The" (motion picture) 284, *il.*
Darling, Alistair 479
Darling, Erik (obit.) **09:**122
DARPA (U.S. govt.): *see* Defense Advanced Research Projects Agency
Darwīsh, Maḥmūd (obit.) **09:**122
Darwitz, Natalie 322
Dash, Samuel (obit.) **05:**108
David, Nicol 325
Davis, Billy, *or* Roquel Davis (obit.) **05:**108
Davis, Glenn Woodward (obit.) **06:**108
Davis, James Bodie (obit.) **08:**123
Davis, Ossie, *or* Raiford Chatman Davis (obit.) **06:**108
Davis, Raymond, Jr. (obit.) **07:**116
Davis, Shani
  biography **07:**80
  speed skating 323
Davis, Skeeter, *or* Mary Frances Penick (obit.) **05:**108
Davis Cup (tennis)
  Sporting Record *tables* 349
  tennis 328
Davydova, Anastasiya 327
"Day" (Kennedy) 255
Day, Laraine, *or* La Raine Johnson (obit.) **08:**123
Day, Mary (obit.) **07:**116
Day-Lewis, Daniel
  Film Awards *table* 286
"Day the Earth Stood Still, The" (motion picture) 284
Daytona 500 (stock-car race) 305
  Sporting Record *tables* 332
DDN (educ.): *see* Digital Dakota Network
De Carlo, Yvonne, *or* Margaret Yvonne Middleton (obit.) **08:**123
de Hoop Scheffer, Jaap, *or* Jakob Gijsbert de Hoop Scheffer (biog.) **05:**73
de la Hoya, Oscar 310
de Niese, Danielle (biog.) **09:**75
Dean, Laura 278
DeAngelis, Sandro 318
death penalty, *or* capital punishment **06:**209; **05:**211; **04:**211; **03:**232; **02:**231; **01:**230; **00:**218
  "Death Penalty on Trial, The" (special report) **03:**230, *map* 231
  Guatemala 407
  Saint Kitts and Nevis 456
  United States 487
Deaver, Michael (obit.) **08:**123
DeBakey, Michael Ellis (obit.) **09:**123
debate
  U.S. election of 2008 179
Debreu, Gerard (obit.) **05:**108
debt cancellation, *or* debt pardon
  Kuwait 427
  São Tomé and Príncipe 457
Déby, Idriss
  Chad 382
  Sudan, The 466
decathlon 328
Dedeaux, Rod, *or* Raoul Martial Dedeaux (obit.) **07:**116
Dee, Frances (obit.) **05:**108
Dee, Sandra, *or* Alexandra Cymboliak Zuck (obit.) **06:**108
Deep Throat: *see* Felt, Mark
DEET, *or* N,N-diethyl-meta-toluamide
  industrial chemistry 291
Defense, U.S. Department of (U.S. govt.)
  military technology 271
Defense Advanced Research Projects Agency, *or* DARPA (sidebar) **09:**272
deforestation
  Papua New Guinea 448
  wildlife conservation 238
Dekker, Desmond, *or* Desmond Adolphus Dacres (obit.) **07:**116
Del Toro, Benicio 284
Delannoy, Jean (obit.) **09:**123
Delano, James Whitlow
  photography 213
Delaware (state, U.S.)
  U.S. state governments 485
Delgado, Junior, *or* Oscar Hibbert (obit.) **06:**108
Delhi, *or* New Delhi (India) 410
Dell, Michael (biog.) **06:**76
Dellinger, David (obit.) **05:**109
Dello Joio, Norman 275
DeLorean, John Zachary (obit.) **06:**108
Deloria, Vine, Jr. (obit.) **06:**108
Delp, Brad, *or* Bradley E. Delp (obit.) **08:**124
Delta Air Lines, Inc. (Am. co.) 215
Dementyeva, Yelena328
democracy
  Mauritania 435
  Myanmar 440
  Swaziland 468
  Tonga 474
Democratic Constitutional Assembly, *or* RCD (pol. party, Tun.) 475
Democratic Forces for the Liberation of Rwanda, *or* FDLR (Rw. rebel group) 387
Democratic Forces for Unity, Union of (pol. group, Cent.Af.Rep.) 382
Democratic Labour Party (pol. party, Barb.) 371
Democratic Left Alliance, *or* SLD (pol. party, Pol.) 450
Democratic National Convention (U.S. politics)
  U.S. election of 2008 178
Democratic Party, *or* Partito Democratico (pol. party, It.) 418
Democratic Party, *or* DP (pol. party, Mong.) 438
Democratic Party (pol. party, U.S.)
  U.S. election of 2008 176, 485
  United States (sidebar) **07:**481
Democratic Party of Albanians, *or* PDSH (pol. party, Maced.) 431
Democratic Party of Japan, *or* DPJ (pol. party, Japan) 419
Democratic Progressive Party, *or* DPP (pol. party, Tai.) 471
Democratic Revolution, Party of the, *or* PRD (pol. party, Mex.) 436
Democratic Revolutionary Party, *or* PRD (pol. party, Pan.) 447
Democratic Society Party, *or* DTP (pol. party, Tur.) 476
Democratic Union for Integration, *or* DUI/BDI (pol. party, Maced.) 432
Democratic Unionist Party, *or* DUP (pol. party, N.Ire., U.K.)
  Ireland 416
  United Kingdom 481
demonstrations and protests
  agricultural producers in Córdoba, Argentina *il.* 367
  Armenia 367
  Bangladesh 371
  Belarus 372, *il.*
  Bolivia 374, *il.*
  Burkina Faso 378
  Côte d'Ivoire 389
  Cambodia 378
  Cameroon 379
  Chilean education *il.* 232
  China 383
  Denmark 392, *il.*
  Dominican Republic 394
  Egypt 395
  France *il.* 400
  Germany *il.* 403
  Haiti 408, *il.*
  Hungary 410
  Indonesia 412, *il.*
  Iraq 484, *ils.* 484, 414
  Japanese consulate in Melbourne, Australia *il.* 368
  Jordan *il.* 422
  Kenya 423
  Latvia 428, *il.*
  Mauritania 435
  Nepal 442
  Panama 448
  Peru 449
  Philippines 450, *il.*
  Russia 454
  skyrocketing food prices 183, *il.*
  South Korea 300, 425, *ils.* 301, 425
  Sri Lanka *il.* 466
  Sudan, The 466
  Swaziland 468
  Taiwan 471, *il.*
  Tanzania 472
  Thailand 473, *ils.* 45, 51
  Tibetan protesters *ils.* 17
  Turkey *ils.* 476, 191, 190
  Ukraine 479
  United Arab Emirates 479
  Uruguay *il.* 488
  Vietnam 491
Demulder, Françoise
  photography 213
Denard, Bob, *or* Gilbert Bourgeaud, *or* Robert Denard (obit.) **08:**124
Deng, Luol 309
dengue (disease)
  Palau 447
Dengue Fever (Am. mus. group) 276
"Denman" (racehorse) 314
Denmark **09:**392; **08:**392; **07:**386; **06:**389; **05:**389; **04:**389; **03:**423; **02:**415; **01:**421; **00:**415
  Arctic Regions 362
  motion pictures 288
  Pakistan 447
  see also WORLD DATA
Dennis, Clarence (obit.) **06:**108
denuclearization
  North Korea 421
Denver, Bob, *or* Robert Denver (obit.) **06:**108
Denver Broncos (Am. football team) 317
deoxyribonucleic acid: *see* DNA
Dependent States **09:**358; **08:**358; **07:**352; **06:**354; **05:**355; **04:**353; **03:**385; **02:**379; **01:**382; **00:**374
  see also WORLD DATA
Depp, Johnny, *or* John Christopher Depp II
  biography **06:**76
  Film Awards *table* 286
Depression of 1929 (econ.): *see* Great Depression
deregulation
  financial crisis of 2008 172
derivative (fin.)
  financial crisis of 2008 172
Dermochelys coriacea (turtle): *see* leatherback turtle
Derrida, Jacques, *or* Jackie Derrida (obit.) **05:**109
Derwall, Jupp, *or* Josef Derwall (obit.) **08:**124
Des Roches, Roger 263
Desai, Kiran (biog.) **08:**77
design
  product design for the new millennium (special report) **01:**168
detective story 265
Detroit Lions (Am. football team)l 317
Detroit Red Wings (Am. hockey team) 321, *il.*
Detroit Shock (basketball team) 308
developing nation, *or* LDC, *or* less-developed country
  environment 236
  financial crisis of 2008 170
  multinational and regional organizations 357
  skyrocketing food prices 182
devil facial tumour disease, *or* DFTD 247, *il.*
Devonshire, Andrew Robert Buxton Cavendish, 11th duke of (obit.) **05:**109
"Deweycheatumnhowe" (racehorse) 314, *il.*
Devn, Agyness
  fashions *il.* 240
DF (pol. party, Den.): *see* Danish People's Party
Dhaka (Bangla.) 371
Di Palma, Carlo (obit.) **05:**109
Di Stefano, Giuseppe
  classical music 275
  obituary **09:**123
"día de hoy, El" (Gándara)264
Diabaté, Toumani 276
diabetes mellitus
  type 2 diabetes (sidebar) **08:**247
diamond
  Botswana 376, *il.*
  Lesotho 429
  trade controversy (sidebar) **01:**390, *map*
Diamond, David Leo (obit.) **06:**109
Díaz, David 310, *il.*
Díaz, Junot
  American literature 259, *il.*
  Latin American literature 265
Díaz, Miguel, *or* Miguel Aurelio Díaz Zayas (obit.) **07:**116
Dibaba, Tirunesh 194, 329
Dibdin, Michael John (obit.) **08:**124
Diddley, Bo, *or* Otha Ellas Bates, *or* Ellas McDaniel
  obituary **09:**123
  popular music 277
"Dieci" (Longo) 264
Diego Garcia (atoll, Ind.O.)
  Mauritius 436
  sidebar **04:**354, *map*
diet
  "Craze for Curbing Carbs, The" (sidebar) **05:**145
Diet, *or* Imperial Diet, *or* Kokkai, *or* Teikoku Gikai (Japanese govt.) 419
digital consumer electronics
  "Digital Consumer Electronics Boom" (special report) **07:**188
Digital Dakota Network, *or* DDN (educ.)
  distance learning (sidebar) **09:**231
digital download 274
digital music player, *or* digital audio player 224
digital-rights management, *or* DRM 222
digitization
  consumer electronics (special report) **07:**188
Dileita Muhammad Dileita 393
Dili (East Timor) 394
dimebon (drug)
  Alzheimer disease treatment 245

Dimitrova, Ghena (obit.) **06:**109
Dink, Hrant (obit.) **08:**124
dinosaur
paleontology 252, *il.* 253
Sue (sidebar) **01:**241
Diogo, Luisa 440
Dion, Mark 210
Dion, Stephane
biography **08:**77
Canada 379
Dior, Christian
fashions 239
direct foreign investment: *see* foreign direct investment
Direction–Social Democracy, *or* Smer-SD (pol. party, Slovakia) 461
disabled, *or* handicapped
Paralympic Games 330
disarmament
Côte d'Ivoire 388
Congo, Republic of the 388
military affairs 270
Niger 444
see also arms control
disaster **09:**56; **08:**56; **07:**56; **06:**56; **05:**56; **04:**60; **03:**56; **02:**62; **01:**56; **00:**160
Egypt 395
emergency management (special report) **06:**182
Saint Lucia 456
Tajikistan 472
tsunami (sidebar) **05:**58
"Discovery" (space shuttle)
space exploration *table* 296
discrimination (soc.)
education 230
disease **09:**242; **08:**242; **07:**213; **06:**200; **05:**200; **04:**201; **03:**221; **02:**222; **01:**218; **00:**206
Alzheimer disease in nuns (sidebar) **02:**225
SARS (special report) **04:**204, *map* 201
traditional Chinese medicine 186
type 2 diabetes (sidebar) **08:**247
disk drive: *see* hard drive
distance learning (sidebar) **09:**231
Distel, Sacha, *or* Alexandre Distel (obit.) **05:**110
Dith Pran (obit.) **09:**124
diving **09:**326; **08:**327; **07:**321; **06:**323; **05:**323; **04:**319; **03:**352; **02:**347; **01:**344; **00:**342
Beijing 2008 Olympic Games 194
Sporting Record *tables* 348
"Diving Bell and the Butterfly, The," *or* "Le Scaphandre et le papillon" (motion picture)
Film Awards *table* 286
Division I-A (football): *see* Football Bowl Subdivision
Dixie Chicks (biog.) **07:**80
Dixon, Floyd, *or* Jay Riggins, Jr. (obit.) **07:**116
Dixon, Frank James (obit.) **09:**124
Dixon, Scott 305
Djerrkura, Gatjil (obit.) **05:**110
DJIA (fin.): *see* Dow Jones Industrial Average
Djibouti **09:**393; **08:**392; **07:**387; **06:**390; **05:**390; **04:**389; **03:**423; **02:**416, **01:**421; **00:**415
Eritrea 397
see also WORLD DATA
Djibouti (Djibouti) 393
Djibouti Agreement (internat. agreement)
Somalia 463
Djokovic, Novak 327
Djukanovic, Milo 439
Dlamini, Absalom Themba 468
Dlamini, Barnabas Sibusiso 468
Dlamini, Bheki 468
DNA, *or* deoxyribonucleic acid **04:**218
"DNA - the Forensic Tool of the '90s" (sidebar) **00:**217
"Do You Know" (album) 277
Doctors Without Borders
Central African Republic 382
Niger 444
documentary film **09:**289; **08:**288; **07:**278; **06:**267; **05:**268; **04:**269; **03:**300; **02:**299; **01:**298; **00:**289
Dodd, Sir Coxsone, *or* Clement Seymour Dodd (obit.) **05:**110
Dodoma (Tan.) 472
Doha (Qatar) 452
Doha Development Round
European Union 357
Doherty, Denny, *or* Dennis Doherty (obit.) **08:**124
DOJ (U.S. govt.): *see* Justice, Department of
Doll, Sir William Richard Shaboe (obit.) **06:**109
dollar (currency)
Canada 381
Chile 383
China 385
dollarization (special report) **02:**420
Japan 421
skyrocketing food prices 182
United States 481
Vatican City State 490
domain name
Internet 221
domestic honeybee, *or* Apis mellifera
colony collapse disorder (sidebar) **09:**249
domestic partnership: *see* same-sex union
Domingo, Placido 274
Dominica **09:**393; **08:**393; **07:**387; **06:**390; **05:**390; **04:**390; **03:**424; **02:**416; **01:**421; **00:**415
see also WORLD DATA
Dominican Republic **09:**393; **08:**393; **07:**387; **06:**390; **05:**390; **04:**390; **03:**424; **02:**417; **01:**422; **00:**416
baseball 307
El Salvador 396
see also WORLD DATA
Donati, Enrico (obit.) **09:**124
Donavon, Tara 210
Donmar Warehouse (Br. thea. co.) 281
Doohan, James Montgomery (obit.) **06:**109
Dooling, Dave
"Mystique of Mars, The" (special report) **05:**274
"Doors Open" (Rankin) 255
Döpfner, Mathias (biog.) **06:**76
doping (drug abuse)
athletics 328
cycling 312
Dorji, Lyonpo Kinzang 374
dos Santos, Fernando da Piedade Dias 365
dos Santos, José Eduardo 365
Doté, Élie 382
"Doubt" (motion picture) 284
Douglas, Denzil 456
Douglas, Dame Mary, *or* Margaret Mary Tew (obit.) **08:**124
Douglas, Mike, *or* Michael Delaney Dowd, Jr. (obit.) **07:**117
Doumbia, Mariam 276, *il.*
Dow Chemical Company (Am. co.)
business 217
Dow Jones Industrial Average, *or* DJIA
financial crisis of 2008 170, 218, 483
stock markets *table* 218
Downey, Robert, Jr., *or* Robert John Downey, Jr. (biog.) **09:**76
download, digital: *see* digital download
downloading, illegal: *see* piracy
DP (pol. party, Mong.): *see* Democratic Party
DPJ (pol. party, Japan): *see* Democratic Party of Japan
DPKO (UN): *see* Peacekeeping Operations, Department of
DPP (pol. party, Den.): *see* Danish People's Party
DPP (pol. party, Tai.): *see* Democratic Progressive Party
Dr. Death: *see* Shipman, Harold Frederick
Drabble, Antonia Susan: *see* Byatt, A. S.
Drake, Charlie, *or* Charles Edward Springall (obit.) **07:**117
DRC (Con.K.): *see* Congo, Democratic Republic of the
dressage **03:**334; **02:**333; **01:**330; **00:**325
Drew, Ronnie (obit.) **09:**124
drinking water: *see* water
DRM (copyright law): *see* digital-rights management
Drnovsek, Janez (obit.) **09:**125
Drogba, Didier (biog.) **08:**78
dromaeosaur
paleontology 252
drought
Cyprus 391
Kiribati 424
Lesotho 429
Madagascar 432
meteorology and climate 228
Somalia 463
Tajikistan 472
Drucker, Peter Ferdinand (obit.) **06:**109
drug trafficking
Dominican Republic 394
Ecuador 395
El Salvador 396
Guatemala 406, *il.*
Guinea-Bissau 407
Mexico 436, *il.* 437
Peru 449
Saint Lucia 456
Sierra Leone 460
Venezuela 490
Dryden, Spencer (obit.) **06:**109
D'Souza, Shanthie Mariet
"Terror in Mumbai" **09:**192
DTP (political party, Turkey): *see* Democratic Society Party
du Aime, Albert William: *see* Wharton, William
Du Toit, Natalie 330
Duarte Frutos, Nicanor 448
Dubai (U.A.E.) 232
Dubcek, Peter *il.* 213
Dube, Lucky Philip (obit.) **08:**125
Dublin (Ire.) 415
Dublin Theatre Festival (Irish thea. co.) 282
duck-billed platypus: *see* platypus
Dudamel, Gustavo (biog.) **09:**76
DUI/BDI (pol. party, Maced.): *see* Democratic Union for Integration
Duisenberg, Wim, *or* Willem Frederik Duisenberg (obit.) **06:**109
Dulles, Avery Robert, Cardinal
obituary **09:**125
religion 301
Dumas, Charles Everett (obit.) **05:**110
Dummies book series (sidebar) **00:**266
dumpster diving
freegans *il.* 185
Duncan, Dudley, *or* Otis Dudley Duncan (obit.) **05:**110
Duncan, Tim, *or* Timothy Theodore Duncan (biog.) **06:**77
Dunham, Katherine (obit.) **07:**117
"dunkle Schiff, Das" (Fatah) 261
Dunn, Ronnie Gene (biog.) **08:**74
DUP (pol. party, N.Ire., U.K.): *see* Democratic Unionist Party
DuPont Company (Am. co.) 217
Dushanbe (Tajikistan) 472
Dutch literature: *see* Netherlandic literature
Dutilleux, Henri (biog.) **06:**77
Dutt, Sunil, *or* Balraj Dutt (obit.) **06:**109
duty: *see* tariff
DVD
online piracy 222
dwarf planet
Pluto (sidebar) **07:**283
Dworkin, Andrea Rita (obit.) **06:**110
Dykla, John R.
"Celebrating the Centennial of Einstein's 'Miraculous Year' " (special report) **06:**270

E

e-commerce **09:**222; **08:**224; **07:**195; **06:**161; **05:**162; **04:**168; **03:**173
U.S. state governments 486
e-reader, *or* electronic reading device
new technology 224, *il.*
e-trading: *see* electronic trading
e-waste, *or* electronic waste 236
EADS (Eur. consortium): *see* European Aeronautic Defence and Space Company
Eagleton, Thomas Francis (obit.) **08:**125
Earth satellite, *or* unmanned satellite 297
Earth sciences **09:**225; **08:**227; **07:**198; **06:**167; **05:**168; **04:**169; **03:**180; **02:**183; **01:**181; **00:**165
Earth Systems Science Agency, *or* ESSA (U.S. agency) 226
earthquake
China 355, 384, il. 384
Congo, Democratic Republic of the 387
geology 225
geophysics 226, *il.* 227
Pakistan
"Cataclysm in Kashmir" (sidebar) **06:**442
earthquake early warning system, *or* EEW system 226
Earth's crust (geol.) 227
Earth's magnetic field 227
East Antarctic Ice Sheet 361
East Timor, *or* Timor-Leste **09:**394; **08:**394; **07:**388; **06:**390; **05:**391; **04:**390; **03:**424; **02:**381; **01:**383
see also WORLD DATA
Eastern Europe
European Union 356
Eastern Orthodox Church: *see* Orthodox Church, The
Eastwood, Clint 284
Ebb, Fred (obit.) **05:**110
Eberhard, Martin (biog.) **08:**78
Eberhart, George M.
"Redefining the Library in the Digital Age" (special report) **08:**188
Eberhart, Richard Ghormley (obit.) **06:**110
Ebner, Wolfgang *il.* 475
ECB (bank, Eur.): *see* European Central Bank

Ecevit, Bülent (obit.) **07:**117
eclipse
  astronomy *table* 294
ecological and fisheries protection zone, *or* ZERP
  Croatia 389
Economic and Financial Crimes Commission, *or* EFCC (pol. org., Nig.) 444
Economic Co-operation and Development, Organisation for, *or* OECD (internat. org.)
  Andorra 365
  New Zealand 443
  Poland 450
  skyrocketing food prices 182
economic growth **06:**171; **05:**172; **04:**173; **03:**185; **02:**188; **01:**186; **00:**170
  China (special report) **08:**180
economic stimulus plan (finance)
  financial crisis of 2008 175
Ecuador **09:**394; **08:**394; **07:**388; **06:**391; **05:**391; **04:**391; **03:**425; **02:**417; **01:**423; **00:**416
  association football 316
  Colombia 386
  Dominican Republic 394
  see also WORLD DATA
ecumenism
  religion 299
Ed in '08 (Am. org.)
  education 231
"Eden's Outcasts: The Story of Louisa May Alcott and Her Father" (Matteson) 259
EDF (Fr. co.): *see* Électricité de France
Edinburgh Festival (festival, Edinburgh, Scot., U.K.) 282
Edison cylinder 274
education **09:**229; **08:**231; **07:**202; **06:**187; **05:**188; **04:**187; **03:**204; **02:**206; **01:**204; **00:**191
  Canada 381
  charter schools (sidebar) **04:**188
  cheating (special report) **03:**206
  distance learning 231
  Dominican Republic 394
  home schooling (sidebar) **00:**193
  Pakistan *il.* 229
  testing (special report) **02:**208
  Turkmenistan 477
  U.S. state governments 487
education, higher: *see* higher education
education, secondary: *see* secondary education
Education City (Qatar) 232
Edwards, Carl 305
Edwards, John, *or* John Reid Edwards (biog.) **05:**73
Edwards, Jorge 265
Edwards, Ralph Livingstone (obit.) **06:**110
EEW system: *see* earthquake early warning system
EEZ (internat. law): *see* exclusive economic zone
EFCC (pol. org., Nig.): *see* Economic and Financial Crimes Commission
Egeland, Jan (biog.) **07:**81
Egypt **09:**395; **08:**395; **07:**389; **06:**392; **05:**392; **04:**392; **03:**426; **02:**418; **01:**423; **00:**416
  Arab League 358
  Arabic literature 268
  association football 316
  Israel 416
  Libya 430
  rockslide *il.* 59
  squash 325
  see also WORLD DATA
Egyptian Organization for Human Rights (Egy. org.) 395
Ehrling, Evert Sixten (obit.) **06:**110
Eidesgaard, Jóannes 358
Eight, Group of, *or* G-8
  environment 236
  India 411
  Japan 420, 421
  multinational and regional organizations 358
"Eight Belles" (racehorse) 312
1873, Panic of (U.S. hist.)
  financial crisis of 2008 175
Einstein, Albert
  "Celebrating the Centennial of Einstein's 'Miraculous Year' " (special report) **06:**270
Eisner, Will, *or* William Erwin Eisner (obit.) **06:**110
El Niño/Southern Oscillation, *or* ENSO (weather) 228
El Salvador **09:**396; **08:**396; **07:**390; **06:**393; **05:**393; **04:**393; **03:**427; **02:**419; **01:**425; **00:**417
  archaeology 203
  see also WORLD DATA
elderly: *see* old age
election
  2001 British election (sidebar) **02:**509
  Angola 365
  Armenia 367
  Australia 368
  Australia (sidebar) **08:**368
  Austria 369
  Azerbaijan 369
  Bangladesh 371
  Barbados 371
  Belarus 372
  Bhutan 374
  Bolivia 374
  Bosnia and Herzegovina 375
  Botswana 375
  Brazil 376
  Burkina Faso 373
  Côte d'Ivoire 389, *il.*
  Cambodia 378
  Canada 263, 379
  Chile 383
  Comoros 360, 387
  Congo, Republic of the 388
  Czech Republic 391
  Djibouti 393
  Dominican Republic 393
  Ecuador 394
  Egypt 395
  El Salvador 396
  Equatorial Guinea 396
  Ethiopia 397
  Fiji 398
  Finland 398
  France 399
  France (sidebar) **08:**400
  French Polynesia 359
  French presidential race (sidebar) **03:**431
  Georgia 401
  Germany 402
  Ghana 404
  Greenland 358
  Grenada 406
  Guinea-Bissau 407
  Honduras 409
  Hungary 409
  India 411
  Indonesia 412
  Iran 413
  Iraq 414
  Israel 416
  Italy 417
  Jamaica 419
  Japan 420
  Kenya 423
  Kuwait 426
  Lebanon 428
  Lithuania 431
  Macedonia 431
  Malaysia 433
  Maldives 434
  Malta 435
  Marshall Islands 435
  Mexico 436
  Monaco 438
  Mongolia 438
  Montenegro 439
  Morocco 439
  Mozambique 440
  Myanmar 440
  Namibia 441
  Nauru 441
  Nepal 442
  New Zealand 442
  Nicaragua 443
  Nigeria 444
  Pakistan 446
  Palestinian parliament (sidebar) **07:**413
  Panama 447
  Paraguay 448
  Romania 452
  Russia 453
  Rwanda 455
  São Tomé and Príncipe 457
  San Marino 457
  Serbia 459
  Sierra Leone 460
  Slovenia 462
  South Korea 425
  Spain 465
  Swaziland 468
  Switzerland 470
  Taiwan 471
  Tanzania 472
  Thailand 473
  Tonga 474
  Tunisia 475
  United Kingdom
    2005 election (sidebars) **06:**477, 479
    U.S. election of 2008 (special report) **09:**176, 485
    U.S. election of 2004 (special report) **05:**484
    U.S. election reform debate (sidebar) **02:**517
    U.S. midterm elections (sidebar) **07:**481
    U.S. midterm elections (sidebar) **03:**517
    U.S. presidential race (special report) **01:**514, *map* 515
  Vanuatu 489
  Venezuela 490
  Zambia 492
  Zimbabwe 492
electric power
  business 218
  Kyrgyzstan 427
  Puerto Rico 359
  South Africa 464
Électricité de France, *or* EDF (Fr. co.) 218
electricity grid
  U.S. electricity grid (sidebar) **05:**185
electronic game: *see* computer game
electronic reading device: *see* e-reader
electronic trading, *or* e-trading (special report) **00:**180
electronic waste: *see* e-waste
elementary education, *or* primary education **09:**229; **08:**231; **07:**202; **06:**187; **05:**188; **04:**187; **03:**204; **02:**206; **01:**204; **00:**191
Eliasson, Olafur (biog.) **09:**77
  art 210, 212
Elizabeth II (q. of U.K.)
  Antigua and Barbuda 366
  Australia 368
  Bahamas, The 370
  Barbados 371
  Belize 373
  Canada 379
  Grenada 406
  Jamaica 419
  New Zealand 442
  Papua New Guinea 448
  Saint Kitts and Nevis 456
  Saint Lucia 456
  Saint Vincent and the Grenadines 456
  Solomon Islands 462
  Tuvalu 477
  United Kingdom 479
Elliott, Osborn (obit.) **09:**125
Ellis, Albert (obit.) **08:**125
Ellis, Alton Nehemiah (obit.) **09:**125
ELN (Colom. guerrilla group): *see* National Liberation Army
embargo
  Côte d'Ivoire 389
  Myanmar 441
embezzlement
  Niger 444
emergency management
  "Preparing for Emergencies" (special report) **06:**182
Emerson, Gloria (obit.) **05:**110
emissions trading
  environment 234
"Empire: Impressions from China" (phot. exhibition) 213
Emporio (bldg., India) 239
ENB (Br. dance co.): *see* English National Ballet
Enceladus (astron.)
  space exploration *il.* 296
"End of the Dark Ages, The" (art) 210
endangered species
  polar bears 362
  wildlife conservation 238
"Endeavour" (space shuttle)
  space exploration *table* 296
enemy combatant: *see* prisoner of war
energy conversion
  Bahamas, The 370
  biofuels (special report) **08:**174
  business 215
England (constituent unit, U.K.)
  cricket 311
  United Kingdom 479
England, Bank of (bank, U.K.) 481
English literature **09:**254; **08:**254; **07:**234; **06:**221; **05:**221; **04:**221; **03:**243; **02:**242; **01:**242; **00:**230
"English Major, The" (Harrison) 258
English National Ballet, *or* ENB (Br. dance co.) 280
English Premier League (football) 315
Enhbayar, Nambaryn, *or* Nambaryn Enkhbayar 438
Enke, Elizabeth Edith: *see* Adams, Edie
Enron Corp. (sidebar) **03:**193
ENSO (weather): *see* El Niño/Southern Oscillation
"Entre les murs" (motion picture): *see* "Class, The"
environment **09:**233; **08:**234, **07:**205; **06:**190; **05:**191; **04:**191; **03:**209; **02:**211; **01:**207; **00:**195
  Antarctica 360
  Floriade exhibit (sidebar) **03:**217
  Kyoto Protocol (special report) **06:**194
  U.S. state governments 487
  United Nations 356
  world water crisis (special report) **04:**192, *map*
Environmental Protection, Committee for (internat. org.)
  Antarctica 360

Environmental Protection Agency, *or* EPA (U.S. govt. agency)
  air pollution 236
Eorsi, Istvan (obit.) **06:**110
EP-FA (pol. party, Urug.): *see* Progressive Encounter-Broad Front
epidemic (path.)
  bird flu (sidebar) **06:**490
Epps, Meave: *see* Leakey, Meave G.
EPRDF (pol. party, Eth.): *see* Ethiopian People's Revolutionary Democratic Front
Epstein, Barbara Zimmerman (obit.) **07:**117
Epstein, Israel (obit.) **06:**110
Equatorial Guinea **09:**396; **08:**396; **07:**390; **06:**393; **05:**393; **04:**393; **03:**427; **02:**419; **01:**425; **00:**418
  Gabon 401
  see also WORLD DATA
equestrian sports **09:**312; **08:**313; **07:**307; **06:**305; **05:**307; **04:**303; **03:**331; **02:**330; **01:**328; **00:**322
  Sporting Record *tables* 338
equinox
  astronomy *table* 294
Erbakan, Necmettin
  "Turkey's Secular/Islamic Conundrum" (special report) **09:**191
Erdogan, Recep Tayyip 475
"Ergun He you an" (Chi Zijian) 269
Eritrea **09:**397; **08:**396; **07:**390; **06:**393; **05:**394; **04:**393; **03:**428; **02:**422; **01:**425; **00:**419
  Djibouti 393
  Ethiopia 398
  see also WORLD DATA
Ertegun, Ahmet (obit.) **07:**118
Ervine, David Walter (obit.) **08:**125
Erwin, Emily Burns: *see* Robison, Emily
Erwin, Martha Elenor: *see* Maguire, Martie
ESA: *see* European Space Agency
escape tectonics
  geophysics 226
Eskom (S.Af. org.) 464
Espín Guillois, Vilma (obit.) **08:**125
ESSA (U.S. agency): *see* Earth Systems Science Agency
Estonia **09:**397; **08:**397; **07:**391; **06:**394; **05:**394, **04:**394; **03:**428; **02:**422; **01:**426; **00:**419
  see also WORLD DATA
ETA, *or* Euskadi Ta Askatasuna, *or* Euzkadi Ta Askatasuna (Basque org.) 465
ethanol
  biofuels (special report) **08:**174
  environment 236
  Jamaica 419
Etheridge, Melissa, *or* Melissa Lou Etheridge (biog.) **09:**77
Ethiopia **09:**397; **08:**397; **07:**392; **06:**394; **05:**395; **04:**394; **03:**429; **02:**423; **01:**427; **00:**420
  Eritrea 397
  Somalia 462
  track and field sports 329
  see also WORLD DATA
Ethiopian People's Revolutionary Democratic Front, *or* EPRDF (pol. party, Eth.) 398
EU Force, *or* EUFOR (mil. org.)
  Chad 382
euro (currency)
  Estonia 397
  euro zone (sidebar) **05:**353
  fashions 239
  Greek Cyprus 391
  new currency (sidebar) **00:**372
  skyrocketing food prices 182
  Vatican City State 490
Euro 2008
  association football 314, *il.* 315
euro zone, *or* euro area
  "Criteria for Joining the Euro Zone" (sidebar) **05:**353
  European Union 357
  financial crisis of 2008 174
  Hungary 409
  Poland 451
  Slovakia 461
Europe
  anthropology 200
  association football 314
  business 215
  dance 279
  dependent states 358
  financial crisis of 2008 170, 174
  honeybee population decline 249
  motion pictures 285
  religion 301
  Roma (special report) **06:**290
Europe, Council of
  Azerbaijan 369
European Aeronautic Defence and Space Company, *or* EADS (Eur. consortium) 215
European Capital of Culture
  theatre 282
European Central Bank, *or* ECB (bank, Eur.)
  financial crisis of 2008 174
European Commission (Eur. org.)
  Bulgaria 377
  computer companies 220
  Italy 418
  Macedonia 432
European Constitution, *or* Constitution of Europe
  "European Union's Proposed Constitution, The" (sidebar) **06:**353
European Film Awards
  Film Awards *table* 287
European Organization for Nuclear Research (Eur. research laboratory): *see* CERN
European Socialists, Party of, *or* PES (pol. party, Eur.)
  Slovakia 461
European Space Agency, *or* ESA
  space exploration 297
European Union **09:**356; **08:**356; **07:**350; **06:**352; **05:**352; **04:**350; **03:**383; **02:**377; **01:**379; **00:**371
  education 232
  environment 233
  euro zone (sidebar) **05:**353
  financial crisis of 2008 174
  international relations
    Albania 364
    Belarus 372
    Bosnia and Herzegovina 375
    Cape Verde 381
    Central African Republic 382
    Croatia 389
    Dominican Republic 394
    Egypt 395
    El Salvador 396
    Georgia 402
    Japan 421
    Kazakhstan 422
    Macedonia 432
    Montenegro 439
    Myanmar 441
    Russia 454
    Rwanda 455
    Serbia 459
    Switzerland 470
    Tunisia 475
    Uzbekistan 488
  member nations
    Austria 369
    Bulgaria 377
    Czech Republic 391
    Denmark 392
    France 399
    Germany 403
    Ireland 415
    Italy 417
    Netherlands, The 442
    Poland 450
    Romania 452
    Slovenia 462
    Sweden 469
    United Kingdom 481
  skyrocketing food prices 182
European Union Reform Treaty
  Czech Republic 392
Eurovision Song Contest 455
Euskadi Ta Askatasuna (Basque org.): *see* ETA
Euzkadi Ta Askatasuna (Basque org.): *see* ETA
Evangelical Church
  religion *table* 303
Evans, Ray (obit.) **08:**126
Evans, Richard Gwynfor (obit.) **06:**111
evolution
  anthropology 200
  zoology 247
exclusive economic zone, *or* EEZ
  Barbados 371
Exelon (Am. co.) 218
exoplanet, *or* extrasolar planet 294
export (trade)
  financial crisis of 2008 175
  Japan 421
  skyrocketing food prices 183
extinction
  wildlife conservation 238, 247
Extraordinary Chambers in the Courts of Cambodia (Camb. hist.): *see* Khmer Rouge Tribunal
ExxonMobil Corporation (Am. corp.) 217
  Guyana 407
  oil spill settlement 362
"Exxon Valdez" (oil tanker)
  Arctic Regions 362
Eyadéma, Gnassingbé, *or* Étienne Eyadéma (obit.) **06:**111

F

F.W. Woolworth Co. (Am. co.): *see* Woolworth Co.
F1 (auto racing): *see* Formula One
FAA (U.S. govt.): *see* Federal Aviation Administration
Fabro, Luciano (obit.) **08:**126
Facebook (Am. co.)
  Internet 221
  military affairs 271
Facilities Access Agreement (1980, U.S.-Oman) 446
"Factory Ship, The," *or* "Kanikōsen" (Kobayashi) 269
Faget, Maxime Allan (obit.) **05:**110
Fahd, *or* Fahd ibn 'Abd al-'Aziz al-Sa'ud (obit.) **06:**111
"Failure" (Schultz) 259
Fairhurst, Angus (obit.) **09:**125
Falcon 1 (launch vehicle): *see* SpaceX Falcon 1
Fallaci, Oriana
  Italian literature 263
  obituary **07:**118
Fallon, Kieren 313
Faludy, György: *or* George Faludy (obit.) **07:**118
Falwell, Jerry (obit.) **08:**126
famine: *see* food aid
"Famous Suicides of the Japanese Empire" (Mura) 258
fan fiction (sidebar) **02:**277
Fanailova, Yelena 267
Fannie Mae, *or* Federal National Mortgage Association, *or* FNMA (Am. corp.)
  financial crisis of 2008 171, 172
"Fanon" (Wideman) 258
FAO (UN): *see* Food and Agriculture Organization
Farabundo Martí National Liberation Front, *or* FMLN (pol. party, El Sal.) 396
Faraz, Ahmed, *or* Syed Ahmad Shah (obit.) **09:**125
FARC, *or* Revolutionary Armed Forces of Colombia (Colom. militant group) 386
  Ecuador 395
  military affairs 270
  Venezuela 490
Farmer, Paul, *or* Paul Edward Farmer (biog.) **05:**73
Farnsworth, Edward Allan (obit.) **06:**111
Faroe Islands 358
fashion **09:**239; **08:**239; **07:**210; **06:**197; **05:**197; **04:**198; **03:**218; **02:**219; **01:**215; **00:**203
  see also clothing and footwear industry
Fassi, Abbas al- 439
Fassie, Brenda
  obituary **05:**110
fast-food restaurant 487
"Fat Pig" (play) 280
Fatah (Pal. pol. party)
  Palestinian election (sidebar) **07:**413
Faust, Drew Gilpin, *or* Catharine Drew Gilpin Faust (biog.) **08:**79
Favors, Malachi Maghostut (obit.) **05:**110
Favre, Brett 317
Fayad, Salam 416
Faymann, Werner 369, *il.*
Fazal Mahmood (obit.) **06:**111
FBS (football): *see* Football Bowl Subdivision
FDA (U.S. agency): *see* Food and Drug Administration
FDI: *see* foreign direct investment
FDLR (Rw. rebel group): *see* Democratic Forces for the Liberation of Rwanda
Febres Cordero, León, *or* León Febres Cordero Ribadeneyra (obit.) **09:**126
Fed Cup (tennis)
  Sporting Record *tables* 349
  tennis 328
Federal Aviation Administration, *or* FAA (U.S. govt.)
  computer failure 223
Federal Home Loan Mortgage Corporation (Am. corp.): *see* Freddie Mac
Federal National Mortgage Association (Am. corp.): *see* Fannie Mae
Federal Reserve Board, *or* Fed (U.S.)
  financial crisis of 2008 171, 482
Federal Trade Commission, *or* FTC (U.S.)
  computer crime 223
Fédération Internationale de Football Association, *or* FIFA (internat. sports org.) 316
Fédération Internationale de l'Automobile, *or* FIA 304
Fédération Internationale de Volleyball, *or* FIVB (sports org.) 330
Federer, Roger
  biography **06:**78
  tennis 327
FedEx Cup (golf) 319

Fehmarn Belt Bridge (bridge project, Den. and Ger.) 393
Fei Xiaotong (obit.) **06:**111
Felt, Mark, *or* Deep Throat, *or* William Mark Felt, Sr. (obit.) **09:**126
"Female of the Species, The" (play) 280
feminism
"Feminism Reimagined: The Third Wave" (special report) **08:**196
fencing **06:**307; **05:**309; **04:**305; **03:**334; **02:**333; **01:**331; **00:**325
Sporting Record *tables* 340
Fender, Freddy, *or* Baldemar Huerta (obit.) **07:**118
Fenech Adami, Eddie 435
Feng Xiliang, *or* C. L. Feng (obit.) **07:**118
Ferguson, Maynard, *or* Walter Maynard Ferguson (obit.) **07:**118
Fermi Gamma Ray Space Telescope
unmanned satellites 297
Fernandez, Armand Pierre: *see* Arman
Fernández de Kirchner, Cristina
Argentina 366
biography **08:**79
Fernández Reyna, Leonel 393
Ferrari SpA (It. co.) 304
Ferré, Gianfranco (obit.) **08:**126
Ferrer, Ibrahim (obit.) **06:**111
Ferrer, Mel, *or* Melchor Gaston Ferrer (obit.) **09:**126
fertility rate: *see* birth rate
"Fetus Movement II: Project for Extraterrestrials No. 9" (art) 212
Feuer, Cy (obit.) **07:**118
Fey, Tina, *or* Elizabeth Stamatina Fey (biog.) **09:**78
FHLMC (Am. corp.): *see* Freddie Mac
FIA: *see* Fédération Internationale de l'Automobile
Fico, Robert 461
Fidesz-Hungarian Civic Alliance (pol. party, Hung.) 409
Field, Patricia 240, *il.* 241
field hockey **03:**335; **02:**334; **01:**331; **00:**326
Sporting Record *tables* 340
Fiennes, Ralph 280, *il.* 281
Fiesta Bowl (sports)
college football 316
Sporting Record *tables* 341
FIFA (internat. sports org.): *see* Fédération Internationale de Football Association
figure skating **09:**322; **08:**323; **07:**317; **06:**316; **05:**318; **04:**314; **03:**343; **02:**342; **01:**339; **00:**338
judging system (sidebar) **06:**316
Sporting Record *tables* 343
Fiji **09:**398; **08:**398; **07:**392; **06:**395; **05:**395; **04:**395; **03:**429; **02:**424; **01:**427; **00:**420
see also WORLD DATA
Fillon, François 399
financial crisis: *see* global financial crisis
"Financial Times" Stock Exchange index, *or* FTSE 100
stock markets *table* 218
finasteride (drug)
pharmaceuticals 246
Finklea, Tula Ellice: *see* Charisse, Cyd
Finland **09:**398; **08:**398; **07:**393; **06:**395; **05:**396; **04:**395; **03:**430; **02:**424; **01:**428; **00:**421
education 230
see also WORLD DATA
FiOS
high-speed Internet access 221
"Fire to Fire" (Doty) 259
Fires, Earlie 313
Fischer, Bobby, *or* Robert James Fischer (obit.) **09:**126
Fischer, Heinz 369, *il.*
Fischer, O. W., *or* Otto Wilhelm Fischer (obit.) **05:**111
Fischer-Tropsch reaction
applied chemistry 291
Fiser, Zbynek: *see* Bondy, Egon
Fisher, Allison (biog.) **05:**74
Fisher, Connie 282
Fisher, George: *see* Peters, Brock
fishery **07:**166; **06:**146; **05:**146; **04:**148; **03:**149; **02:**157; **01:**149; **00:**131
Croatia 389
"Fitna" (motion picture) 442
Fitzgerald, Geraldine Mary (obit.) **06:**112
Fitzgerald, Len (obit.) **08:**126
Fitzgerald, Patrick J. (biog.) **06:**78
Fitzsimmons, Cotton, *or* Lowell Fitzsimmons (obit.) **05:**111
FIVB (sports org.): *see* Fédération Internationale de Volleyball
live-element theory (Chin. med.)
traditional Chinese medicine 187
Flannery, Tim, *or* Timothy Fridtjof Flannery (biog.) **08:**80
Fleisher, Leon (biog.) **08:**80
Fletcher, Cyril (obit.) **06:**112
Fleury, Sylvie *il.* 210
flight (aircraft): *see* aviation
Flon, Suzanne (obit.) **06:**112
flooding
Angola 365
Belize 373
Brazil 377
Malawi 433
Mozambique 440
Togo 474
Yemen 491
Zambia 492
Flórez, Juan Diego (biog.) **09:**78
Floriade (sidebar) **03:**217
Florida (state, U.S.) 486
environment 234
Florida, University of (univ., Fla., U.S.) 316
"Flow: For Love of Water" (motion picture) 289
flu: *see* influenza
Fluckey, Eugene Bennett (obit.) **08:**127
Flurizan (drug)
Alzheimer disease treatment 245
"Fly, The" (opera) 273
"Flying Tomato": *see* White, Shaun
FMLN (pol. party, El Sal.): *see* Farabundo Martí National Liberation Front
fMRI: *see* functional magnetic resonance imaging
FN (pol. party, C.I.): *see* New Forces Party
FNL (rebel group, Buru.): *see* National Liberation Forces
FNMA (Am. corp.): *see* Fannie Mae
Foch, Nina, *or* Nina Consuelo Maud Fock **09:**127
Fogelberg, Dan, *or* Daniel Grayling Fogelberg (obit.) **08:**127
Folman, Ari 289, *il.*
Fomalhaut b
astronomy 294, *il.* 295
Fomenko, Yuliya 328
Fontinhas, José: *see* Andrade, Eugénio de
food
freegans *ils.* 184, 186
genetically modified foods (special report) **01:**150
health and disease 242
special report **09:**182
see also agriculture
food aid
Djibouti 393
Lesotho 429
Senegal 459
Food and Agriculture Organization, *or* FAO (UN)
North Korea 425
Senegal 458
skyrocketing food prices 182
United Nations 354
Food and Drug Administration, *or* FDA (U.S.) 242
China 385
pharmaceuticals 218
Food Not Bombs (Am. org.)
freegans 184
food production: *see* agriculture
Foot, Paul Mackintosh (obit.) **05:**111
foot-and-mouth disease, *or* hoof-and-mouth disease
British agriculture (special report) **02:**154
football (Can.): *see* Canadian football
football, *or* American football (gridiron) **09:**316; **08:**317; **07:**312; **06:**309; **05:**312; **04:**308; **03:**337; **02:**335; **01:**333; **00:**328
Sporting Record *tables* 341
football, *or* association football, *or* soccer (internat. sport) **09:**314; **08:**315; **07:**310; **06:**308; **05:**310; **04:**306; **03:**335; **02:**334; **01:**331; **00:**326;
Spain 466
Sporting Record *tables* 340
World Cup (sidebars) **07:**311; **03:**336
Football Bowl Subdivision, *or* Division I-A, *or* FBS 316
Foote, Shelby (obit.) **06:**112
"For King and Country" (MacArthur)
English literature 255
Forces for National Liberation: *see* National Liberation Forces
Forces Nationales de Libération (rebel group, Buru.): *see* National Liberation Forces
Ford, Alan Robert (obit.) **09:**127
Ford, Gerald R., *or* Gerald Rudolph Ford, Jr., *or* Leslie Lynch King, Jr. (obit.) **07:**119
Ford, Glenn, *or* Gwyllyn Samuel Newton Ford (obit.) **07:**118
Ford Motor Co. (Am. co.)
business 214
classical music 274, *il.*
foreclosure (law)
financial crisis of 2008 171
U.S. state governments 486
foreign affairs: *see* world affairs
foreign direct investment, *or* FDI
Mauritius 436
Montenegro 439
Morocco 439
"Forgetting Sarah Marshall" (motion picture) 284
forint
Hungary 409
Forman, James, *or* James Rufus (obit.) **06:**112
Formula One, *or* F1
Grand Prix racing 304
Singapore 461, *il.*
Sporting Record *tables* 332
Forsythe, William
biography **06:**78
dance 279
Forte of Ripley, Charles Forte, Baron, *or* Carmine Monforte (obit.) **08:**127
Fortis NV (Belgo-Dutch bank)
Belgium 373
financial crisis of 2008 174
Luxembourg 431
Netherlands, The 442
"Fortune" (Am. mag.) 239
Fortuño, Luis *il.* 359
Fossett, Steve
biography **06:**79
obituary **08:**127
fossil
Antarctica 361
anthropology 200
paleontology 252
fossil fuel (sidebar) **09:**216
found object (art) 211
Fournier, Jean-Louis 263
Fournier, Jennifer 278
Fowler, Mayhill 181
Fowles, John Robert (obit.) **06:**112
Fowlis, Julie 276
Foxx, Jamie, *or* Eric Bishop (biog.) **06:**79
FPO (pol. party, Aus.): *see* Freedom Party
FPR (pol. party, Rwanda): *see* Rwanda Patriotic Front
"Fraction of the Whole, A" (Toltz) literature in English 261, *il.*
Frame, Janet Paterson, *or* Janet Paterson Frame Clutha (obit.) **05:**111
Franca, Celia, *or* Celia Franks (obit.) **08:**127
France **09:**399; **08:**399; **07:**393; **06:**396; **05:**396; **04:**396; **03:**430; **02:**425; **01:**428; **00:**421
2002 elections (sidebar) **03:**431
2007 elections (sidebar) **08:**400
Beijing 2008 Olympic Games 194
church and state 300
financial crisis of 2008 174
Germany 403
international relations
Algeria 365
Belgium 373
China 385
Comoros 387
dependent states 359, 360
European Union 357
Georgia 402
India 411
Luxembourg 431
Morocco 440
Russia 455
Spain 465
Syria 470
United Arab Emirates 479
literature 262
military affairs 271
motion pictures 285, *table* 286
photography 213
stock markets *table* 218
see also WORLD DATA
Franciosa, Tony, *or* Anthony Papaleo (obit.) **07:**120
Francis, Freddie (obit.) **08:**128
Francis, Paula Marie: *see* Allen, Paula Gunn
Frank, Reuven (obit.) **07:**120
Frank O'Connor International Short Story Award
Literary Prizes *table* 256
Frankfurt Book Fair
German literature 261
Franklin, Madeleine: *see* L'Engle, Madeleine
Franks, Celia: *see* Franca, Celia
Fraser, George MacDonald (obit.) **09:**127
Freas, Frank Kelly (obit.) **06:**112
Freddie Mac, *or* Federal Home Loan Mortgage Corporation, *or* FHLMC (Am. corp.)
financial crisis of 2008 171, 172

Fredriksson, Gert Fridolf (obit.) **07:**120
free jazz 275
free trade
  ASEAN 358
  India 411
  New Zealand and China 443
Freed, Leonard (obit.) **07:**120
freedom of speech
  Azerbaijan 370
  Denmark 392
  Ethiopia 398
  Gambia, The 401
Freedom Party, *or* FPÖ (pol. party, Aus.) 369
freegan
  "Freegans—the Ultimate Recyclers, The" (special report) **09:**184
  skyrocketing food prices 183
Freeman, Alan Leslie (obit.) **07:**120
Freeman, Richard B.
  "Immigration's Economic Impact" (special report) **07:**486
freestyle skiing **09:**324; **08:**326; **07:**320; **06:**320; **05:**321; **04:**317; **03:**350, **02:**345; **01:**343; **00:**341
  Sporting Record *tables* 346
freestyle wrestling **09:**331; **08:**331; **07:**325; **06:**327; **05:**327
  Sporting Record *tables* 351
Freetown (S.L.)
  Sierra Leone 460
Freis, Edward David (obit.) **06:**112
Frelimo, *or* Mozambique Liberation Front (pol. party, Moz.) 440
French-Canadian literature: *see* Canadian literature
French literature **09:**262; **08:**262; **07:**242; **06:**230; **05:**230; **04:**230; **03:**251; **02:**250, **01:**250; **00:**238
French Open (tennis)
  Sporting Record *tables* 349
  tennis 327
French Polynesia 359
freshwater pollution 237
Fretwell, Elizabeth (obit.) **07:**120
Freud, Lucian 209, *il.*
Friedan, Betty, *or* Bettye Naomi Goldstein (obit.) **07:**120
Friedkin, William
  classical music 273
Friedman, Milton (obit.) **07:**121
Friedmann, E. Imre (obit.) **08:**128
Friedmann, Kornel: *see* Capa, Cornell
Friis, Janus (biog.) **08:**111
Froehlich, Harold Edward, *or* Bud Froehlich (obit.) **08:**128
Front Patriotique Rwandais (pol. party, Rwanda): *see* Rwanda Patriotic Front
Frontiere, Georgia Irwin (obit.) **09:**127
"Frontline, The" (play) 281
Frost Medal
  Literary Prizes *table* 256
"Frost/Nixon" (motion picture) 284
Fry, Christopher, *or* Christopher Harris (obit.) **06:**113
FSLN (pol. party, Nic.): *see* Sandinista Front
FSM (Micronesia): *see* Micronesia, Federated States of
FTC (U.S.): *see* Federal Trade Commission
FTSE 100: *see* "Financial Times" Stock Exchange index
Fuente, Julian de la 208
Fuentes, Carlos 265, *il.*
Fugard, Athol 261
Fujimori, Alberto 449
Fujishima, Akira (biog.) **05:**74
Fujita, Den (obit.) **05:**111
Fukuda, Yasuo
  Australia 368
  biography **08:**81
  Japan 419
Fukui, Toshihiko
  biography **05:**74
  Japan 420
Fulks, Sarah Jane: *see* Wyman, Jane
Fuller, Buckminster 212
FUNCINPEC (pol. party, Camb.) 378
functional magnetic resonance imaging, *or* fMRI
  genetics 251
fund-raising
  U.S. election of 2008 177
fundamental physics 293
Furcifer labordi (reptile) 247
Furtado, Celso Monteiro (obit.) **05:**111
Future Movement (pol. org., Leb.) 428
Future of Europe Summit 365
Fyodorov, Boris Grigoryevich (obit.) **09:**127

G

G-8 (internat. org.): *see* Eight, Group of
G-20 (internat. org.): *see* Twenty, Group of
G1 (elec.)
  smartphones 219, *il.*
Gabon **09:**401; **08:**401; **07:**395; **06:**398; **05:**398; **04:**397; **03:**432; **02:**427; **01:**430; **00:**423
  Equatorial Guinea 396
  wildlife conservation 238
  see also WORLD DATA
Gabonese Democratic Party, *or* Parti Démocratique Gabonais, *or* PDG (pol. party, Gab.) 401
Gabonese Union for Democracy and Development, *or* UGDD (pol. party, Gab.) 401
Gaborone (Bots.) 375
Gabre-Medhin, Tsegaye: *see* Tsegaye, Gabre-Medhin
Gades, Antonio, *or* Antonio Esteve Ródenas (obit.) **05:**111
Gaiman, Neil (biog.) **05:**75
Gajdusek, D. Carleton, *or* Daniel Carleton Gadjusek (obit.) **09:**128
Galápagos Islands (Ec.) 394
galaxy
  astronomy 295
Galbraith, John Kenneth (obit.) **07:**121
Gallagher, Tom
  "Tony Blair: A 10-Year Retrospective" (special report) **08:**198
Gallo, Ernest (obit.) **08:**128
Galloway, James 237
Gambia, The **09:**401; **08:**401; **07:**395; **06:**398; **05:**398; **04:**398; **03:**432, **02:**427; **01:**431; **00:**424
  see also WORLD DATA
gambling
  Antigua and Barbuda 366
Gamburtsev Mountains (Antarc.) 361
gamma ray burst 295
  space exploration 297
Ganesan, Gemini, *or* Ramaswamy Ganesh (obit.) **06:**113
gang (crime)
  El Salvador 396
Gap Inc. (Am. co.)
  fashions 240
Garang de Mabior, John (obit.) **06:**113
garbage
  Italy 417, *il.* 418
García, Alan
  biography **07:**82
  Peru 449
García Préval, René: *see* Préval, René
Gardasil 244
gardening **03:**216; **02:**217; **01:**213; **00:**201
Garinei, Pietro (obit.) **07:**121
Garland, Hank, *or* Walter Louis Garland (obit.) **05:**111
garment industry: *see* clothing and footwear industry
Garnaut, Ross 368
Garnett, Kevin 307, *il.* 308
Garrity, Frederick, *or* Freddie Garrity (obit.) **07:**122
Garrone, Matteo 285, *il.*
Garza, Matt 306
gasoline
  Australia 368
  business 214, *il.*
  Japan 420
  South Africa 464
  Turkmenistan 476
  United States 483
  see also petroleum
Gasparovic, Ivan 461
Gass, John Donald MacIntyre (obit.) **06:**113
Gates, Bill
  biography **07:**83
  computer companies 220
Gates, Melinda (biog.) **07:**83
Gates, Robert, *or* Robert Michael Gates (biog.) **07:**83
Gatski, Gunner, *or* Frank Gatski (obit.) **06:**113
Gaul, Charly (obit.) **06:**113
Gaultier, Jean Paul 239
Gay, Tyson 329
Gavoom, Maumoon Abdul 434
gays: *see* homosexuality
Gaza (Gaza Strip)
  Israel 416, *il.* 55
Gaza Strip (terr., Middle East)
  Israel 416
  military affairs 270
  wall closing *il.* 11
Gazprom (Russ. co.)
  business 217
  Turkmenistan 477
  Ukraine 478
Gbagbo, Laurent 388
GCC (internat. org.): *see* Gulf Cooperation Council
Gebrselassie, Haile 330
Geelong Cats (Austl. football club) 318
Geertz, Clifford James (obit.) **07:**122
Geingob, Hage 441
Geisman, Ella: *see* Alfvson, June
Gelman, Juan (biog.) **09:**79
Gencer, Leyla, *or* Ayshe Leyla Cevrekgil
  classical music 275
  obituary **09:**128
gender
  education 229
gene bank: *see* seed bank
genealogy
  Internet (sidebar) **04:**167
General Motors Corporation, *or* GM (Am. co.)
  business 214
  financial crisis of 2008 175, *il.* 173
generic drug 218
genetic disease, *or* genetic disorder
  traditional Chinese medicine 187
genetically modified food, *or* GM food
  botany 248
genetics **09:**251; **08:**251; **07:**230; **06:**217; **05:**218; **04:**218
  anthropology 200
  botany 248
  cancer 244
Geneva (Switz.)
  Large Hadron Collider 292
"Genius, the": *see* Charles, Ray
Gennes, Pierre-Gilles de (obit.) **08:**128
genocide
  Rwanda 455
genome
  cancer 244
  honeybees (sidebar) **09:**249
geochemistry **09:**225; **08:**227; **07:**198; **06:**167; **05:**168; **04:**169; **03:**180; **02:**183; **01:**181; **00:**166
Geoffrion, Bernie, *or* Bernard Joseph André (obit.) **07:**122
Geological Society of London (Brit. org.)
  geology 225
Geological Survey, United States (geol. org., U.S.): *see* United States Geological Survey
geology **09:**225; **08:**227; **07:**198; **06:**167; **05:**168; **04:**169; **03:**180; **02:**183; **01:**181; **00:**166
geophysics **09:**226; **08:**228; **07:**199; **06:**168; **05:**169; **04:**170; **03:**181; **02:**185; **01:**182; **00:**167
Georg-Büchner-Preis: *see* Büchner Prize
George, Elizabeth, *or* Susan Elizabeth George (biog.) **06:**80
Georgetown (Guy.)
  Guyana 407
Georgia **09:**401; **08:**402; **07:**396; **06:**398; **05:**398; **04:**398; **03:**433; **02:**427; **01:**431; **00:**424
  Belarus 372
  classical music 273
  cyberwarfare 222
  Estonia 397
  European Union 356
  France 400
  Germany 403
  Latvia 428
  Lithuania 431
  military affairs 270
  Poland 450
  Romania 453
  Russia-Georgia conflict 454, *il.*
  Shanghai Cooperation Organization 358
  Ukraine 478
  United States 485, *il.*
  Vatican City State 489
  see also WORLD DATA
Georgia (state, U.S.)
  U.S. state governments 486
geothermal energy
  Saint Kitts and Nevis 456
Gerdec (Alb.)
  Albania *il.* 364
Geremek, Bronisław (obit.) **09:**128
Gergiev, Valery
  classical music 273
Gerindra (pol. party, Indon.)
  Indonesia 412
German Book Prize
  German literature 261, *il.* 262
German literature **09:**261; **08:**261; **07:**241; **06:**227; **05:**228; **04:**227; **03:**249; **02:**248; **01:**247; **00:**235
Germanic literature **07:**241; **06:**227; **05:**228
Germany **09:**402; **08:**402; **07:**396; **06:**399; **05:**399; **04:**399; **03:**433; **02:**428; **01:**432; **00:**425
  air pollution 236
  arts and entertainment
    classical music 273
    dance 280
    motion pictures 285

financial crisis of 2008 170, 174
international relations
Austria 369
Denmark 393
European Union 357
France 400
Italy 418
Liechtenstein 430
sports
association football 315
Beijing 2008 Olympic Games 194
luge 309
stock markets *table* 218
see also WORLD DATA
Gervais, Ricky (biog.) **07:**84
Geschonneck, Erwin (obit.) **09:**128
Getty, Estelle, *or* Estelle Scher Gettleman (obit.) **09:**128
Gevelin, Philip (obit.) **05:**111
GFATM: *see* Global Fund to Fight AIDS, Tuberculosis and Malaria
Ghana **09:**404; **08:**404; **07:**398; **06:**401; **05:**401; **04:**401; **03:**436; **02:**431; **01:**435; **00:**427
see also WORLD DATA
Ghannouchi, Mohamed 475
Gharib, Jaouad 330
Ghazi, Abdul Rashid (obit.) **08:**129
Ghiaurov, Nicolai, *or* Nikolay Georgiev Gvaurov (obit.) **05:**111
Ghiṭānī, Jamāl al- 268, *il.*
Ghosananda, Maha, *or* Somdet Phra Maha Ghosananda (obit.) **08:**129
Giannini, Frida
biography **09:**79
fashions 239
Giardello, Joey, *or* Carmen Orlando Telleli (obit.) **09:**129
Gibbs, Sir Harry Talbot (obit.) **06:**113
Gibney, Frank Bray (obit.) **07:**122
Gibraltar 358, *il.*
Gibson, Mel (biog.) **05:**75
Gibson, William (obit.) **09:**129
"Gifted" (Lalwani) 254
Gilbert, Michael Francis (obit.) **07:**122
Gilchrist (Tex., U.S.)
hurricane *il.* 228
Gillani, Yousaf Raza 446
Gillis, Margie 278
Gillmor, Dan 180
Giordano, Gus, *or* August T. Giordano (obit.) **09:**129
Giordano, Paolo 263, *il.* 264
Giro d'Italia: *see* Tour of Italy
Giroux, Robert (obit.) **09:**129
Giuffre, Jimmy, *or* James Peter Giuffre (obit.) **09:**129
Giuliani, Rudolph
U.S. election of 2008 177
Giulini, Carlo Maria (obit.) **06:**113
Gizenga, Antoine 387
Glass, Ira (biog.) **09:**80
"Glass Heart, The" (ballet) 280, *il.*
GlaxoSmithKline (pharm. co.) 218
Glean, Carlyle 406
Glick, Thomas F.
"Intelligent Design—Scientific Concept or Religious View?" (special report) **07:**286
Global Crop Diversity Trust (internat. org.)
seed banks (sidebar) **09:**235
global financial crisis, *or* international financial crisis (special report) **09:**170
2008 financial crisis 218, 354
art 209
Australia 368
automobile racing 305
Bahrain 370
Belarus 372
Belgium 373
Brazil 376
Canada 381
Chile 383
China 384
computer companies 220
Czech Republic 392
Denmark 393
Dominican Republic 393, *il.*
El Salvador 396
English literature 255
Estonia 397
European Union 357
fashions 239
France 400
Germany 403
Haiti 408
Hungary 409
Iceland 410, *il.*
Ireland 416
Japan 420
Lebanon 429
Liechtenstein 430
Lithuania 431
Luxembourg 431
Morocco 439
multinational and regional organizations 357
Netherlands, The 442
Nigeria 444
Norway 445
Panama 448
Philippines 450
Poland 451
Portugal 451
Russia 453
Slovenia 462
South Korea 425
Sweden 469
Taiwan 471
Tunisia 475
Turkey 476
Ukraine 478
United Arab Emirates 479
United Kingdom 480
United States 482
Uruguay 488
U.S. election of 2008 179
Venezuela 490
Vietnam 491
Global Fund to Fight AIDS, Tuberculosis and Malaria, *or* GFATM
United Nations 356
Global Polio Eradication Initiative, *or* GPEI 243
global warming 227
Australia 368
"Climate Change—The Global Effects" (special report) **08:**170
zoology 247
globalization
"POWs and the Global War on Terrorism" (special report) **05:**250
sidebar **01:**191
Vatican City State 489
Glossop, Peter (obit.) **09:**129
glycan: *see* polysaccharide
GM (Am. co.): *see* General Motors Corporation
GM food: *see* genetically modified food
Gnassingbé, Faure, *or* Faure Essozimna Gnassingbé
biography **06:**80
Togo 473
GNP (econ.): *see* gross national product
GNP (pol. party, S.Kor.): *see* Grand National Party
Gobekli Tepe (archaeological site, Turkey) 201, *il.*
"God of Carnage" (play) 280, *il.* 281
Goddard, Jonathan 280
Godmanis, Ivars 428
Godolphin (horse stable)
Thoroughbred racing 313
"God's Own Country" (Raisin) 255
gold 217
Gold, Thomas (obit.) **05:**112
Goldemberg, José 237
"Golden Age, A" (Anam) 254
"Golden Calf, The" (art) 209
Golden Globe Awards
fashions 241
Film Awards *table* 286
Golden League (sports) 329
Golding, Bruce 419
Goldman Sachs Group (Am. corp.)
financial crisis of 2008 172
Goldsmith, Jerry, *or* Jerrald King Goldsmith (obit.) **05:**112
Goldsmith, Olivia, *or* Randy Goldfield (obit.) **05:**112
Goldstein, Bettye Naomi: *see* Friedan, Betty
Goldstine, Herman Heine (obit.) **05:**112
golf **09:**318; **08:**320; **07:**314; **06:**312; **05:**314; **04:**310; **03:**340; **02:**339; **01:**336; **00:**331
Sporting Record *tables* 342
Golijov, Osvaldo (biog.) **07:**84
Golub, Leon (obit.) **05:**112
"Gomorra" (Saviano) 264
"Gomorra," *or* "Gomorrah" (motion picture) 285, *il.*
Italy 418
Gonçalves, Vasco dos Santos (obit.) **06:**114
Gonsalves, Ralph 456
González, Ángel (obit.) **09:**129
González, Fernando 328
González Cruchaga, the Right Rev. Carlos (obit.) **09:**129
Gonzi, Kate *il.* 435
Gonzi, Lawrence 435, *il.*
Good Neighbour Policy (Chin. foreign policy)
China's relations with its neighbours (sidebar) **06:**381
"Good Soul of Szechuan, The" (play) 282
"Good to a Fault" (Endicott) 260
Goodman, Abraham: *see* Mann, Abby
Goodman, Dody, *or* Dolores Goodman (obit.) **09:**130
Goodpaster, Andrew Jackson (obit.) **06:**114
Goodwin, Doris Kearns, *or* Doris Helen Kearns (biog.) **07:**85
Goodwin-Day, Sebastian *il.* 274
Google Inc. (Am. co.)
computer companies 220
military affairs 271
GOP (pol. party, U.S.): *see* Republican Party
gorilla, *or* Gorilla gorilla
wildlife conservation 238, *il.* 237
Gorilla beringei beringei: *see* mountain gorilla
Gorilla gorilla gorilla: *see* western lowland gorilla
Gorman, Rudolph Carl (obit.) **06:**114
Gorshin, Frank
obituary **06:**114
Goss, Porter J., *or* Porter Johnston Goss (biog.) **05:**75
Gottlieb, Joseph Abraham: *see* Bishop, Joey
Gough, June: *see* Bronhill, June
Gould, Gordon, *or* Richard Gordon Gould (obit.) **06:**114
Goulet, Robert (obit.) **08:**129
Governor General's Literary Award
Literary Awards *table* 257
Gowdy, Curt (obit.) **07:**122
GPEI: *see* Global Polio Eradication Initiative
Grace, Patricia
literature in English 261
"Gracias" (album)
popular music 276
Gracq, Julien, *or* Louis Poirier (obit.) **08:**129
graft (surg.): *see* transplant
Graham, Colin (obit.) **08:**129
Graham, Robert (obit.) **09:**130
Gramm, Phil
financial crisis of 2008 172
Grammy Awards
classical music 274
jazz 276
popular music 277
Grand Canyon (canyon, Ariz., U.S.)
geology 225
Grand Challenge (U.S. govt.): *see* Urban Challenge
Grand National, *or* Grand National Handicap Steeplechase (Br. horse race)
steeplechasing 314
Grand National Party, *or* GNP (pol. party, S.Kor.)
South Korea 425
Grand Prix racing **09:**304; **08:**302; **07:**294; **06:**293; **05:**291; **04:**290; **03:**317; **02:**316; **01:**314; **00:**307
Sporting Record *tables* 332
Grand Slam (tennis)
tennis 327
"Grand Theft Auto IV" (video game)
computer companies *il.* 23
Grandage, Michael
biography **08:**81
theatre 281
Grande Comore (is., Com.)
Comoros 387
Grant, Joseph (obit.) **06:**114
Grant Park (park, Chicago, Ill., U.S.)
Obama celebration *il.* 49
graphic novel (sidebar) **05:**239
Grass, Günter
German literature 261
Grau, Enrique (obit.) **05:**112
Gray, L. Patrick, III, *or* Louis Patrick Gray III (obit.) **06:**114
Gray, Simon, *or* Simon James Holliday Gray (obit.) **09:**130
Gray, Spalding (obit.) **05:**112
GRB080319B (astron.)
astronomy 295
Great Ape Project
wildlife conservation 238, *il.* 237
Great Depression, *or* Depression of 1929, *or* Slump of 1929 (econ.)
financial crisis of 2008 170, 173
"Great Man, The" (Christensen)
American literature 259
Great South Gate (gate, Seoul, S.Kor.): *see* Namdaemun
great tit, *or* Parus major
zoology 247
Greceanii, Zinaida
Moldova 438
Greco-Roman wrestling **09:**331; **08:**331; **07:**325; **06:**327; **05:**327; **04:**323; **03:**356; **02:**350; **01:**349
Sporting Record *tables* 351
Greece **09:**405; **08:**405; **07:**399; **06:**402; **05:**402; **04:**402; **03:**437; **02:**431; **01:**435; **00:**430
financial crisis of 2008 174
Macedonia 431
see also WORLD DATA
green architecture, *or* sustainable architecture
"Green Architecture: Building for the 21st Century" (special report) **08:**192

Green Bay Packers (Am. football team) 317
Green Party (pol. party, Aus.) 369
Green Party (pol. party, Can.) 379
Green Party, *or* SZ (pol. party, Czech Republic) 391
Green Party (pol. party, Swed.) 469
Greene, Brian (biog.) **07:**85
greenhouse gas 233
  Japan 421
Greenland 358
Greenland Ice Sheet 362
Greenpeace (internat. org.)
  environment 233
Greens, the (pol. party, Fin.) 399
Greenwood, Ron, *or* Ronald Greenwood (obit.) **07:**122
Greer, Germaine 281
Gregory, Rogan (biog.) **06:**80
"Grekh" (Prilepin) 267
Grenada **09:**406; **08:**406; **07:**400; **06:**403; **05:**403; **04:**403; **03:**438; **02:**432; **01:**436; **00:**431
  see also WORLD DATA
Grenville, Kate (biog.) **07:**86
Grey Cup (Can. football) 318
  Sporting Record *tables* 341
gridiron football: *see* football
Griffey, Ken, Jr. 307
Griffin, Johnny
  jazz 276
  obituary **09:**130
Griffin, Merv, *or* Mervyn Edward Griffin (obit.) **08:**129
Griffin, Michael (biog.) **07:**86
Griffin Poetry Prize
  Literary Prizes *table* 257
Griffiths, Philip Jones
  obituary **09:**130
  photography 212
Grigoropoulos, Alexandros 405
Grigsby, Mary
  "The Freegans—the Ultimate Recyclers" (special report) **09:**184
Grimaldi, Albert-Alexandre-Louis-Pierre de: *see* Albert II, Prince
Grimaldi, Rainier-Louis-Henri-Maxence-Bertrand de: *see* Rainier III, Prince
Grimsdale, Richard Lawrence (obit.) **06:**114
Grimsson, Ólafur Ragnar
  biography **08:**81
  Iceland 410
Groban, Josh, *or* Joshua Winslow Groban (biog.) **09:**80
Groebli, Werner Fritz, *or* Frick Groebli (obit.) **09:**130
gross national product, *or* GNP (econ.)
  migrant remittances (sidebar) **07:**432
Grouès, Henri-Antoine: *see* Abbé Pierre
ground zero (terrorism site, N.Y.C., N.Y., U.S.): *see* World Trade Center
Growth Acceleration Program, *or* PAC (Braz.) 376
Gruau, René, *or* Renato Zavagli Ricciardelli delle Camminate (obit.) **05:**112
Gruevski, Nikola 431, *il.* 432
Grunwald, Henry (obit.) **06:**114
Guadeloupe 393
Guam 360
Guantánamo Bay (bay, Cuba)
  terrorism 355
  United States 484
Guardian Children's Fiction Prize
  English literature 258
Guatemala **09:**406; **08:**406; **07:**400; **06:**403; **05:**403; **04:**403; **03:**438; **02:**432; **01:**436; **00:**432
  Latin American literature 265
  see also WORLD DATA
Guatemala City (Guat.) 406
Gucci (It. co.) 239, *il.*
Guebuza, Armando 440
Guerrero, Dorothy-Grace
  "Perils of China's Explosive Growth, The" (special report) **08:**180
Guerrero, Lalo, *or* Eduardo Guerrero Jr. (obit.) **06:**114
Guest, Val, *or* Valmond Maurice Guest (obit.) **07:**123
Guillen, Ozzie, *or* Oswaldo José Guillen Barrios (biog.) **06:**81
Guinea **09:**407; **08:**407; **07:**401; **06:**404; **05:**404; **04:**404; **03:**438; **02:**433; **01:**437; **00:**432
  see also WORLD DATA
Guinea-Bissau **09:**407; **08:**407; **07:**401; **06:**404; **05:**404; **04:**404; **03:**439; **02:**433; **01:**437; **00:**432
  cholera 243
  see also WORLD DATA
Güines, Tatá, *or* Federico Arístides Soto Alejo (obit.) **09:**130
"Guitar Hero" (computer game) 223
Gujarāt (state, India)
  bus disaster *il.* 60
Gul, Abdullah
  Armenia 367
  biography **08:**82
  Turkey 475
  "Turkey's Secular/Islamic Conundrum" (special report) **09:**190
Gulf Cooperation Council, *or* GCC, *or* Gulf States (internat. org.)
  construction boom (sidebar) **08:**477
  Oman 446
gun control
  U.S. state governments 487
  United States (special report) **01:**228
Gunn, Thom William, *or* Thomson William Gunn (obit.) **05:**112
Gunter, Sue (obit.) **06:**115
Guo Jingjing
  biography **09:**81
  diving 326
Gupta, Modadugu (biog.) **07:**87
Gurgenidze, Lado 401
Gusenbauer, Alfred 369
Gusmão, Xanana 394
"Gustav" (hurricane) 228
  Cuba 390
Guy, Buddy, *or* George Guy (biog.) **05:**76
Guyana **09:**407; **08:**407; **07:**401; **06:**405; **05:**405; **04:**404; **03:**439; **02:**434; **01:**437; **00:**433
  see also WORLD DATA
Gyaurov, Nikolay Georgiev: *see* Ghiaurov, Nicolai
Gyllensten, Lars Johan Wictor (obit.) **07:**123
gymnastics **09:**320; **08:**321; **07:**315; **06:**314; **05:**315; **04:**311; **03:**341; **02:**340; **01:**337; **00:**333
  Sporting Record *tables* 343
Gypsy: *see* Roma
Gyurcsany, Ferenc 409

H

H5N1 (avian flu virus)
  "Bird Flu—The Next Human Pandemic?" (sidebar) **06:**490
Haarde, Geir H. 410
Haas, Ernst
  photography 213
Haas, Karl (obit.) **06:**115
Haas, Peter (obit.) **06:**115
Habash, George (obit.) **09:**131
hacker
  computer security 222
Hackett, Grant 326
Hackworth, David Haskell (obit.) **06:**115
Haden, Charlie 275
Hadid, Zaha 209, *il.* 210
Hadley, Jerry (obit.) **08:**130
Haeberlin, Paul (obit.) **09:**131
Hagen, Earle Harry (obit.) **09:**131
Hagen, Uta Thyra (obit.) **05:**113
Hägg, Gunder (obit.) **05:**113
Haider, Jörg
  Austria 369
  obituary **09:**131
Hailey, Arthur (obit.) **05:**113
Haines, Connie, *or* Yvonne Marie Antoinette JaMais (obit.) **09:**132
"Hairspray" (mus. thea.) 282
Haiti **09:**408; **08:**408; **07:**402; **06:**405; **05:**405; **04:**405; **03:**440; **02:**434; **01:**438; **00:**433
  Dominican Republic 394
  school collapse *il.* 58
  skyrocketing food prices 182
  see also WORLD DATA
Hakuho 331
Halberstam, David (obit.) **08:**130
Halifax Bank of Scotland (bank, U.K.) 480
Hall, Donald, *or* Donald Andrew Hall, Jr. (biog.) **07:**87
Hall, Kenneth 419
Hall, Oakley Maxwell, *or* O. M. Hall, *or* Jason Manor (obit.) **09:**132
Hallaren, Mary Agnes (obit.) **06:**115
Hallé Orchestra (Br. orchestra) 274
Halonen, Tarja 398
Halverstadt, Constance: *see* Cummings, Constance
Hamas (Pal. Islamic movement)
  Gaza Strip *ils.* 11, 55
  Israel 416, *il.* 417
  military affairs 270
  Palestinian election (sidebar) **07:**413
Hambletonian Stake (horse race)
  harness racing 314, *il.*
Hamburger, Philip (obit.) **05:**113
Hamburger, Yosef: *see* Harel, Yossi
Hamels, Cole 306
Hamengkubuwono X 412
Hamilton, Lewis 304, *il.*
Hampshire, Sir Stuart Newton (obit.) **05:**113
Hamza El Din (obit.) **07:**123
Han (As. people)
  China 383
Han Duck-soo 425
Han Seung-soo 425
Hancock, Herbie
  jazz 275
  popular music 277
hand, foot, and mouth disease
  health and disease 243
handicapped: *see* disabled
Handley, Vernon George, *or* Tod Handley (obit.) **09:**132
Hanna, Arthur Dion 370
Hannon, Ezra: *see* Hunter, Evan
Hanoi (Viet.) 490
Hans Adam II, Prince 430
Hansen, Joseph (obit.) **05:**113
Hanson of Edgerton, James Edward Hanson, Baron (obit.) **05:**113
Hanura (pol. party, Indon.) 412
haplotype, *or* haploid genotype
  anthropology 201
"Happy-Go-Lucky" (motion picture) 284
Harald V (k. of Nor.) 445
Harare (Zimb.) 492
hard drive
  computer systems 224
"Harder They Come, The" (mus. thea.) 281
Hardwick, Elizabeth (obit.) **08:**130
Harel, Yossi, *or* Yosef Hamburger (obit.) **09:**132
Hargeysa (Som.) 462
Hargis, Billy James (obit.) **05:**114
Haring, Keith *il.* 25
Hariri, Rafiq Bahaa Edine al-, *or* Rafik Hariri (obit.) **06:**115
Harkness, Ned (obit.) **09:**132
Harman, Buddy 277
harness racing **09:**314; **08:**315; **07:**309; **06:**306; **05:**308; **04:**304; **03:**333; **02:**332; **01:**330; **00:**324
Harper, Stephen, *or* Stephen Joseph Harper
  biographies **07:**87; **05:**76
  Canada 379
"Harper Regan" (play) 282
Harrell, Graham 317
Harrer, Heinrich (obit.) **07:**123
Harrington, Carey Bell: *see* Bell, Carey
Harrington, Pádraig
  biography **08:**82
  golf 319
Harris, Christopher: *see* Fry, Christopher
Harris, René, *or* René Reynaldo Harris
  Nauru 441
  obituary **09:**132
Harry, Prince: *see* Henry of Wales, Prince
Hart, Johnny (obit.) **08:**130
Hart, Pro (obit.) **07:**123
Hart Trophy (sports award) 321
Hartack, Bill, *or* William John Hartack, Jr. (obit.) **08:**130
Hartigan, Grace (obit.) **09:**133
Harvey-Jones, Sir John Henry (obit.) **09:**133
Hasek, Dominik 322
Hashimoto, Ryūtarō (obit.) **07:**123
Hasina Wazed, Sheikh 371
Haskins, Don, *or* Donald L. Haskins (obit.) **09:**133
Hasler, Otmar 430
Hass, Robert 259
Hatton, Ricky 311
Haughey, Charles James (obit.) **07:**124
Haunch of Venison (art gallery, N.Y.C., N.Y., U.S.) 209
"Hauts Murs, Les" (motion picture) 285
Havana (Cuba) 390
Havemann, Joel
  "Financial Crisis of 2008, The" (special report) **09:**170
Hawaii, *or* Hawaiian Islands, *or* Sandwich Islands (state, U.S.)
  U.S. state governments 485
Hawk, Tony, *or* Anthony Frank Hawk (biog.) **06:**81
Hawking, Stephen W.
  matter and antimatter research 292
Hawkins, Sally
  Film Awards *table* 286
Hawthorn Hawks (Austl. football club) 318
Hayden, Melissa, *or* Mildred Herman (obit.) **07:**124
Hayes, Isaac, *or* Isaac Lee Hayes, Jr.
  obituary **09:**133
  popular music 277
Haymarket Theatre (thea., London, U.K.) 281
Haynes, Johnny (obit.) **06:**115

Hazare, Vijay (obit.) **05:**114
Hazlewood, Lee (obit.) **08:**131
HB (Am. dance co.): *see* Houston Ballet
HD 40307 (star) 295
HD DVD (tech.) 224
HDZ (pol. party, Croatia): *see* Croatian Democratic Union
He Kexin 320
Healey, Jeff, *or* Norman Jeffrey Healey (obit.) **09:**133
health **09:**242; **08:**242; **07:**213; **06:**200; **05:**200; **04:**201; **03:**221; **02:**222; **01:**218; **00:**206
  Alzheimer disease (sidebar) **02:**225
  Botox (sidebar) **03:**224
  childhood obesity (sidebar) **06:**203
  SARS (special report) **04:**204, *map* 201
  socialized medicine (special report) **01:**222
  type 2 diabetes (sidebar) **08:**247
  U.S. state governments 487
  United Nations 355
health care
  Austria 369
  Bulgaria 377
  Czech Republic 392
  Hungary 409
  traditional Chinese medicine 186
  United States 484
  WHO report (special report) **01:**222
health insurance
  U.S. state governments 487
heart (anat.)
  health and disease 245
  heart-cell experiment *il.* 9
HeartNet Ventricular Support System 245, *il.*
Heath, Sir Edward Richard George (obit.) **06:**116
Heath, Percy Leroy (obit.) **06:**116
Heatley, Dany 322
Heatley, Norman George (obit.) **05:**114
Hebrew literature **06:**235; **05:**235; **04:**235; **03:**257; **02:**256; **01:**256; **00:**244
Hecht, Anthony Evan (obit.) **05:**114
Heigl, Katherine Marie (biog.) **09:**81
Heimberger, Edward Albert: *see* Albert, Eddie
Heisman Trophy (sports award) 317
HELCOM (Eur. org.): *see* Baltic Marine Environment Protection Commission
"Helium Brick aka Summer Snow" (art) 211
helium-uranium-thorium dating
  geology 226
Hellebaut, Tia 328
Heller, Michael, *or* Michal Kazimierz Heller
  biography **09:**82
  religion 301
Helms, Don 277
Helms, Jesse Alexander (obit.) **09:**133
Helmsley, Leona (obit.) **08:**131
Helsinki (Fin.) 398
"Hemingses of Monticello, The" (Gordon-Reed) 259
Hench, John (obit.) **05:**114
Henderson, Skitch, *or* Lyle Russell Cedric Henderson (obit.) **06:**116
Henin, Justine, *or* Justine Henin-Hardenne (biog.) **05:**76
Henri (Luxem. noble)
  Luxembourg 431
Henry, Thierry, *or* Thierry Daniel Henry (biog.) **05:**77
Henry of Wales, Prince, *or* Prince Harry, *or* Prince Henry Charles Albert David
  United Kingdom 481, *il.*
Heparin (drug) 242
  China 385
hepatitis B
  pancreatic cancer 245
Heper, Metin
  "Turkey's Secular/Islamic Conundrum" (special report) **09:**190
heptathlon 328
"Her Naked Skin" (play) 282
herb, *or* potherb (culinary and medicinal plant)
  traditional Chinese medicine 187, *il.*
Herbert, Don, *or* Donald Jeffry Herbert (obit.) **08:**131
Herbert, Sir Wally, *or* Walter William Herbert (obit.) **08:**131
"Here Lies Arthur" (Reeve) 258
Herman, Mildred: *see* Hayden, Melissa
"hermandad de la buena suerte, La" (Savater) 264
Hernández, María Julia (obit.) **08:**131
heroin
  Switzerland 470
Herrera Campíns, Luis (obit.) **08:**131
Hersh, Seymour, *or* Seymour Myron Hersh (biog.) **05:**77
Hertzberg, Arthur (obit.) **07:**124
Hess Corp. (Am. corp.): *see* Amerada Hess
Heston, Charlton, *or* John Charlton Carter (obit.) **09:**134
Hewlett-Packard Company, *or* HP (Am. co.) 220
Hezbollah (Leb. org.) 428
  Syria 470
HHK (pol. party, Arm.): *see* Republican Party of Armenia
Hib disease 245
Hibbert, Oscar: *see* Delgado, Junior
Hickey, James Aloysius Cardinal, *or* James Cardinal Hickey (obit.) **05:**114
Hickox, Richard (obit.) **09:**134
Higgensen, Doris: *see* Troy, Doris
Higginson, Lynda: *see* Lee-Potter, Lynda
Higgs, Peter 292
United Nations High Commissioner for Human Rights, Office of the, *or* OHCHR (internat. org.) 365
high jump 328
"High School Musical 3: Senior Year" (motion picture) 284
high seas (maritime law)
  piracy (special report) **06:**210
higher education **09:**232; **08:**232; **07:**204; **06:**188; **05:**190; **04:**189; **03:**208; **02:**210; **01:**206; **00:**193
  distance learning (sidebar) 231
  Muslim head-scarfs at Turkish universities *ils.* 191, 190
  Slovenia 462
Higher Education Act (U.S.) 232
Hightower, Rosella (obit.) **09:**134
highway: *see* road
Hildegarde, *or* Hildegarde Loretta Sell (obit.) **06:**116
Hill, Arthur (obit.) **07:**124
Hill, Joseph (obit.) **07:**124
Hill, Oliver, *or* Oliver White (obit.) **08:**132
Hill, Phil, *or* Philip Toll Hill, Jr. (obit.) **09:**135
Hill-Norton, Peter John, *or* Baron Hill-Norton of South Nutfield (obit.) **05:**114
Hillary, Sir Edmund Percival (obit.) **09:**135
Hilleman, Maurice Ralph (obit.) **06:**116
Hiller, Stanley, Jr. (obit.) **07:**124
Hillerman, Tony, *or* Anthony Grove Hillerman (obit.) **09:**135
Hillery, Patrick John (obit.) **09:**135
Hillier, Rick, *or* Richard J. Hillier (biog.) **09:**82
Himachal Pradesh (state, India)
  stampede *il.* 61
Hinckley, Gordon Bitner
  obituary **09:**136
  religion 301
Hinds, Justin (obit.) **06:**116
Hinds, Sam 407
Hinduism
  Maha Kumbh Mela (sidebar) **02:**308
  religion 298, *tables* 302, 303
Hinton, William Howard (obit.) **05:**114
hip-hop 277
Hirsch, Crazylegs, *or* Elroy Leon Hirsch (obit.) **05:**114
Hirst, Damien 209
Hirvonen, Mikko 305
Hispanic American
  U.S. Hispanic population *maps* **02:**515
Hitchcock, Hugh Wiley (obit.) **08:**132
HIV/AIDS **07:**213; **06:**201; **05:**200; **04:**202; **03:**222; **02:**223; **01:**219; **00:**206
  Africa's struggle against AIDS (special report) **00:**450, *map*
  health and disease 242
  Lesotho 429
  South African National Defence Force 271
  Swaziland 469
  United Nations 356
Ho, Don (obit.) **08:**132
Hobbs, Bruce Robertson (obit.) **06:**116
hockey: *see* field hockey; ice hockey
Hodak, Zvonimir 389
Holfa, Reese 328
Hoffman, Philip Seymour
  biography **07:**88
  motion pictures 284
Hoffmann, Ferenc: *see* Kishon, Ephraim
Hofmann, Albert (obit.) **09:**136
Hofstetter, Ernest (obit.) **08:**132
Hogan, Vickie Lynn: *see* Smith, Anna Nicole
Hogg, Kathleen Erin: *see* Woodiwiss, Kathleen
Holloway, Natalee 359
Holm, Eleanor, *or* Eleanor Holm-Jarrett, *or* Eleanor Holm Whalen (obit.) **05:**115
Holmes, Martha Louise (obit.) **07:**125
Holmes Felious, Odetta: *see* Odetta
Holtzman, Jerome (obit.) **09:**136
Holyfield, Evander 310
Holzer, Jenny 212
home education, or home schooling (sidebar) **00:**193
  distance learning (sidebar) **09:**231
"Homecoming, The" (play) 282
homelessness (sociol.)
  Madagascar 432
  Mozambique 440
Homer, Winslow 212
hominin
  anthropology 200, *il.*
Homo antecessor
  anthropology 200
Homo neanderthalensis (anthro.): *see* Neanderthal
homosexuality
  Anglican bishop controversy 188
  Gambia, The 401
  legal debate over same-sex marriage (special report) **05:**206
  religion 299
Honda, Kenichi (biog.) **05:**74
Honda Motor Company, Ltd. (Japanese corp.)
  automobile racing 305
  business 215
  classical music 274
Honderich, Beland (obit.) **06:**116
Honduras **09:**408; **08:**408; **07:**402; **06:**406; **05:**406; **04:**405; **03:**440; **02:**435; **01:**438; **00:**434
  see also WORLD DATA
honeybee: *see* domestic honeybee
Hong Kong (admin. reg., China)
  stock markets *table* 218
Honiara (Sol.Is.) 462
hoof-and-mouth disease: *see* foot-and-mouth disease
Hooft Prize, *or* P. C. Hooftprijs
  Literary Prizes *table* 257
Hookes, David William (obit.) **05:**115
Hopkins, Sir Anthony, *or* Anthony Hopkins 274
Hopkins, Bernard
  biography **05:**78
  boxing 310
Horn, Shirley Valerie (obit.) **06:**117
Horner, Red, *or* Reginald Horner (obit.) **06:**117
Hosseini, Khaled (biog.) **08:**83
hostage-taking
  Colombia 386
  Egypt 395
  Mali 434
Houngbo, Gilbert 473
Hounsfield, Sir Godfrey Newbold (obit.) **05:**115
House of Holland (Br. co.)
  fashions 239, *il.* 240
housing
  financial crisis of 2008 170, *il.*
  Ireland 415
  United Kingdom 480
Houston, James Archibald (obit.) **06:**117
Houston Ballet, *or* HB (Am. ballet co.) 278
Howard, Michael (biog.) **05:**78
Howard, Ryan 306
Howard G. Buffett Foundation
  food aid 183
Howell, Francis Clark (obit.) **08:**132
Howells, William White (obit.) **06:**117
Hoy, Christopher
  Beijing 2008 Olympic Games 194
  biography **09:**83
  cycling 312
HP (Am. co.): *see* Hewlett-Packard Company
Hrawi, Elias (obit.) **07:**125
hryvnya
  Ukraine 479
HSS (pol. party, Croatia): *see* Croatian Peasant Party
"Hu guang shan se" (novel by Zhou Daxin) 269
Hu Jintao
  China 383
  Good Neighbour Policy (sidebar) **06:**381
  Japan 421

Hu Shuli (biog.) **08:**83
Hua Guoleng, *or* Su Zhu (obit.) **09:**136
Huang Ju (obit.) **08:**132
Huangzhiguo Traditional Chinese Massage and Acupuncture Clinic (clinic, Shanghai, China)
moxa treatment *il.* 186
Hubbard, Freddie, *or* Frederick Dewayne Hubbard (obit.) **09:**136
Hubbard, Jerry Reed: *see* Reed, Jerry
Hübbe, Nikolaj 278
Hubble Space Telescope 296
astronomy 294, *il.* 295
Huckabee, Mike
U.S. election of 2008 177
Huerta, Baldemar: *see* Fender, Freddy
Huffington Post, The (Web site)
citizen journalism 181, *il.*
Hufner, Tatjana309
Hughes, Barnard, *or* Bernard Hughes (obit.) **07:**125
Hughes, Brendan (obit.) **09:**137
Hughes, Emlyn Walter (obit.) **05:**115
Human Genome Project (special report) **01:**238
human migration **06:**289; **05:**289; **04:**288; **03:**315; **02:**314; **01:**312; **00:**304
human nutrition: *see* nutrition, human
human rights **06:**287; **05:**287; **04:**286; **03:**311; **02:**312; **01:**308; **00:**301
ASEAN 358
Azerbaijan 370
Cameroon 379
China 383
Egypt 395
Ethiopia 398
Gambia, The 401
Kazakhstan 423
Malaysia 434
Mexico 437
"Roma—Europe's Largest Minority, The" (special report) **06:**290
Togo 474
United Arab Emirates 479
United Nations 355
Uzbekistan 488
see also civil rights
Human Rights Council (UN) 355
United Arab Emirates 479
Human Rights Protection Party (pol. party, Samoa) 457
human trafficking
Benin 373
humanitarian aid
Darfur crisis 467
Lesotho 429
Mozambique 440
Somalia 463
United Nations 355
United States *il.* 485
Humbard, Rex, *or* Rev. Alpha Rex Emmanuel Humbard (obit.) **08:**132
Hun Sen 378
"Hundert Tage" (Barfuss) 261
Hungarian Socialist Party, *or* MSzP (pol. party, Hung.) 409
Hungary **09:**409; **08:**409; **07:**403; **06:**406; **05:**406; **04:**406; **03:**441; **02:**435; **01:**439; **00:**435
financial crisis of 2008 174
motion pictures 288
Slovakia 461
see also WORLD DATA
hunger
skyrocketing food prices 182
United Nations 354
"Hunger" (motion picture) 284
Hunt, E. Howard, Jr., *or* Everette Howard Hunt, Jr. (obit.) **08:**133
Hunt, Lamar (obit.) **07:**125
Hunt Lieberson, Lorraine (obit.) **07:**125
Hunter, Bob, *or* Robert Hunter (obit.) **06:**117
Hunter, Evan, *or* John Ahhott, *or* Curt Cannon, *or* Hunt Collins, *or* Ezra Hannon, *or* Salvatore Albert Lombino, *or* Richard Marsten, *or* Ed McBain (obit.) **06:**117
Huntington, Samuel Phillips (obit.) **09:**137
hurricane
Cuba 390
disasters 59
Haiti 408
meteorology and climate 228, *il.*
see also "Wilma"
Hurwicz, Leonid (obit.) **09:**137
Husayni, Muhammad 'Abd al-Ra'uf al-Qudwah al-: *see* Arafat, Yasir
Husbands, Sir Clifford 371
Hussein, Nur Hassan 462
Hussein, Saddam, *or* Saddam Hussein al-Tikriti (obit.) **07:**125
Hussey, Ruth, *or* Ruth Carol O'Rourke (obit.) **06:**117
Hussey of North Bradley, Marmaduke James Hussey, Baron (obit.) **07:**126
Hutton, Betty, *or* "The Blonde Bombshell" (obit.) **08:**133
Hutton, John 480
Hutu (people)
Congo, Democratic Republic of the 387
Huygens (space probe): *see* Cassini-Huygens
Hwang Woo Suk (biog.) **05:**78
hybrid car
environment (sidebar) **05:**193
Hyde, Henry John (obit.) **08:**133
hydroelectric power, *or* hydropower
Bhutan 374
Guyana 408
Nicaragua 443
hydrogen
physical chemistry 290, *il.*
Hyland, Frances (obit.) **05:**115
hyphal ring
paleontology 253
Hytner, Nicholas, *or* Nicholas Robert Hytner
biography **05:**79
theatre 282

I

"I Give You All My Money" (art) *il.* 211
i-LIMB
MacRobert Award *il.* 29
"I Want to Believe" (art) 211
IAAF: *see* International Association of Athletics Federations
IAEA (internat. org.): *see* International Atomic Energy Agency
IAJE (internat. org.): *see* International Association for Jazz Education
Iakovos, *or* Demetrios Coucouzis (obit.) **06:**117
Iberê Camargo Museum (mus., Porto Alegre, Braz.)
architecture 208
IBEX (U.S. satellite): *see* Interstellar Boundary Explorer
IBF (internat. sports org.): *see* International Boxing Federation
Ibrahim, Anwar bin
biography **09:**83
Malaysia 433, *il.*
ICANN, *or* Internet Corporation for Assigned Names and Numbers (internat. org.) 221
ICC (internat. law): *see* International Criminal Court
ice dancing 323
Sporting Record *tables* 343
ice hockey **09:**321; **08:**322; **07:**316; **06:**314; **05:**316; **04:**312; **03:**342; **02:**341; **01:**338; **00:**334
Sporting Record *tables* 343
ice skating **09:**322; **08:**323; **07:**317; **06:**316; **05:**318; **04:**314; **03:**343; **02:**342; **01:**339; **00:**338
Sporting Record *tables* 343
Iceland **09:**410; **08:**410; **07:**404; **06:**407; **05:**407; **04:**407; **03:**441; **02:**436; **01:**440; **00:**436
financial crisis of 2008 174
see also WORLD DATA
Ichikawa, Kon (obit.) **09:**137
ICJ (internat. court): *see* International Court of Justice
ICN (educ.): *see* Iowa Communications Network
ICTR: *see* International Criminal Trihunal for Rwanda
ICTY (internat. org.): *see* International Criminal Tribunal for the Former Yugoslavia
ICU (Af. militia): *see* Islamic Courts, Union of
ID: *see* intelligent design
IDP (soc.): *see* internally displaced person
Idemia, Apisai 477
Ieronymos (Greek archbishop) 406
IFPRI (UN): *see* International Food Policy Research Institute
Ifukube, Akira (obit.) **07:**126
IIHF (sports org.): *see* International Ice Hockey Federation
"Ike" (hurricane)
Cuba 390
environment 234
meteorology and climate 228, *il.*
Ike, Chukwuemeka 260
"Il y a longtemps que je t'aime" (motion picture): *see* "I've Loved You So Long"
Ilchenko, Larissa 326
illegal immigration
Italy 418
Malta 435
Mexico 437
U.S. state governments 486
Illinois (state, U.S.) 485
Iloilo, Ratu Josela, *or* Ratu Josefa Iloilovatu Uluivuda 398
Ilulissat Declaration (internat. agreement) 358
Ilves, Toomas Hendrik 397
"Imagine This" (Adeniran) 260
Imamura, Shohei (obit.) **07:**126
IMC (internat. pol. org.): *see* International Monitoring Council
IMF (UN agency): *see* International Monetary Fund
Imlah, Mick
English literature 254
Immelman, Trevor 319
Immerwahr, Werner Adolf Martin: *see* Ingram, Vernon Martin
immigration
Bahamas, The 370
Denmark 392
English literature 254
Germany 402
immigration backlash (special report) **03:**396
Italy 418
South Africa 464, *il.*
Spain 465
United States
"Immigration's Economic Impact" (special report) **07:**486
Immonen, Riitta Narhi (obit.) **09:**137
IMO (maritime org.): *see* International Maritime Organization
"Impératif catégorique" (Roubaud)
French literature 262
Imperial Diet (Japanese govt.): *see* Diet
"Impressing the Czar" (ballet) 279
in-yō (Eastern philosophy): *see* yinyang
INA (pol. party, Iraq): *see* Iraqi National Accord
Iñárritu, Alejandro González (biog.) **08:**84
InBev, *or* Interbrew (Belg. co.) 373
"Inconvenient Truth, An" (motion picture) 273
India **09:**410; **08:**410; **07:**404; **06:**407; **05:**407; **04:**407; **03:**442; **02:**436; **01:**440; **00:**436
Bollywood (sidebar) **00:**284
business 215, *table* 218
cricket 311
education 230, *il.*
environment 236
fashions 239
"India's Computer Revolution" (sidebar) **01:**442
international relations
Afghanistan 363
Bhutan 374
China 385
Japan 421
Myanmar 441
motion pictures 289
Mumbai terrorist attack (special report) **09:**192
religion 298
skyrocketing food prices 182
space exploration 297
Tehelka.com sting (sidebar) **02:**438
United States 485
see also WORLD DATA
India-Africa Summit
India 411
Indian, American: *see* Native American
Indian Ocean
dependent states 360
Indian Ocean tsunami (2004): *see* tsunami
Indian Premier League, *or* IPL (cricket) 311
"Indiana Jones and the Kingdom of the Crystal Skull" (motion picture) 284
Indianapolis 500 (auto race) 305
Sporting Record *tables* 332
"Indignation" (Roth)
American literature 258
Indohyus
paleontology 253
Indonesia **09:**412; **08:**412; **07:**405; **06:**408; **05:**408; **04:**409; **03:**443; **02:**438; **01:**443; **00:**438
ASEAN 358
avian influenza 243, 356
post-Suharto transition (special report) **02:**440, *map*
see also WORLD DATA
Indonesian Democratic Party of Struggle, *or* PDI-P (pol. party, Indon.)
Indonesia 412

industrial chemistry **09:**291
industry **05:**183; **04:**182; **03:**200; **02:**203; **01:**201; **00:**187
Indy Racing League, *or* IRL (Am. racing org.) 305
Sporting Record *tables* 332
infant mortality rate
Angola 366
Sierra Leone 460
infectious disease **06:**201; **05:**202; **04:**201; **03:**221; **02:**223; **01:**218; **00:**206
infectious salmon anemia, *or* ISA
Chile 383
inflation
Argentina 366
Australia 368
Austria 369
Azerbaijan 370
Bangladesh 371
Burkina Faso 378
business 217
China 385
Croatia 390
Czech Republic 392
Dominican Republic 394
Egypt 395
Estonia 397
Ethiopia 397
Ghana 404
Greece 405
Hungary 410
Iceland 410
India 411
Indonesia 412
Iran 413
Iraq 414
Ireland 415
Jordan 422
Latvia 428
Macedonia 432
Malaysia 434
Mexico 437
Montenegro 439
Morocco 439
Myanmar 440
Nicaragua 443
Norway 445
Pakistan 447
Peru 449
Philippines 450
Poland 451
Portugal 451
Qatar 452
Russia 453
Singapore 461
skyrocketing food prices 183
Slovenia 462
South Africa 464
Spain 465
Sri Lanka 466
Swaziland 469
Tunisia 475
Ukraine 479
United Kingdom 479, 481
Uruguay 488
Vietnam 490
Zimbabwe 492, *il.*
influenza, *or* flu
molecular biology and genetics 252, *il.*
information processing, *or* information technology, *or* IT **04:**162; **03:**170; **02:**175; **01:**171; **00:**151
wireless technology (special report) **03:**178
information system **09:**219; **08:**220; **07:**191; **06:**160; **05:**161; **04:**162; **03:**170; **02:**175; **01:**171; **00:**151
quantum physics 292
infrastructure
Romania 453
South Africa 464
United States 483
Ingraham, Hubert 370
Ingram, Vernon Martin, *or* Werner Adolf Martin Immerwahr (obit.) **07:**126
"inizio e in autunno, L'" (Sanvitale) 263
Inman, John, *or* Frederick John Inman (obit.) **08:**133
Inoni, Ephraim 379
"Inopportune: Stage One" (art) 211
insect
skyrocketing food prices 183
zoology 247
installation art 209, *il.* 210
"Instrucciones para salvar el mundo" (Montero) 264
insurance
financial crisis of 2008 171
insurgency, *or* insurgent attacks
military affairs 270
Philippines 449
Somalia 462
Yemen 452
Intel Corp. (Am. corp.)
computer companies 220
Magalhães computer development 451
intelligent design, *or* ID
"Intelligent Design—Scientific Concept or Religious View?" (special report) **07:**286
Inter Milan (It. foothall team) 419
Inter-Services Intelligence, *or* ISI (Pak. govt.) 447
Interbrew (Belg. co.): *see* InBev
interest rate
Australia 368
China 385
financial crisis of 2008 170
Japan 421
Intergovernmental Panel on Climate Change, *or* IPCC (internat. org.)
climate change (special report) **08:**170
Internal Macedonian Revolutionary Organization-Democratic Party for Macedonian National Unity (pol., party, Maced.) 431
internally displaced person, *or* IDP
Angola 366
Congo, Democratic Republic of the *il.* 387
Kenya 423, *il.*
Sri Lanka *il.* 466
Sudan, The 468, *map*
United Nations 355
International Association for Jazz Education, *or* IAJE (internat. org.) 275
International Association of Athletics Federations, *or* IAAF
track and field sports 328
International Atomic Energy Agency, *or* IAEA (internat. org.) 355
International Boxing Federation, *or* IBF (internat. sports org.) 310
International Center of Photography (N.Y.C., N.Y., U.S.)
photography 213
International Court of Justice, *or* ICJ, *or* World Court (UN)
Cameroon 379
Gabon 401
Kosovo 426, 459
International Criminal Court, *or* ICC
Arab League 358
Sudan, The 466
Uganda 478
United Nations 355
International Criminal Police Organization (internat. org.): *see* Interpol
International Criminal Tribunal for Rwanda, *or* ICTR 455
International Criminal Tribunal for the Former Yugoslavia, *or* ICTY (internat. org.)
Macedonia 432
Serbia 459
international financial crisis: *see* global financial crisis
International Food Policy Research Institute, *or* IFPRI
skyrocketing food prices 182
International Geological Congress 225
International Ice Hockey Federation, *or* IIHF (sports org.) 322
International IMPAC Dublin Literary Award
Literary Prizes *table* 256
international law **07:**218; **06:**205; **05:**205; **04:**207; **03:**225; **02:**226; **01:**224; **00:**212
International Maritime Organization, *or* IMO
environment 237
international migration: *see* refugee
International Monetary Fund, *or* IMF (UN agency)
Australia 368
European Union
Iceland 410
Italy 418, 357
Latvia 428
Gambia, The 401
Japan 420
Pakistan 447
Tajikistan 472
Ukraine 479
United Nations 354
International Monitoring Council, *or* IMC (internat. pol. org.)
Northern Ireland 481
International Olympic Committee
Beijing 2008 Olympic Games 194
International Organization for Migration, *or* IOM
Bhutan 374
international payment **04:**176; **03:**190; **02:**193; **01:**190; **00:**174
International Potato Centre, *or* IPC (internat. agri. org.)
seed banks (sidebar) **09:**235
international relations: *see* world affairs
International Rice Research Institute, *or* IRRI (internat. agri. org.)
seed banks (sidebar) **09:**235
International Rugby Board, *or* IRB 318
International Space Station, *or* ISS
space exploration 296
international trade **06:**174; **05:**175; **04:**176; **03:**190; **02:**193; **01:**190; **00:**174
Guatemala 406
see also free trade
Internet **09:**221; **08:**221; **07:**194; **06:**164; **05:**165; **04:**162; **03:**170; **02:**178; **01:**174; **00:**151
China 383
Chinese literature 269
classical music 274
Cuba 390
DARPA (sidebar) **09:**272
distance learning (sidebar) **09:**231
fan fiction (sidebar) **02:**277
genealogy (sidebar) **04:**167
geology 225
military affairs 271
online gaming (sidebar) **07:**196
Persian literature 267
privacy concerns (special report) **01:**178
social networking (sidebar) **08:**225
Turkmenistan 476
Web logs (sidebar) **03:**273
Internet Corporation for Assigned Names and Numbers (internat. org.): *see* ICANN
Internet gambling
Antigua and Barbuda 366
Interpol, *or* International Criminal Police Organization (internat. org.)
South Africa 464
Interstellar Boundary Explorer, *or* IBEX
unmanned satellites 297
Inuit (people)
Arctic Regions 362
"Invasion '68: Prague" (phot. exhibit) 212
"Invention of Everything Else, The" (Hunt) 258
investment bank, *or* merchant bank
financial crisis of 2008 171
IOM: *see* International Organization for Migration
Iowa (state, U.S.)
distance learning (sidebar) **09:**231
U.S. election of 2008 177
U.S. state governments 487
Iowa Communications Network, *or* ICN (educ.)
distance learning (sidebar) **09:**231
IPC (internat. agri. org.): *see* International Potato Centre
IPCC (internat. org.): *see* Intergovernmental Panel on Climate Change
iPhone 3G 219
IPL (cricket): *see* Indian Premier League
iPod 224
iPod Touch
computers 219
IRA (Irish mil. org.): *see* Irish Republican Army
Irabagon, Jon
jazz competition *il.* 47
Iran **09:**413; **08:**413; **07:**406; **06:**409; **05:**410; **04:**410; **03:**445; **02:**442; **01:**444; **00:**439
Bahrain 370
France 400
Germany 403
"Iran's Power Dilemma" (special report) **07:**408
Iraq 414
Israel 417
motion pictures 288
nuclear proliferation 355
Oman 446
Persian literature 267
Russia 454
skyrocketing food prices 183
"Sunni-Shi'ite Division Within Islam, The" (special report) **08:**178
Switzerland 470
Syria 470
Turkey 476
United States 485
Venezuela 490
see also WORLD DATA
Iraq **09:**414; **08:**414; **07:**410; **06:**411; **05:**411; **04:**411; **03:**446; **02:**443; **01:**445; **00:**440
"Bush, Iraq, and the World" (special report) **04:**412

international relations
Australia 368
Iran 413
Jordan 422
Kuwait 427
Syria 470
United Arab Emirates 479
United Kingdom 481
United Nations 354, *il.* 355
United States 483
military affairs 270
skyrocketing food prices 183
"Sunni-Shi'ite Division Within Islam, The" (special report) **08:**178
U.S. election of 2008 177
see also WORLD DATA
Iraq War, *or* Second Persian Gulf War (2003)
Albania 364
Australia 368
battlefield medicine (special report) **08:**176
documentary films 289
military affairs 270
South Korea 425
United States 483
war reporting (special report) **04:**246
Iraqi National Accord, *or* INA (pol. party, Iraq) 414
IRB (sports org.): *see* International Rugby Board
Ireland **09:**415; **08:**415; **07:**411; **06:**412; **05:**414; **04:**416; **03:**447; **02:**444; **01:**445; **00:**440
European Union 356
France 400
theatre 280
see also WORLD DATA
iRex Digital Reader 224, *il.*
Irish Republican Army, *or* IRA, *or* Provisional Irish Republican Army (Irish mil. org.) 481
IRL (Am. racing org.): *see* Indy Racing League
iron 217
"Iron Man" (motion picture) 284
IRRI (internat. agri. org.): *see* International Rice Research Institute
Irwin, Steve, *or* Stephen Robert Irwin (obit.) **07:**126
ISA: *see* infectious salmon anemia
ISI (Pak. govt.): *see* Inter-Services Intelligence
Isinbayeva, Yelena
biography **06:**81
track and field sports 328
Islam
"Britain: The Radical Stronghold of European Muslims" (special report) **07:**476
Denmark 392
education 229
"Literary Voices for Islam in the West" (sidebar) **06:**237
Netherlands, The 442
Philippines 449
religion 298, *tables* 302, 303
Saudi Arabia 458
"Sunni-Shi'ite Division Within Islam, The" (special report) **08:**178
"Turkey's Secular/Islamic Conundrum" (special report) **09:**190
Vatican City State 489
Islam, Runa 210
Islamabad (Pak.)
military affairs 271
Pakistan 446
Islamic Art, Museum of (museum, Doha, Qatar)
architecture 205, *il.*
Qatar *il.* 452
Islamic Courts, Union of, *or* ICU, *or* Islamic Courts Union (Af. militia)
Somalia 462
Islamic law: *see* Shari'ah
Ismail Omar Guelleh 393
Israel **09:**416; **08:**416; **07:**412; **06:**413; **05:**415; **04:**417; **03:**448; **02:**445; **01:**447; **00:**442
archaeology 202
international relations
El Salvador 396
France 400
Iran 413
Jordan 422
Lebanon 429
Israeli and Palestinian settlements in the West Bank and Gaza Strip *map* **03:**448
military affairs 270
motion pictures 289
see also WORLD DATA
Israeli acute paralysis virus
colony collapse disorder (sidebar) **09:**249
ISS (space station): *see* International Space Station
IT (tech.): *see* information processing
Italian literature **09:**263; **08:**263; **07:**243; **06:**231; **05:**232; **04:**231; **03:**253; **02:**252; **01:**251; **00:**239
Italiano, Anna Maria Louisa: *see* Bancroft, Anne
Italy **09:**417; **08:**417; **07:**414; **06:**414; **05:**417; **04:**419; **03:**449; **02:**446; **01:**448; **00:**443
airline industry 215
Austria 369
Beijing 2008 Olympic Games 194
classical music 273
Croatia 389
Libya 430
motion pictures 285, *table* 287
stock markets *table* 218
Vatican City State 490
see also WORLD DATA
Ito, Kiyoshi (obit.) **09:**137
"Ivanov" (play) 281
Ivanovic, Ana 327, *il.*
"I've Loved You So Long," *or* "Il y a longtemps que je t'aime" (motion picture) 285
Iverson, Kenneth Eugene (obit.) **05:**115
Ivins, Molly, *or* Mary Tyler Ivins (obit.) **08:**133
Iwamatsu, Makoto: *see* Mako

J

J-Lab: The Institute for Interactive Journalism (Am. org.)
citizen journalism 181
J.P. Morgan and Company, Inc. (Am. bank): *see* JPMorgan Chase & Co.
Jaafari, Ibrahim al-, *or* Ibrahim al-Ashaiqir (biog.) **06:**82
Jackson, Margaret: *see* Beckett, Margaret
Jackson, Mary 210
Jacobi, Sir Derek 281
Jacobs, Jane, *or* Jane Butzner (obit.) **07:**127
Jacobs, Klaus Johann (obit.) **09:**138
Jacquet, Illinois, *or* Jean Baptiste Illinois Jacquet (obit.) **05:**115
Jacquet, Luc (biog.) **07:**88
Jade, Claude, *or* Claude Marcelle Jorré (obit.) **07:**127
Jagdeo, Bharrat 407
Jagr, Jaromir 322
Jakab, Zsuzsanna (biog.) **06:**82
Jakarta (Indon.) 412
JAM (Iraqi militia group): *see* Mahdi Army
Jamaat-ud-Dawa
Mumbai terrorist attack 192, 447
Jamaica **09:**419; **08:**419; **07:**415; **06:**415; **05:**418; **04:**420; **03:**451; **02:**448; **01:**449; **00:**445
athletics 329
see also WORLD DATA
Jamaica Labour Party, *or* JLP (pol. party, Jam.) 419
JaMais, Yvonne Marie Antoinette: *see* Haines, Connie
James, LeBron 308
James, Rick, *or* James Ambrose Johnson (obit.) **05:**116
James, Sidney Lorraine (obit.) **05:**116
Jamestown Colony (Eng. colony, N.Am.)
"Remembering the Jamestown Colony After 400 Years" (special report) **08:**182
Jammeh, Yahya 401
Jammu and Kashmir (state, India)
earthquake (sidebar) **06:**442
India 411
Pakistan 446
religion 298, *il.*
Jan Mayen (isl., Nor.) 445
Jang Mi Ran 331
Janjawid (Sud. militia)
Darfur crisis 467
Jankovic, Jelena 327
Jansa, Janez 461
Japan **09:**419; **08:**419; **07:**415; **06:**416; **05:**418; **04:**420; **03:**451; **02:**448; **01:**450; **00:**446
automobile industry 215
environment 235
financial crisis of 2008 170, 175
geophysics 226
international relations
Antarctica 361
Australia 368
Chile 383
China 385
Dominica 393
South Korea 425
military technology 271
motion pictures 289
space exploration 296
sports
World Baseball Classic (sidebar) **07:**301
baseball 307
wrestling 331
stock markets *table* 218
see also WORLD DATA
Japan, Bank of, *or* BOJ 419
Japan Series (baseball)
Sporting Record *tables* 333
Japanese literature **09:**269; **08:**269; **07:**249; **06:**238; **05:**238; **04:**238; **03:**260; **02:**259; **01:**259; **00:**247
world's first novel (sidebar) **02:**260
"Japanese Wife, The" (Basu) 260
Jastrow, Robert (obit.) **09:**138
Jay-Z 277, *il.*
Jaysh al-Mahdi (Iraqi militia group): *see* Mahdi Army
Jazeera, al- (Middle Eastern broadcast network)
television coverage of Middle East affairs (sidebar) **02:**272
jazz **09:**275; **08:**274; **07:**264; **06:**251; **05:**255; **04:**254; **03:**285; **02:**283; **01:**283; **00:**274
Jazz Education Network (internat. org.) 275
Jazz Showcase (nightclub, Chicago, Ill., U.S.)
jazz 275
Jean, Michaëlle
biography **06:**83
Canada 379
Jefferts Schori, Katharine (biog.) **07:**89
Jeffery, Michael 368
Jefri (prince of Brunei) 377
Jelimo, Pamela 329
Jemaah Islamiyah, *or* JI (Islamic militant org.)
Singapore 461
Jenkins, Leroy (obit.) **08:**134
Jennings, Peter Charles (obit.) **06:**117
Jennings, Ray Salvatore
"Character and Future of Nation Building, The" (special report) **05:**412
Jennings, Sir Robert Yewdall (obit.) **05:**116
"Jersey Boys" (mus. thea.) 281
Jerusalem (Isr.)
archaeology 202
classical music 273
Israel 416
Vatican City State 489
JetBlue Airways (Am. co.) 215
Jeter, Derek *il.* 306
Jeter, Mildred Delores: *see* Loving, Mildred
"Jeudi saint" (Borzeix) 262
Jewish literature **06:**235; **05:**235; **04:**235; **03:**257; **02:**256; **01:**256; **00:**244
Jeyaretnam, Joshua Benjamin, *or* J. B. Jeyaretnam (obit.) **09:**138
JI (Islamic militant org.): *see* Jemaah Islamiyah
Jiangxi (prov., China) 202
Jin, Ha 259
JLP (pol. party, Jam.): *see* Jamaica Labour Party
Jobs, Steven 220
"Joe the Plumber" (U.S. pol. fig.)
U.S. election of 2008 179
Joh, Tiffany *il.* 319
Johannesen, Grant (obit.) **06:**119
Johannesen, Kaj Leo 358
John Paul II, *or* Karol Jozef Wojtyla
obituary **06:**118
Roman Catholicism (special report) **06:**280
"Johnny One-Eye" (Charyn) 258
Johnson, Boris, *or* Alexander Boris de Pfeffel Johnson
biography **09:**84
United Kingdom 479
Johnson, Charles Van: *see* Johnson, Van
Johnson, James Ambrose: *see* James, Rick
Johnson, Jimmie, *or* Jimmie Kenneth Johnson (biog.) **09:**84
automobile racing 305
Johnson, John Harold (obit.) **06:**119
Johnson, Johnnie Clyde (obit.) **06:**119
Johnson, La Raine: *see* Day, Laraine
Johnson, Lady Bird, *or* Claudia Alta Taylor (obit.) **08:**134
Johnson, Philip Cortelyou (obit.) **06:**119
Johnson, Samuel Curtis (obit.) **05:**116
Johnson, Shawn 320
Johnson, Tom, *or* Thomas Christian Johnson (obit.) **08:**134
Johnson, Van, *or* Charles Van Johnson (obit.) **09:**138
Johnson-Sirleaf, Ellen
biography **07:**89
Liberia 429

Johnston, Ollie, *or* Oliver Martin Johnston, Jr. (obit.) **09:**138
Jolie, Angelina, *or* Angelina Voight (biog.) **08:**84
Jolley, Elizabeth, *or* Monica Elizabeth Knight (obit.) **08:**134
Jonas Brothers (biog.) **09:**84
Jones, Bill T., *or* William Tass Jones (biog.) **08:**85
Jones, Chipper 306
Jones, Elvin Ray (obit.) **05:**116
Jones, Fay, *or* Euine Jones (obit.) **05:**116
Jones, Georgeanna Seeger (obit.) **06:**119
Jones, Leisel 326
Jones, Sadie 255
Jones, Virginia Clara: *see* Mayo, Virginia
Jones, William Tass: *see* Jones, Bill T.
Jordan **09:**421; **08:**422; **07:**418; **06:**418; **05:**421; **04:**423; **03:**454; **02:**451; **01:**453; **00:**448
  Iraq 414
  see also WORLD DATA
Jordan, Duke (obit.) **07:**127
Jordan, Hamilton, *or* William Hamilton McWhorter Jordan (obit.) **09:**139
Jordan, James J., Jr. (obit.) **05:**116
Jordan, Winthrop Donaldson (obit.) **08:**135
Jorré, Claude Marcelle: *see* Jade, Claude
Joubert, Brian 322
journalism, *or* reportage
  Azerbaijan 370
  "Citizen Journalism: A News [R]evolution" (special report) **09:**180
  Ethiopia 398
  Gambia, The 401
  Malawi 433
  Vietnam 491
JPMorgan Chase & Co., *or* J.P. Morgan and Company, Inc. (Am. bank)
  financial crisis of 2008 171
Juan Carlos I
  Saudi Arabia *il.* 458
  Spain 465
Juanes, *or* Juan Estebán Aristizábal Vásquez (biog.) **06:**83
Judaism
  religion 300, *tables* 302, 303
Judd, Nadine: *see* Nerina, Nadia
judo **03:**347; **02:**343; **01:**340; **00:**338
  Sporting Record *tables* 344
"juego del ángel, El" (Ruiz Zafón)
  Spanish literature 264, *il.*
Jugnauth, Sir Anerood 436
Jules Verne (spacecraft) 297
Juliana, Princess, *or* Juliana Louise Emma Marie Wilhelmina, princess of Orange-Nassau (obit.) **05:**116
Juncker, Jean-Claude 431
Jung Ji Hoon: *see* Rain
Jun'ichirō Tanizaki Prize, *or* Tanizaki Jun'ichirō Shō 269
  Literary Prizes *table* 257
junk e-mail: *see* spam
Jurado, Rocío (obit.) **07:**127
Justice, Department of, *or* DOJ (U.S. govt.)
  computer companies 220
Justice, Donald Rodney (obit.) **05:**116
Justice and Development Party, *or* PJD (pol. party, Mor.) 439
Justice and Development Party, *or* AKP (pol. party, Tur.)
  education 232
  Turkey 475, *il.* 476
  "Turkey's Secular/Islamic Conundrum" 190
Justicialist Party, *or* Peronist Party, *or* PJ (pol. party, Arg.) 366

K

Kabi, Martinho Ndala 407
Kabila, Joseph 387
Kabuki
  Kabuki in the U.S. (special report) **06:**258
Kahul (Afg.) 363
Kaczynski, Jaroslaw (biog.) **07:**90
Kaczynski, Lech
  biography **07:**90
  Poland 450
Kadima (pol. party, Isr.) 416
Kaduri, Yitzhak (obit.) **07:**127
Kagame, Paul 387, 455
Kagel, Mauricio Raúl
  classical music 275
  obituary **09:**139
Kaiha, Muftah Muhammad 430
Kaká, *or* Ricardo Izecson dos Santos Leite
  association football 316
  biography **09:**85
Kalenjin (people) 423
Kalosovi, Antoine: *see* Papa Wendo
Kampala (Ugan.) 477
Kanayeva, Yevgeniya 321
Kane, Patrick 321
Kanehara, Hitomi (biog.) **05:**79
Kanerva, Ilkka 399
"Kanikōsen" (Kobayashi): *see* "Factory Ship, The"
Kantrowitz, Adrian (obit.) **09:**139
Kantrowitz, Arthur Robert (obit.) **09:**139
Kapoor, Anish
  art 210, 212
  biography **09:**85
Kaprow, Allan (obit.) **07:**127
Karaca, Cem (obit.) **05:**117
Karadžić, Radovan 356, 459, *il.*
Karajan, Herbert von 273
Karamanlis, Kostas, *or* Konstantinos Karamanlis
  biography **05:**80
  Greece 405
Karimov, Islam 488
Karlsson, Robert 319
Karzai, Hamid 363
Kase, Toshikazu (obit.) **05:**117
Kashmir (state, India): *see* Jammu and Kashmir
Kasner, Angela Dorothea: *see* Merkel, Angela
Kassab, Gilberto 376
Kassoma, Antônio Paulo 365
Kathmandu (Nepal) 442
Kaulman, Seymour: *see* Coleman, Cy
Kaust (univ., Saud.Arab.): *see* King Abdullah University of Science and Technology
"Kauto Star" (racehorse) 314
Kawase, Naomi (biog.) **08:**85
Kaye, M. M., *or* Mary Margaret Kaye (obit.) **05:**117
Kazakhstan **09:**422; **08:**422; **07:**418; **06:**419; **05:**421; **04:**423; **03:**454; **02:**451; **01:**435; **00:**449
  motion pictures 288
  Uzbekistan 488
  see also WORLD DATA
Kazulin, Alyaksandr
  Belarus 372
KDU-CSL (pol. party, Czech Rep.): *see* Christian and Democratic Union–Czech People's Party
Kearns, Doris Helen: *see* Goodwin, Doris Kearns
Keel, Howard, *or* Harold Clifford Leek (obit.) **05:**117
Keeling, Charles David (obit.) **06:**120
Keenan, Brian (obit.) **09:**139
Keeshan, Bob, *or* Robert James Keeshan (obit.) **05:**117
Keke, Kieren 441
Kelley, John Adelbert (obit.) **05:**117
Kelly, Barbara (obit.) **08:**135
Kelly, Margaret (obit.) **05:**117
Kelly, Molly, *or* Molly Craig (obit.) **05:**117
Kelman, Charles (obit.) **05:**117
Kelso, William M. (biog.) **08:**86
Kemakeza, Sir Allan 462
Kennan, George Frost (obit.) **06:**120
Kennedy, A. L. 255
Kennedy, the Rev. Dennis James (obit.) **08:**135
Kennedy, Edward
  education 231
Kennedy, Graham Cyril (obit.) **06:**120
Kennedy, Rosemary (obit.) **06:**120
Kennedy Center for the Performing Arts (thea., Wash., D.C., U.S.) 279, 283
Kennedy Center Honors (Am. arts award) 277
Kente, Gibson, *or* "Bra Gib" (obit.) **05:**118
Kentucky Derby (horse race) 312
  Sporting Record *tables* 338
Kenya **09:**423; **08:**423; **07:**419; **06:**420; **05:**422; **04:**424; **03:**455; **02:**452; **01:**454; **00:**452
  environment 234, *il.*
  Uganda 477
  see also WORLD DATA
Kenzaburō Oe Prize
  Japanese literature 269
Kernaghan, Lee, *or* Lee Raymond Kernaghan (biog.) **09:**86
Kerr, Deborah, *or* Deborah Jane Kerr-Trimmer (obit.) **08:**135
Kerry, John, *or* John Forbes Kerry
  biography **05:**80
  U.S. election of 2004 (special report) **05:**484
Kessel, Barney (obit.) **05:**118
Kesselaar, Rudolf Wijbrand: *see* Carrell, Rudi
Key, John, *or* John Phillip Key
  biography **09:**87
  New Zealand 442, *il.* 443
Keyes, Evelyn Louise (obit.) **09:**140
Keys, Alicia, *or* Alicia Augello Cook (biog.) **06:**83
Keys, Ancel (obit.) **05:**118
Khachiyan, Leonid Henry (obit.) **06:**120
Khadra, Yasmina 268
Khalayleh, Ahmad Fadil Nazal al-: *see* Zarqawi, Abu Musab al-
Khaled, Amr (biog.) **07:**90
Khalifah, Hamad ibn Isa Al- 370
Khalifah, Khalifah ibn Sulman al- Bahrain 370
Khalil, Mustafa (obit.) **09:**140
Khalk Maslahaty (Turkmen govt.): *see* People's Council
Khama, Ian 375
Khamenei, Ayatollah Sayyed Ali
  Iran 413
Khan, Bismillah (obit.) **07:**127
Khan, Ghulam Ishaq (obit.) **07:**127
Khan, Vilayat Hussain (obit.) **05:**118
Khartoum (Sud.)
  airline disaster *il.* 56
  Sudan, The 466
Khirbet Qeiyafa (anc. site, Isr.) 202
Khmer Rouge Tribunal, *or* Extraordinary Chambers in the Courts of Cambodia (Camb. hist.) 378
Khoo Teck Puat (obit.) **05:**118
Khrennikov, Tikhon Nikolayevich (obit.) **08:**135
Khun Sa, *or* Chang Chi-fu, *or* Chufu, *or* Shi-fu (obit.) **08:**136
Kibaki, Mwai 423
Kiho
  space exploration 296
"Kicking a Dead Horse" (play) 282
Kidd, Michael (obit.) **08:**136
Kidd, William, *or* Captain Kidd 203
kidnapping
  Central African Republic 382
  Colombia 386
  Egypt 395
  Iraq 414
  Niger 444
  North Korea 421
  Tunisia 475, *il.*
kidney transplant 461
Kieber, Heinrich 430
Kielmansegg, Johann-Adolf, Count von (obit.) **07:**128
Kiev (Ukraine) 478
Kigali (Rw.) 455
Kikuyu (people) 423
Kikwete, Jakaya 472
Kilby, Jack St. Clair (obit.) **06:**120
Kildow, Lindsey: *see* Vonn, Lindsey
Kiley, Dan, *or* Daniel Urban Kiley (obit.) **05:**118
Kilgore, Wyatt Merle (obit.) **06:**120
Killingsworth, Edward Abel (obit.) **05:**118
Kim Jong Il
  Japan 421
  North Korea 424
Kim Yu-Na 323
King, Alan, *or* Irwin Alan Kniberg (obit.) **05:**118
King, Coretta Scott, *or* Coretta Scott (obit.) **07:**128
King, Leslie Lynch, Jr.: *see* Ford, Gerald R.
King, Michael (obit.) **05:**118
King, Moira Shearer: *see* Shearer, Moira
King, Stephenson 456
King Abdullah University of Science and Technology, *or* Kaust (univ., Saud.Arab.) 232
King-Aribisala, Karen 261
King of Wartnaby, John Leonard King, Baron (obit.) **06:**120
Kingston (Jam.) 419
Kingstown (St. Vincent and the Grenadines) 456
Kinshasa (Dem. Rep. of the Congo) 387
Kirchner, Néstor
  Argentina 366
Kiriasis, Sandra 309
Kiribati **09:**424; **08:**424; **07:**420; **06:**421; **05:**423; **04:**425; **03:**456; **02:**453; **01:**455; **00:**453
  see also WORLD DATA
Kirkilas, Gediminas 431
Kirkpatrick, Clayton (obit.) **05:**118
Kirkpatrick, Jeane Duane Jordan (obit.) **07:**128
Kirkuk (Iraq) 414
Kirov Ballet (Russ. dance co.): *see* Mariinsky Ballet
Kishon, Ephraim, *or* Ferenc Hoffmann (obit.) **06:**121
Kitaj, R. B., *or* Ronald Brooks Kitaj (obit.) **08:**136
Kitajima, Kosuke
  swimming 325

Kitt, Eartha Mae (obit.) **09:**140
Kittel, Frederick August: *see* Wilson, August
Klassen, Cindy (biog.) **07:**91
Klaus, Vaclav 394
Klausner, Amos: *see* Oz, Amos
Kleiber, Carlos (obit.) **05:**118
Klestil, Thomas (obit.) **05:**118
Klinger, Georgette (obit.) **05:**119
Klitschko, Vitali 310
Klitschko, Wladimir 310
Kljusev, Nikola 432
Klochkova, Yana (biog.) **05:**80
Kloiber, Andrea *il.* 475
Klüft, Carolina Evelyn (biog.) **08:**86
KMT (pol. party, Tai.): *see* Nationalist Party
Kniberg, Irwin Alan: *see* King, Alan
Knievel, Evel, *or* Robert Craig Knievel (obit.) **08:**136
"Knife of Never Letting Go, The" (Ness) 258
Knight, Monica Elizabeth: *see* Jolley, Elizabeth
Knotts, Don, *or* Jesse Donald Knotts (obit.) **07:**128
Knowles, Beyoncé Giselle: *see* Beyoncé
Knox, Paul
"Leftist Surge in Latin America, A" (special report) **06:**488
Ko Un (biog.) **08:**87
Kobayashi, Makoto
Nobel Prize 67
Kobborg, Johan 280
Kobia, Samuel (biog.) **05:**81
Kocharyan, Robert 367
Koen, Francina Elsje: *see* Blankers-Koen, Fanny
Koenig, Pierre (obit.) **05:**119
Köhler, Horst 402
Koirala, Girija Prasad
biography **08:**87
Nepal 442
Kojima, Nobuo (obit.) **07:**128
Kokkai (Japanese govt.): *see* Diet
Kolakowski, Leszek (biog.) **05:**81
Kollek, Teddy, *or* Theodor Herzl Kollek (obit.) **08:**136
Kolosoy, Wendo: *see* Papa Wendo
Komsic, Zeljko 375
Kondaurova, Yekaterina *il.* 280
KONGRA-GEL (Kurdish militant org.): *see* People's Congress of Kurdistan
König, Franz Cardinal (obit.) **05:**119
Kony, Joseph
biography **08:**88
Uganda 478
United Nations 355
Koons, Jeff 212, *il.*
Kooser, Ted, *or* Theodore Kooser (biog.) **05:**82
Koppelman, Andrew
"Legal Debate over Same-Sex Marriages, The" (special report) **05:**206
Korea, Democratic People's Republic of, *or* North Korea **09:**424; **08:**424; **07:**420; **06:**421; **05:**423; **04:**425; **03:**456; **02:**453; **01:**455; **00:**453
classical music 273
Japan 421
Myanmar 441
South Korea 425
United States 485
see also WORLD DATA
Korea, Republic of, *or* South Korea **09:**425; **08:**424; **07:**421; **06:**421; **05:**423; **04:**425; **03:**457; **02:**453; **01:**456; **00:**453
financial crisis of 2008 175
military affairs 271
motion pictures 289
North Korea 421, 424
religion 300, *il.* 301
sports
association football 316
baseball 307
swimming 326
stock markets *table* 218
see also WORLD DATA
Korean War (1950-53)
military affairs 271
Karhonen, Jarmo 399
Korman, Harvey (obit.) **09:**140
Kornberg, Arthur (obit.) **08:**136
Koroma, Ernest Bai 460
Kors, Michael 239, *il.* 240
Korvald, Lars (obit.) **07:**129
Koshland, Daniel Edward, Jr. (obit.) **08:**137
Kosovo (self-declared independent country, 2008) **09:**425
Albania 364
Bosnia and Herzegovina 375
Cyprus 391
European Union 356
Montenegro 439
Slovenia 462
Kosovo (prov., Serbia)
Germany 403
Serbia 459
Kostenyuk, Aleksandra *il.* 42
Kostner, Carolina 323
Kostunica, Vojislav 459
Kotooshu 331
Kouchner, Bernard 455
Koudelka, Josef 212
Koumakoye, Delwa Kassire 382
Kouyaté, Lansana 407
Kovacs, Laszlo (obit.) **08:**137
KPK (Indon. com.): *see* Corruption Eradication Commission
Kramer, Sven 323
Krauss, Alison (biog.) **05:**82
krill
Antarctica 361
Kristensen, Tom 305
króna (currency) 410
Kronos Quartet (Am. mus. group)
popular music 276
Krugman, Paul, *or* Paul Robin Krugman
Nobel Prize 64, *il.*
Kryuchkov, Vladimir Aleksandrovich (obit.) **08:**137
Krzyzanowska, Irena: *see* Sendler, Irena
Ku Sang (obit.) **05:**119
Kuala Lumpur (Mal.) 433
Kubilius, Andrius 431
Kübler-Ross, Elisabeth (obit.) **05:**119
Kucher, Karol Kennedy (obit.) **05:**119
Kudelka, James 278
Kudrin, Aleksey 454
Kufuor, John Agyekum 404
Kuhn, Bowie Kent (obit.) **08:**137
Kuitunen, Virpi 324
Kumar, A. S. Dileep: *see* Rahman, A. R.
Kumari, Mayawati 410
Kunene, Mazisi, *or* Mazisi Raymond Fakazi Mngoni Kunene (obit.) **07:**129
Kunitz, Stanley Jasspon (obit.) **07:**129
Kuomintang (pol. party, Tai.): *see* Nationalist Party
Kurd (people)
Iraq 414
Syria 470
Kurdistan Worker's Party (Kurdish militant org.): *see* People's Congress of Kurdistan
Kurihara, Harumi (biog.) **07:**91
Kurokawa, Kisho, *or* Noriaki Kurokawa (obit.) **08:**138
Kuron, Jacek Jan (obit.) **05:**119
Kuwait **09:**426; **08:**425; **07:**421; **06:**422; **05:**424; **04:**426; **03:**457; **02:**454; **01:**456; **00:**454
Bangladesh 371
Iraq 415
see also WORLD DATA
Kuwait (Kuw.) 426
Kuzwayo, Ellen, *or* Nnoseng Ellen Kate Merafe (obit.) **07:**129
Kyoto Protocol, *or* Kyoto Treaty
Australia 368
environment 234, 356
"Kyoto Protocol: What Next?, The" (special report) **06:**194
Kyrgyzstan **09:**427; **08:**425; **07:**422; **06:**423; **05:**424; **04:**427; **03:**458; **02:**454; **01:**457; **00:**454
Uzbekistan 489
see also WORLD DATA

L

La Niña 228
strong conditions *map* **00:**169
LA Opera (Am. opera co.): *see* Los Angeles Opera
La Paz (Bol.) 374
La Scala (opera house, Milan, It.)
classical music 273
Labor Party (pol. party, Austl.): *see* Australian Labor Party
Labour Contract Law (2008, China) 385
labour migration
Spain 465
Tajikistan 472
Labour Party (pol. party, Austl.): *see* Australian Labor Party
Labour Party (pol. party, Malta) 435
Lahour Party (pol. party, N.Z.) 442
Labour Party (pol. party, U.K.) 479
labour union: *see* organized labour
Lacy, Steve, *or* Steven Norman Lackritz (obit.) **05:**119
Ladefoged, Peter Nielsen (obit.) **07:**129
Ladies Professional Golf Association, *or* LPGA 319
Sporting Record *tables* 342
Laforet, Carmen, *or* Carmen Díaz Laforet (obit.) **05:**119
Lagarde, Christine (biog.) **08:**88
Lagerfeld, Karl 241
Laghdaf, Moulaye Ould Mohamed Mauritania 435
Lagos (Nig.)
fire *il.* 57
laicism
Turkey 190
Lajcak, Miroslav 375
Lake-Tack, Louise 366
Laker, Sir Freddie (obit.) **07:**129
Laliberté, Guy (biog.) **06:**84
Lalwani, Nikita 254
Lamb, Willis Eugene, Jr. (obit.) **09:**140
Lambeth Conference (rel.)
Anglican Church 189, *il.* 188
Lampel, Tomislav: *see* Lapid, Joseph
Lampert, Edward S. (biog.) **06:**84
land concession 427
land mine
Angola 366
Niger 444
"Ten Years of Progress Toward a World Free of Land Mines" (special report) **08:**186
landslide, *or* landslip (geol.)
Cairo *il.* 59
China 226, *il.* 227
Lang Lang (biog.) **05:**82
Lange, André
biography **09:**87
bobsleigh 309
Lange, David Russell (obit.) **06:**121
Lange, Jessica (biog.) **06:**84
Langlord, Frances, *or* Frances Newbern (obit.) **06:**121
Lanin, Lester, *or* Nathaniel Lester Lanin (obit.) **05:**120
Lansley, Beryl Frances: *see* Cook, Beryl
lanthanum iron arsenide, *or* LaOFeAs
solid-state chemistry 290
Laos **09:**427; **08:**426; **07:**422; **06:**423; **05:**425; **04:**427; **03:**459; **02:**455; **01:**457; **00:**455
skyrocketing food prices 183
see also WORLD DATA
Lapid, Joseph, *or* Tomislav Lampel (obit.) **09:**141
Lar Lubovitch Dance Company (Am. dance co.) 278
Laredo, Ruth, *or* Ruth Meckler (obit.) **06:**121
Large Hadron Collider
particle physics 291
sidebar **09:**292
Larsen Ice Shelf (Antarc.)
disintegration *map* **03:**387
LaRue, Frederick Cheney (obit.) **05:**120
laser 293
Lashkar-e-Taiba, *or* LeT (militant org.)
Mumbai terrorist attack 298, 447
Lasica, J. D. 180
Lasky, Melvin Jonah (obit.) **05:**120
"Last Days of Judas Iscariot, The" (play) 282
Latham, Mark (biog.) **05:**83
Latin America
dollarization (special report) **02:**420
"Leftist Surge in Latin America, A" (special report) **06:**488
motion pictures 288
multinational and regional organizations 358
United States 485
Latin-American literature **09:**265; **08:**264; **07:**245; **06:**232; **05:**233; **04:**232; **03:**254; **02:**253; **01:**253; **00:**240
see also Brazilian literature
Latvala, Jari-Matti 305
Latvia **09:**428; **08:**427; **07:**423; **06:**424; **05:**425; **04:**428; **03:**459; **02:**456; **01:**458; **00:**455
financial crisis of 2008 174
see also WORLD DATA
Lauder, Estée, *or* Josephine Esther Mentzer (obit.) **05:**120
launch vehicle 297
Laurie, Hugh, *or* James Hugh Calum Laurie (biog.) **08:**89
Laurus, Metropolitan, *or* Vassily Mikhailovich Skurla
obituary **09:**141
religion 301
Lauterbur, Paul Christian (obit.) **08:**138
Lautner, John 208
"Lavinia" (Le Guin) 258
law **07:**218; **06:**205; **05:**205; **04:**207; **03:**225; **02:**226; **01:**224; **00:**212
high-seas piracy (special report) **06:**210
legal debate over same-sex marriages (special report) **05:**206
Law and Justice, *or* PiS (pol. party, Pol.) 450

law enforcement **06:**209; **05:**211; **04:**211; **03:**229; **02:**230; **01:**230; **00:**216
  security vs. civil liberties (special report) **03:**317
Law of the Sea: *see* UN Convention on the Law of the Sea
Lawrence, Jerome (obit.) **05:**120
Lay, Kenneth (obit.) **07:**130
Layton, Irving, *or* Irving Peter Lazarovici (obit.) **07:**130
LDC (sociol.): *see* developing nation
LDP (pol. party, Japan): *see* Liberal Democratic Party
LDU (Ec. football club): *see* Liga Deportiva Universitaria
Le Clézio, Jean-Marie-Gustave, *or* J. M. G. Le Clézio
  Nobel Prize 65, 262, *il.* 65
Le Guin, Ursula K. 258
Le Mans Grand Prix d'Endurance (automobile race) 305
  Sporting Record *tables* 332
Leakey, Meave G., *or* Meave Epps (biog.) **08:**89
leatherback turtle, *or* Dermochelys coriacea
  wildlife conservation 238, *il.*
Lebanon **09:**428; **08:**427; **07:**424; **06:**424; **05:**426; **04:**429; **03:**460; **02:**456; **01:**458; **00:**456
  Arabic literature 268
  Israel 417
  Qatar 452
  Syria 470
  see also WORLD DATA
"Leben der Anderen, Das" (motion picture)
  Film Awards *table* 286
Lebzelter, John H.: *see* Warden, Jack
Leckey, Mark 210, *il.* 52
Lederberg, Joshua (obit.) **09:**141
Ledger, Heath, *or* Heathcliff Andrew Ledger
  motion pictures 284, *il.*
  obituary **09:**141
Ledra Street (st., Nicosia, Cyp.)
  barricade removal *il.* 20
Lee, Arthur (obit.) **07:**130
Lee, Cliff 306
Lee Hsien Loong (biog.) **05:**83
  Singapore 460
Lee Jong Wook (obit.) **07:**130
Lee Myung-bak
  biography **08:**90
  North Korea 424
  religion 300
  South Korea 425
Lee-Potter, Lynda, *or* Lynda Higginson (obit.) **05:**120
Leek, Harold Clifford: *see* Keel, Howard
Lefkosia, *or* Lefkosa, *or* Nicosia (Cyp.) 391
Left, the (pol. party, Den.): *see* Liberal Party
Left, the (pol. party, Ger.) 403
Left and Democrats, *or* LiD (pol. party, Pol.) 450
Left Front (pol. org., India) 410
Left Party, *or* Communist Party of Sweden (pol. party, Swed.) 469
Lehman, Clarence
  "Biofuels—The Next Great Source of Energy?" (special report) **08:**174
Lehman, Ernest (obit.) **06:**121
Lehman Brothers (corp.)
  financial crisis of 2008 172, *il.*
Leibowitz, Jonathan Stewart: *see* Stewart, Jon
Leigh, Dorian, *or* Dorian Elizabeth Leigh Parker (obit.) **09:**141
Leigh, Janet, *or* Jeanette Helen Morrison (obit.) **05:**120
Leigh, Mike 284
Leith, Emmett Norman (obit.) **06:**121
Leithold, Louis (obit.) **06:**121
Leitner, Patric 309
Lem, Stanislaw (obit.) **07:**131
Lenart, Jozef (obit.) **05:**120
lending (fin.): *see* credit
Leneghan, Mary Patricia: *see* McAleese, Mary
L'Engle, Madeleine, *or* Madeleine L'Engle Camp, *or* Madeleine Franklin (obit.) **08:**138
Lenihan, Brian Joseph 416
Leno, Jay, *or* James Douglas Muir Leno (biog.) **09:**87
Lenton, Lisbeth, *or* Libby Lenton (biog.) **08:**90
Lenz, Siegfried 262
Leo, Melissa
  Film Awards *table* 287
Leonard, John (obit.) **09:**142
Leónidas, *or* Leónidas da Silva (obit.) **05:**121
Lepage, Robert 283
Lepeshinskaya, Olga Vasilivevna (obit.) **09:**142
Lerner, Alexander Yakob (obit.) **05:**121
Lerner, Tillie: *see* Olsen, Tillie
lesbianism: *see* homosexuality
Lesotho **09:**429; **08:**428; **07:**424; **06:**425; **05:**427; **04:**429; **03:**460; **02:**456; **01:**459; **00:**456
  see also WORLD DATA
less-developed country: *see* developing nation
"Lessons Learned in One Day" (phot. exhibition) 213
LeT (militant org.): *see* Lashkar-i-Taiba
Leterme, Yves 372
Letsie III (k. of Les.) 429
Letts, Tracy (biog.) **09:**88
Levert, Gerald (obit.) **07:**131
Levin, Bernard, *or* Henry Bernard Levin (obit.) **05:**121
Levin, Ira Marvin (obit.) **08:**138
Levine, Lawrence William (obit.) **07:**131
Levitt, Theodore (obit.) **07:**131
Lewis, Al, *or* Albert Meister, *or* Alexander Meister (obit.) **07:**131
Lewis, Edward B. (obit.) **05:**121
LeWitt, Sol, *or* Solomon LeWitt (obit.) **08:**139
Lewitzky, Bella (obit.) **05:**121
Lhasa (China) 383
Li Keqiang 384
Li Ruigang (biog.) **07:**92
Li Ximing (obit.) **09:**142
Li Yaotang: *see* Ba Jin
Liberal Democratic Party, *or* LDP (pol. party, Japan) 419
Liberal Party, *or* LP (pol. party, Can.) 379
Liberal Party, *or* the Left, *or* Venstre (pol. party, Den.) 392
Liberation Tigers of Tamil Eelam, *or* LTTE (rev. org., Sri Lanka)
  military affairs 271
  Sri Lanka 466
Liberia **09:**429; **08:**428; **07:**425; **06:**425; **05:**427; **04:**429; **03:**461; **02:**457; **01:**460; **00:**457
  see also WORLD DATA
Libertadores de América Cup 316
  Sporting Record *tables* 341
Libertas (pol. group, Ire.) 415
Libi, Abu Yahya al-, *or* Muhammad Hassan Qa'id, *or* Abu Yahya al-Sahrawi (biog.) **09:**88
library **07:**221; **06:**212; **05:**212; **04:**212; **03:**233; **02:**232; **01:**231; **00:**219
  "Redefining the Library in the Digital Age" (special report) **08:**188
Libreville (Gab.) 401
Libya **09:**430; **08:**429; **07:**425; **06:**426; **05:**427; **04:**430; **03:**461; **02:**458; **01:**460; **00:**457
  Mali 434
  Switzerland 470
  see also WORLD DATA
Lichfield, Thomas Patrick John Anson, filth earl of (obit.) **06:**121
LiD (pol. party, Pol.): *see* Left and Democrats
Lidstrom, Nicklas
  biography **09:**89
  ice hockey 321, *il.*
"liebender Mann, Ein" (Walser) 262
"Liebesbrand" (Zaimoglu) 261
Liechtenstein **09:**430; **08:**429; **07:**426; **06:**426; **05:**428; **04:**430; **03:**462; **02:**458; **01:**460; **00:**458
  see also WORLD DATA
"Lien étroit, Un" (Jordis) 262
life expectancy
  Lesotho 429
  Liberia 429
Liga Deportiva Universitaria, *or* LDU
  Ecuador 316
Ligeti, Gyorgy Sandor (obit.) **07:**131
Ligety, Ted 324
Lil Wayne, *or* Dwayne Michael Carter, Jr. 277
Lilongwe (Malawi) 433
Lim Goh Tong (obit.) **08:**139
Lima (Peru) 449
Lincecum, Tim 306
Lincoln Center for the Performing Arts (bldg., N.Y.C., N.Y., U.S.)
  dance 279
Lini, Ham 489
Linowitz, Sol Myron (obit.) **06:**122
Lipitor (drug) 218
Lipset, Seymour Martin (obit.) **07:**131
"Lipsynch" (thea. and dance) 282
liquefied natural gas, *or* LNG
  Bahamas, The 370
  Jamaica 419
  Papua New Guinea 448
Lisbon (Port.) 451
Lisbon, Treaty of, *or* Reform Treaty (European Union)
  Denmark 392
  European Union 356
  Ireland 415, *il.*
  Netherlands, The 442
  Poland 450
  Slovakia 461
  Slovenia 462
  United Kingdom 481
literature **09:**254; **08:**254; **07:**234; **06:**221; **05:**221; **04:**221; **03:**243; **02:**242; **01:**242; **00:**230
  Literary Prizes *table* 256
  "Literary Voices for Islam in the West" (sidebar) **06:**237
literature, U.K.: *see* English literature
literature, U.S.: *see* American literature
Lithgow, John
  theatre 283
Lithuania **09:**431; **08:**430; **07:**426; **06:**427; **05:**428; **04:**431; **03:**462; **02:**459; **01:**461; **00:**458
  see also WORLD DATA
Little Brown Jug (harness race)
  harness racing 314
Little League World Series **09:**307; **08:**305; **07:**301; **06:**296; **05:**299; **04:**293
  Waipio-Matamoros series *il.* 39
Litvinenko, Alexander (obit.) **07:**132
Liu, Cynthia *il.* 180
Liu Binyan (obit.) **06:**122
Liu Chao-shiuan 471
Liu Xiang (biog.) **05:**83
Liukin, Nastia, *or* Anastasia Liukin, *or* Anastasiya Valeryevna Lyukina
  Beijing 2008 Olympic Games 194
  biography **09:**89
  gymnastics 320, *il.*
Liverpool (Eng., U.K.)
  theatre 282
Liverpool, Nicholas 393
livestock
  livestock disease (special report) **02:**154
Livingstone, Ken 479
Livni, Tzipi, *or* Tziporah Malka Livni (biog.) **09:**90
  Israel 416
Ljubljana (Slovenia) 461
Lloyds TSB Broup PLC, *or* Lloyds Bank Ltd. (bank, U.K.) 480
  financial crisis of 2008 174
Llullaillaco Maiden 203
LNG (chem. compound): *see* liquefied natural gas
"Lo que sé de los vampiros" (Casavella) 264
loan (fin.): *see* credit
Lobamba (Swaz.) 468
Locarno International Film Festival
  Film Awards *table* 287
Lochte, Ryan 326
Lockwood, Robert, Jr. (obit.) **07:**132
Loeb, Sébastien 305
logging
  Papua New Guinea 448
  wildlife conservation 238, *il.*
Loiewski, Oleg Cassini: *see* Cassini, Oleg
Lombino, Salvatore Albert: *see* Hunter, Evan
Lomé (Togo) 473
London (Eng., U.K.)
  residential property for sale *il.* 170
  United Kingdom 479
London Fashion Week *il.* 240
London Marathon
  Sporting Record *tables* 350
Long Term Evolution: *see* LTE
Longoria, Evan 306
"Look We Have Coming to Dover" (Nagra)
  English literature 254
Lopez, Al, *or* Alfonso Ramon Lopez, *or* "El Señor" (obit.) **06:**122
López Michelsen, Alfonso (obit.) **08:**139
López Obrador, Andrés Manuel (biog.) **06:**85
López Portillo, José (obit.) **05:**121
López Trujillo, Alfonso Cardinal
  obituary **09:**142
  religion 301
Lord's Resistance Army, *or* LRA (rebel org.)
  Congo, Democratic Republic of the 387
  Uganda 477
  United Nations 355
Lorenz, Edward Norton (obit.) **09:**142
Lorius, Claude
  environment 237

Los Angeles Angels of Anaheim (Am. baseball team) 306
Los Angeles Dodgers (baseball team) 306
Los Angeles Lakers (basketball team) 307
Los Angeles Opera, *or* LA Opera (Am. opera co.) 273
"Lost in Uttar Pradesh" (Connell) American literature 259
"Lost Leader, The" (Imlah) 254
Louboutin, Christian (biog.) **09:**90
Louisy, Dame Pearlette 456
Loving, Mildred, *or* Mildred Delores Jeter (obit.) **09:**143
Loving v. Virginia (U.S. law case) American civil rights movement 143
low-carbohydrate diet
health and disease (special report) **05:**202
Lowassa, Edward 472
Loyde, Lobby, *or* John Baslington Lyde (obit.) **08:**139
Lozitha (Swaz.) 468
LP (pol. party, Can.): *see* Liberal Party
LPGA: *see* Ladies Professional Golf Association
LRA (rebel org.): *see* Lord's Resistance Army
LTE, *or* Long Term Evolution (tech.) 219
LTG Group (Liech. bank)l 430
LTTE (rev. org., Sri Lanka): *see* Liberation Tigers of Tamil Eelam
Lu, Annette 441
Luanda (Ang.) 365
Lubich, Chiara, *or* Silvia Lubich
obituary **09:**143
religion 301
Lucas García, Fernando Romeo (obit.) **07:**132
Ludzidzini (Swaz.) 468
Lulthansa (Ger. airline) 373
luge **09:**309; **08:**308, **07:**304; **06:**300; **05:**303; **04:**297; **03:**325; **02:**325; **01:**322; **00:**316
Sporting Record *tables* 334
Lugo, Fernando, *or* Fernando Armindo Lugo Méndez
biography **09:**91
Paraguay 448, *il.*
religion 301
Lukashenka, Alyaksandr H., *or* Aleksandr Hrygorevich Lukashenka 372
Luksic Abaroa, Andrónico (obit.) **06:**122
Lula da Silva, Luiz Inácio
Brazil 376
Venezuela 490
Lunar Reconnaissance Orbiter (U.S. spacecraft) 297
Lusaka (Zambia) 491
Lustiger, Jean-Marie Cardinal (obit.) **08:**139
Luttrell, Joyce Reba: *see* Rambo, Dottie
Lux, Thomas 259
Luxembourg **09:**431; **08:**430; **07:**426; **06:**427; **05:**429; **04:**431; **03:**462; **02:**459; **01:**461; **00:**458
Belgium 373
financial crisis of 2008 174
see also WORLD DATA
Luxembourg (Luxem.) 431
Luzi, Mario Egidio Vincenzo (obit.) **06:**122
Lyde, John Baslington: *see* Loyde, Lobby
"Lydia" (play) 283
Lykaion, Mount (mt., Gr.) 202
lynching
Mozambique 440
Lysacek, Evan 322
Lyttelton, Humphrey Richard Adeane (obit.) **09:**143
Lyukina, Anastasiva Valeryevna: *see* Liukin, Nastia

M

Ma Ying-jeou (biog.) **09:**91
China 385
Taiwan 471
Maal, Baaba (biog.) **05:**84
Maazel, Lorin 273, *il.* 424
Mac, Bernie, *or* Bernard Jeffrey McCullough (obit.) **09:**143
Mac Lane, Saunders (obit.) **06:**122
MacArthur, Ellen, *or* Ellen Patricia MacArthur (biog.) **06:**85
Macau, *or* Macao (admin. reg., China)
return to China (sidebar) **00:**374
Maccido, Muhammadu (obit.) **07:**132
MacCready, Paul Beattie (obit.) **08:**140
MacDiarmid, Alan Graham (obit.) **08:**140
MacDiarmid, George: *see* Brecht, George
Macedonia **09:**431; **08:**431; **07:**427; **06:**428; **05:**429; **04:**432; **03:**463; **02:**459; **01:**462; **00:**459
Greece 405
see also WORLD DATA
Machado, José Ramón 390
Machado de Assis, Joaquim Maria 266
machaeridian (plant) 253
Maciel Degollado, the Rev. Marcial
obituary **09:**143
religion 301
Mackenzie Valley Gas Pipeline 362
MacMahon, Robert Carrier: *see* Carrier, Robert
MacMillan, Kenneth 280
Macor, Marco *il.* 285
Macquarrie, the Rev. John (obit.) **08:**140
Macuga, Goshka 210
MAD (mus., N.Y., N.Y., U.S.): *see* Arts and Design, Museum of
mad-cow disease: *see* bovine spongiform encephalopathy
"Mad Men" (Am. television program) 240
Madagascar **09:**432; **08:**431; **07:**427; **06:**428; **05:**430; **04:**433; **03:**463; **02:**460; **01:**463; **00:**459
see also WORLD DATA
"Made in America" (mus.) 274
Madilu System, *or* Jean Bialu Madilu (obit.) **08:**140
Madobe, Sheikh Aden 462
Madoff, Bernard 483, *il.* 482
Madrid (Sp.) 465
Madsen, Michael (obit.) **08:**141
Magalhães (computer) 451
Magalhães, Antônio Carlos, *or* Antônio Carlos Peixoto de Magalhães (obit.) **08:**141
magazine **07:**255; **06:**245; **05:**245; **04:**243; **03:**274; **02:**275; **01:**273; **00:**263
Magdoff, Harry, *or* Henry Samuel Magdoff (obit.) **07:**132
Maghut, Muhammad al- (obit.) **07:**132
magma 227
Magnum Photos (internat. phot. agency) 212
Maguire, Martie, *or* Martha Elenor Erwin (biog.) **07:**80
Mahajan, Pramod (obit.) **07:**132
Mahakala omnogovae (dromaeosaur) 252
Mahal, Taj 276
Mahdi Army, *or* JAM, *or* Jaysh al-Mahdi (Iraqi militia group) 414
Mahesh Yogi, Maharishi
obituary **09:**143
religion 301
Mahfouz, Naguib, *or* Najib Maḥfūẓ (biog.) **07:**133
Mahmudi, Al-Baghdadi Ali al-
Libya 430
Mailer, Norman Kingsley (obit.) **08:**141
Maiman, Theodore Harold (obit.) **08:**141
Maine (state, U.S.) 486
Maines, Natalie, *or* Natalie Louise Maines (biog.) **07:**80
Mainwaring, Chris (obit.) **08:**142
maize (plant): *see* corn
Majnuna, Tell (archae. site, Syr.) 202
"Major Barbara" (play) 282
Major Economies Meeting
environment 235
Major League Soccer Cup, *or* MLS Cup 316
Sporting Record *tables* 341
Majuro (Marshall Isls.) 435
Makeba, Miriam, *or* Zensi Miriam Makeba, *or* Mama Afrika (obit.) **09:**144
Makem, Tommy, *or* Thomas James Makem (obit.) **08:**142
Mako, *or* Iwamatsu, Makoto (obit.) **07:**133
Maktum, Sheikh Maktum ibn Rashid al-Maktum al- (obit.) **07:**133
Maktum, Sheikh Muhammad ibn Rashid al- 479
Makuza, Bernard 455
Malabo (Equat.Guin.) 396
malaria 243
Congo, Republic of the 388
United Nations 356
Malawi **09:**433; **08:**431; **07:**428; **06:**429; **05:**430; **04:**433; **03:**464; **02:**461; **01:**463; **00:**460
see also WORLD DATA
Malaysia **09:**433; **08:**432; **07:**428; **06:**429; **05:**431; **04:**433; **03:**464; **02:**461; **01:**463; **00:**460
Brunei 377
see also WORLD DATA
Maldives **09:**434; **08:**433; **07:**429; **06:**430; **05:**432; **04:**434; **03:**465; **02:**462; **01:**464; **00:**461
see also WORLD DATA
Male (Mald.) 434
Mali **09:**434; **08:**433; **07:**429; **06:**430; **05:**432; **04:**434; **03:**465; **02:**462; **01:**464; **00:**461
popular music 276
see also WORLD DATA
Malietoa Tanumafili II (obit.) **08:**142
Maliki, Nuri al-, *or* Nuri Kamal al-Maliki (biog.) **07:**92
Iraq 414
United States 484, *il.*
Vatican City State 489
Malkin, Evgeni 321
Mally, Komlan
Togo 473
Malta **09:**435; **08:**434; **07:**430; **06:**431; **05:**433; **04:**435; **03:**466; **02:**463; **01:**465; **00:**461
see also WORLD DATA
Mama Afrika: *see* Makeba, Miriam
"Mamma Mia!" (motion picture) 284
Mamo, Sir Anthony Joseph (obit.) **09:**144
Man Asian Literary Prize
Literary Prizes *table* 257
Man Booker International Prize
Literary Prizes *table* 256
Man Booker Prize 254
Literary Prizes *table* 256
"Man in the Dark" (Auster) 258
"Man on Wire" (motion picture) 289
Managua (Nic.) 443
Manama (Bahr.) 370
Manchester, William Raymond (obit.) **05:**122
Manchester United (Br. football team) 315
"Mandé Variations, The" (album) popular music 276
Mandela, Nelson 464
Mandelson, Peter
biography **05:**84
United Kingdom 479, *il.* 480
Manekshaw, Sam (obit.) **09:**144
Mangaung (S.Af.): *see* Bloemfontein
Mangel, Marcel: *see* Marceau, Marcel
Mangelsdorff, Albert (obit.) **06:**122
Manhattan Declaration on Climate Change 236
Manila (Phil.) 449
Mann, Abby, *or* Abraham Goodman (obit.) **09:**144
Mann, Delbert (obit.) **08:**142
Mann, Simon 396, *il.*
manned spacecraft 296
Manning, Eli, *or* Elisha Nelson Manning
biography **09:**92
football 317
Manning, Patrick 474
Manning, Peyton, *or* Peyton Williams Manning
biography **06:**86
football 317
"Manon" (ballet) 280
Manor, Jason: *see* Hall, Oakley Maxwell
Manouch (people): *see* Roma
Manulis, Martin Ellyot (obit.) **08:**142
Mao Dun Literary Award 268
Literary Prizes *table* 257
Maori (people) 261
Maputo (Moz.) 440
Mara, Ratu Sir Kamisese (obit.) **05:**122
marathon **09:**330; **08:**330; **07:**324; **06:**326; **05:**326; **04:**322; **03:**355; **02:**349; **01:**348; **00:**346
Sporting Record *tables* 350
Marceau, Marcel, *or* Marcel Mangel (obit.) **08:**142
Marcinkus, Paul Casimir (obit.) **07:**133
Marcus Nonius Macrinus 201
Mardin, Arif (obit.) **07:**133
Margarito, Antonio 311
Margrethe II (q. of Den.) 392
"Marguerite" (mus. thea.) 281
Mariinsky Ballet, *or* Kirov Ballet (Russ. ballet co.) 279, 280, *il.*
marijuana
U.S. state governments 487
Marín, Pedro Antonio: *see* Maruanda Vélez, Manuel
Marín Millié, Gladys (obit.) **06:**123
marine biology
"Census of Marine Life" (special report) **07:**226
marine pollution
environment 236
wildlife conservation 238
maritime law
piracy (special report) **06:**210
Mark, Jan, *or* Janet Marjorie Brisland Mark (obit.) **07:**133
Mark Morris Dance Group (Am. dance co.) 279

Markandaya, Kamala, *or* Kamala Purnaiya Taylor (obit.) **05:**122
Markle, Lois *il.* 283
Markova, Dame Alicia, *or* Lilian Alicia Marks (obit.) **05:**122
Marly, Anna, *or* Anna Yuryevna Betulinskaya (obit.) **07:**134
Maroni, Roberto 418
Márquez, Rafael 311
marriage
  legal debate over same-sex marriage (special report) **05:**206
  Yemen 491, *il.*
Mars (planet) 294
  "Mystique of Mars, The" (special report) **05:**274
  space exploration 297
Mars Reconnaissance Orbiter, *or* MRO 294
Marsalis, Wynton 275
Marsé, Juan 264
Marsh, James 289
"Marsh Side" (racehorse) 314
Marshall Islands **09:**435; **08:**434; **07:**430; **06:**431; **05:**433; **04:**435; **03:**466; **02:**463; **01:**465; **00:**462
  see also WORLD DATA
Marsten, Richard: *see* Hunter, Evan
martial art
  Chinese medicine 186
Martin, Agnes Bernice (obit.) **05:**122
Martin, Bill, Jr., *or* William Ivan Martin, Jr. (obit.) **05:**122
Martin, Del, *or* Dorothy L. Taliaferro (obit.) **09:**145
Martin, Dick, *or* Thomas Richard Martin (obit.) **09:**145
Martin, Jimmy, *or* James Henry Martin (obit.) **06:**123
Martínez, Oscar
  Film Awards *table* 287
Martino, Donald (obit.) **06:**123
Marulanda Vélez, Manuel, *or* Pedro Antonio Marín, *or* "Tirofijo" 270
  Colombia 386
  obituary **09:**145
Maryland (state, U.S.) 486
Masada (anc. fortress, Isr.) 251
Maseru (Les.) 429
Masimov, Karim 422
Maskawa, Toshihide
  Nobel Prize 67
Máspoli, Roque Gastón (obit.) **05:**122
mass media **07:**250; **06:**239; **05:**240; **04:**239; **03:**269; **02:**269; **01:**268; **00:**257
  blogs (sidebar) **03:**273
  poker (sidebar) **06:**241
  Poland 450
  Russia 453
  Vietnam 491
  war reporting (special report) **04:**246
Massa, Felipe 304
Massachusetts (state, U.S.) 486
massive star 295
Mastella, Clemente 418
Masters Tournament (golf) 319
  Sporting Record *tables* 342
Matane, Sir Paulias 448
Mataskelekele, Kalkot 489
Materpiscis attenboroughi (fish)
  paleontology 253
mathematics **03:**261; **02:**261; **01:**260; **00:**248
Mathias, Bob, *or* Robert Bruce Mathias (obit.) **07:**134
Mathosa, Lebo (obit.) **07:**134
Matsepe-Casaburri, Ivy 463
Matsui, Robert Takeo (obit.) **06:**123
Matsuzaka, Daisuke (biog.) **08:**90
Matthiessen, Peter 258
Mauresmo, Amélie (biog.) **07:**93
Mauritania **09:**435; **08:**434; **07:**430; **06:**431; **05:**433; **04:**435; **03:**466; **02:**463; **01:**465; **00:**462
  African Union 358
  see also WORLD DATA
Mauritius **09:**436; **08:**435; **07:**431; **06:**432; **05:**434; **04:**436; **03:**466; **02:**464; **01:**466; **00:**462
  see also WORLD DATA
May-Treanor, Misty
  biography **09:**92
  volleyball 331
May-Treanor, Misty, and Walsh, Kerri (biog.) **09:**92
Maya (people) 203
Maynard Smith, John (obit.) **05:**122
Mayne, Thom (biog.) **06:**86
Mayo, Virginia, *or* Virginia Clara Jones (obit.) **06:**123
Mavotte (is., Ind.O.) 360, 386
Mayr, Ernst Walter (obit.) **06:**123
Mayweather, Floyd, *or* Floyd Mayweather, Jr.
  biography **08:**91
  boxing 311
Mazepa, Anna Stepanovna: *see* Politkovskaya, Anna
Mazumdar-Shaw, Kiran (biog.) **06:**86
Mbabane (Swaz.) 468
Mbeki, Thabo 463
  Zimbabwe 492
MCA (museum, Chicago, Ill., U.S.): *see* Contemporary Art, Museum of
McAfee (Am. co.)
  computers 221
McAleese, Mary, *or* Mary Patricia Leneghan 415
McAnuff, Des 283
McBain, Ed: *see* Hunter, Evan
McBurney, Simon 283
McCain, Harrison (obit.) **05:**123
McCain, John, *or* John Sidney McCain III
  biography **09:**93
  popular music 277
  religion 301
  U.S. election of 2008 176, *il.* 177
McCain/Palin: *see* United States Presidential Election of 2008
McCain vs. Obama: *see* United States Presidential Election of 2008
McCall Smith, Alexander (biog.) **09:**93
McCambridge, Mercedes, *or* Carlotta Mercedes Agnes McCambridge (obit.) **05:**123
McCann, Madeleine 451
McCarthy, Eugene Joseph (obit.) **06:**123
McCarty, Maclyn (obit.) **06:**123
McCauley, Rosa Louise: *see* Parks, Rosa
McClelland, Jack, *or* John Gordon McClelland (obit.) **05:**123
McCoy, Colt 317
McCullough, Bernard Jeffrey: *see* Mac, Bernie
McCullough, Colleen 261
McCullough, David (biog.) **09:**94
McDaniel, Ellas: *see* Diddley, Bo
McDonald, Audra (biog.) **05:**85
McElheny, Josiah 210
McFadden, Gene (obit.) **07:**134
McFerrin, Robert, Sr. (obit.) **07:**134
McGahern, John (obit.) **07:**134
McGavin, Darren, *or* William Lyle Richardson (obit.) **07:**134
McGrath, Campbell 259
McGrath, Glenn (biog.) **08:**91
McGraw, Phil (biog.) **05:**85
McGraw, Tim, *or* Samuel Timothy Smith (biog.) **06:**87
McGraw, Tug, *or* Frank Edwin McGraw, Jr. (obit.) **05:**123
McGrory, Mary (obit.) **05:**123
McGuinness, Martin 481
McHenry, Keith 184
McKay, Jim, *or* James Kenneth McManus (obit.) **09:**145
McKenley, Herbert Henry (obit.) **08:**143
McKusick, Victor Almon (obit.) **09:**145
McLachlan, Keith S.
  "Iran's Power Dilemma" (special report) **07:**408
McLean, Jackie (obit.) **07:**134
McLellan, Joseph (obit.) **06:**124
McLeod, Alice: *see* Coltrane, Alice
McManus, James Kenneth: *see* McKay, Jim
McMillan, Enolia Pettigen (obit.) **07:**135
McNair, Barbara (obit.) **08:**143
McQueen, Alexander 239
McRae, Colin (obit.) **08:**143
McShann, Jay, *or* James Columbus McShann (obit.) **07:**135
McTeer, Janet *il.* 281
McWhirter, Norris Dewar (obit.) **05:**123
McWilliams, Julia Carolyn: *see* Child, Julia Carolyn McWilliams
MDC (pol. party, Zimb.): *see* Movement for Democratic Change
MDGs (UN): *see* Millennium Development Goals
MDR-TB: *see* multidrug-resistant tuberculosis
Meader, Vaughn, *or* Abbott Vaughn Meader (obit.) **05:**123
Meckler, Ruth: *see* Laredo, Ruth
media: *see* mass media
Medicare 484
  prescription-drug program (sidebar) **05:**285
medicine **08:**242; **07:**213; **06:**200; **05:**200; **04:**201; **03:**221; **02:**222; **01:**218; **00:**206
  Alzheimer disease (sidebar) **02:**225
  battlefield medicine (special report) **08:**176
  Botox (sidebar) **03:**224
  Medicare drug program (sidebar) **05:**285
  pharmaceuticals 218
  polio eradication (sidebar) **05:**203
  SARS (special report) **04:**204
  socialized medicine (special report) **01:**222
  stem cell research (special report) **00:**210
  see also health
Mediterranean, Union for the (internat. org.)
  France 400
  Libya 430
Medvedev, Dmitry
  Azerbaijan 370
  biography **09:**94
  Cuba 390
  Georgia 402
  Moldova 438
  Russia 453
  Ukraine 478
Meehan, Tony, *or* Daniel Joseph Anthony Meehan (obit.) **06:**124
Mehldau, Brad, *or* Bradford Alexander Mehldau (biog.) **08:**92
Meier, Richard 205
Meireles, Cildo
  art 210
  biography **09:**95
Meissner, Kimmie 323
Meister, Albert: *see* Lewis, Al
Meister, Alexander: *see* Lewis, Al
melamine
  China 242, 385, *il.* 242
Melanesian Spearhead Group, *or* MSG (Melanesian org.) 489
Melekeok (Palau) 447
Mellers, Wilfrid Howard 275
Mellouli, Ous 326
Memphis, University of (univ., Memphis, Tenn., U.S.) 308
Mendes da Rocha, Paulo (biog.) **07:**93
Mendoza, Eduardo 264
Menezes, Fradique de 457
meningitis 378
Menotti, Gian Carlo (obit.) **08:**143
mental health
  insurance coverage 246
Mentzer, Josephine Esther: *see* Lauder, Estée
Merafe, Nnoseng Elfen Kate: *see* Kuzwayo, Ellen
Merce Cunningham Dance Company (Am. dance co.) 279
Merchant, Ismail, *or* Noormohamed Abdul Rehman (obit.) **06:**124
merchant bank: *see* investment bank
Merck & Company, Incorporated (Am. co.) 218
Mercosur, *or* South American Common Market, *or* Southern Cone Common Market (S.Am. econ. org.) 358
Mercury (planet) 294
  space probes 297
Meredith, William Morris, Jr. (obit.) **08:**143
merger and acquisition
  Belgium 373
  business 214
  computers 220
Meri, Lennart (obit.) **07:**135
Mérida Initiative
  Guatemala 406
  Mexico 437
meridian (Chin. med.) 187
Merkel, Angela, *or* Angela Dorothea Kasner
  biography **06:**87
  France 400
  Germany 402
Merlyn-Rees, Merlyn Merlyn-Rees, Baron, *or* Merlyn Rees (obit.) **07:**135
Merrilield, Robert Bruce (obit.) **07:**136
Merrill, Robert, *or* Moishe Miller (obit.) **05:**123
Merrill Lynch & Co., Inc. (Am. brokerage firm)
  financial crisis of 2008 172
Mesic, Stipe 389
Messenger (U.S. spacecraft) 294
  space probes 297
Messerer, Sulamith Mikhaylovna (obit.) **05:**123
Messic, Dale, *or* Dalia Messick (obit.) **06:**124
Messmer, Pierre August Joseph (obit.) **08:**144
Messner, Tammy Faye, *or* Tammy Faye Bakker (obit.) **08:**144
metal
  business 217
Metcalf, Joseph, III (obit.) **08:**144
meteorology **09:**227; **08:**229; **07:**200; **06:**169; **05:**170; **04:**171; **03:**183; **02:**186; **01:**184; **00:**168

methane
  astronomy 295
Metropolitan Opera, *or* Met (N.Y.C., N.Y., U.S.) 274
Metzger, Bruce Manning (obit.) **08:**144
Mexican League (baseball) 307
Mexican Petroleum Co., *or* PEMEX (Mex. co.) 436
"Mexican Suitcase" (phot.) 213
Mexico **09:**436; **08:**435; **07:**431; **06:**432; **05:**434; **04:**436; **03:**467; **02:**464; **01:**466; **00:**463
  El Salvador 396
  Latin American literature 265
  motion pictures 288
  stock markets *table* 218
  Switzerland 470
  see also WORLD DATA
Mexico City (Mex.) 436
Meyer, Ray, *or* Raymond Joseph Meyer (obit.) **07:**136
Meyer, Russ (obit.) **05:**124
Meyer, Stephenie, *or* Stephenie Morgan
  biography **08:**92
  "Breaking Dawn" *il.* 36
MFDC (Sen. org.): *see* Movement of the Democratic Forces of Casamance
Mgaloblishvili, Grigol 401
Miami City Ballet (Am. ballet co.) 278
"Michael Clayton" (motion picture)
  Film Awards *table* 286
Michaels, James Walker (obit.) **08:**144
Michel, Amanda *il.* 181
Michel, James 460
Michels, Rinus, *or* Marinus Hendrikus Jacobus Michels (obit.) **06:**124
Michigan (state, U.S.) 486
microelectronics **03:**175; **02:**181; **01:**177; **00:**156
Micronesia, Federated States of, *or* FSM **09:**437; **08:**436; **07:**433; **06:**433; **05:**435; **04:**437; **03:**468; **02:**465; **01:**467; **00:**464
  see also WORLD DATA
Microsoft Corporation (Am. corp.)
  computers 220
Middle East
  education 232
  fossil fuels 216
  military affairs 270
  motion pictures 288
  skyrocketing food prices 182
  United States 485
Middleton, Margaret Yvonne: *see* De Carlo, Yvonne
"Midnight's Children" (Rushdie) 255
migrant labour 427
  remittances (sidebar) **07:**432
migration (human): *see* human migration
Mikan, George Lawrence (obit.) **06:**124
Miles, Buddy, *or* George Allen Miles, Jr. (obit.) **09:**145
MILF (Phil. separatist movement): *see* Moro Islamic Liberation Front
Miliband, David
  biography **08:**93
  European Union 356
  United Kingdom 479
Milinkevich, Alyaksandr 372
military affairs **09:**270; **08:**270; **07:**258; **06:**247; **05:**248; **04:**248; **03:**277; **02:**278; **01:**276; **00:**267
  Afghanistan 363
  battlefield medicine (special report) **08:**176
  China 385
  Ecuador 395
  Germany 403
  Guinea 407, *il.*
  Pakistan 447
  "POWs and the Global War on Terrorism" (special report) **05:**250
  Turkey 476
  United Nations 355
  United States 483
  warfare in the 21st century (special report) **03:**280
military coup: *see* coup
military services provider: *see* private military firm
military technology 271
militia, *or* reserve forces
  Iraq 414
"Milk" (motion picture) 284
Milk, Harvey 284
Millás, Juan José 264
millennium (sidebar) **00:**252
Millennium Development Goals, *or* MDGs (UN) 355
Millennium Seed Bank (agri. project, Eng., U.K.)
  seed banks (sidebar) **09:**235
Miller, Ann, *or* Johnnie Lucille Ann Collier (obit.) **05:**124
Miller, Arthur, *or* Arthur Asher Miller (obit.) **06:**124
  theatre 283
Miller, Bode, *or* Samuel Bode Miller
  Alpine skiing 324
  biography **06:**88
Miller, G. William, *or* George William Miller (obit.) **07:**136
Miller, Keith Ross (obit.) **05:**124
Miller, Moishe: *see* Merrill, Robert
Miller, Stanley (obit.) **08:**144
Mills, Sir John, *or* Lewis Ernest Watts Mills (obit.) **06:**125
Mills, John Atta 404, *il.*
Milongo, André (obit.) **08:**145
Milosevic, Slobodan (obit.) **07:**136
Milosz, Czeslaw (obit.) **05:**124
Milwaukee Brewers (baseball team) 306
Minc, Carlos 376
Mincer, Jacob (obit.) **07:**136
Mindanao (isl., Phil.) 449
Minghella, Anthony (obit.) **09:**146
minimum wage
  Lebanon 429
  Nicaragua 443
mining 217
  Congo, Democratic Republic of the 387
  Kazakhstan 423
Minnesota Twins (baseball team) 306
Minogue, Kylie, *or* Kylie Ann Minogue (biog.) **05:**85
Minsk (Belarus) 372
MINUSTAH (Haiti): *see* UN Stabilization Mission in Haiti
Mirghani, Ahmad Ali al- (obit.) **09:**146
Mirzivavev, Shavkat 488
Miss Lou: *see* Bennett-Coverly, Louise
Miss Rhythm: *see* Brown, Ruth
missile defense shield
  military affairs 270
  Russian objection 455
  United States and Poland 451
Missouri (state, U.S.) 485
Mistry, Rohinton 260
Mitcham, Matt 327
Mitchell, Keith 406
Mitchell, Mitch, *or* John Mitchell (obit.) **09:**146
Mitchell, Parren James (obit.) **08:**145
Mitchelson, Marvin Morris (obit.) **05:**124
Mitrokhin, Vasily Nikitich (obit.) **05:**124
Mittal, Lakshmi (biog.) **06:**88
mixed martial arts, *or* MMA (sidebar) **08:**309
mixed media 210
Mivake, Issey (biog.) **07:**93
Mivamoto, Kenji (obit.) **08:**145
Miyazawa, Kiichi (obit.) **08:**145
Mizan Zainal Abidin ibni al-Marhum Sultan Mahmud, Tuanku 433
Mizerak, Steve (obit.) **07:**136
MLS Cup: *see* Major League Soccer Cup
MMA (sport): *see* mixed martial arts
MMD (pol. party, Zambia): *see* Movement for Multiparty Democracy
MNJ (pol. org., Niger): *see* Movement of Nigerians for Justice
mobile phone: *see* cellular telephone
Modern Art, Museum of, *or* MoMA (museum, N.Y.C., N.Y., U.S.)
  architecture 204
Moeritherium
  paleontology 253
Moffo, Anna (obit.) **07:**137
Mogadishu (Som.) 462
Mogae, Festus 375
Mohammad Zahir Shah: *see* Zahir Shah, Mohammad
Mohammed, Warith Deen, *or* Wallace D. Muhammad, *or* Warith Deen Muhammad
  obituary **09:**146
  religion 301
Mohéli (is., Com.) 387
Moisevev, Igor Aleksandrovich (obit.) **08:**145
Moldova **09:**438; **08:**437; **07:**433; **06:**434; **05:**435; **04:**438; **03:**468; **02:**466; **01:**468; **00:**465
  see also WORLD DATA
molecular biology **09:**251; **08:**251; **07:**230; **06:**217; **05:**218; **04:**218; **03:**239; **02:**236; **01:**236; **00:**225
molecular breast imaging
  cancer 244
MoMA (museum, N.Y.C., N.Y., U.S.): *see* Modern Art, Museum of
"Môme, La" (motion picture): *see* "Vie en rose, La"
Monaco **09:**438; **08:**437; **07:**433; **06:**434; **05:**436; **04:**438; **03:**469; **02:**466; **01:**468; **00:**465
  see also WORLD DATA
Monaco Together (pol. party, Mon.) 438
Mondavi, Robert Gerald (obit.) **09:**146
Monénembo, Tierno 263, *il.* 262
Moneo, José Rafael 205
Money, John (obit.) **07:**137
money laundering
  San Marino 457
  Taiwan 471
money lending (fin.): *see* credit
money-market fund (finance)
  financial crisis of 2008 173
Monforte, Carmine: *see* Forte of Ripley, Charles Forte, Baron
Mongolia **09:**438; **08:**437; **07:**434; **06:**434; **05:**436; **04:**438; **03:**469; **02:**466; **01:**469; **00:**465
  see also WORLD DATA
Mongolian People's Revolutionary Party, *or* MPRP (pol. party, Mong.) 438
monoculture (agri.)
  seed banks (sidebar) **09:**235
monotreme (zool.) 248
Monrovia (Lib.) 429
Monson, Thomas Spencer
  biography **09:**95
  religion 301
Montagnier, Luc
  Nobel Prize 68, *il.*
Montana (state, U.S.) 485
Montana New Zealand Book Awards 261
Monte-Carlo rally (automobile race)
  Sporting Record *tables* 332
Montenegro **09:**439; **08:**438; **07:**434
Montevideo (Urug.) 488
Montoya, Juan Francisco Rodríguez: *see* Soriano, Juan
Montreal Alouettes (Can. football team) 318
Montreal Canadiens (Can. hockey team) 321
Montreal World Film Festival
  Film Awards *table* 287
Montserrat 359
Moog, Robert Arthur (obit.) **06:**125
Moon
  eclipses *table* 294
  space probes 297
Moon Shin Yong (biog.) **05:**78
Mooney, Harold 237
Moorer, Thomas Hinman (obit.) **05:**125
Moores, Frank Duff (obit.) **06:**125
Moraes, Dom, *or* Dominic Francis Moraes (obit.) **05:**125
Morales, Evo, *or* Juan Evo Morales Ayma (biog.) **07:**94
  Bolivia 374
Morava, Jan 391
Mordyukova, Nonna (obit.) **09:**146
"More" (Clarke) 260
Morgan, George Frederick (obit.) **05:**125
Morgan, Stephenie: *see* Meyer, Stephenie
Morgan Stanley (investment bank)
  financial crisis of 2008 172
Morgenstern, Thomas 324, *il.* 325
Mori, Emanuel, *or* Manny Mori
  Micronesia 437
Morita, Pat, *or* Noriyuki Morita (obit.) **06:**125
Moro Islamic Liberation Front, *or* MILF (Phil. separatist movement) 271
  Philippines 449
Morocco **09:**439; **08:**438; **07:**435; **06:**435; **05:**437; **04:**439; **03:**470; **02:**467; **01:**469; **00:**466
  Algeria 365
  see also WORLD DATA
Moroni (Com.) 386
Morris, Craig (obit.) **07:**137
Morris, Henry Madison, Jr. (obit.) **07:**137
Morris, Norval (obit.) **05:**125
Morrison, Denny 323
Morrison, Jeanette Helen: *see* Leigh, Janet
Morrison, Philip (obit.) **06:**125
Morrisseau, Norval, *or* "Copper Thunderbird" (obit.) **08:**146
Morse, Barry, *or* Herbert Morse (obit.) **09:**147
Mortenson, Greg 229
mortgage
  financial crisis of 2008 170, 482
  "Subprime Mortgages: A Catalyst for Global Chaos" (sidebar) **08:**484
Moscow (Russ.) 453
Mosebach, Martin (biog.) **08:**93

Mosisili, Bethuel Pakalitha 429
Mosley, Max 304
Mosley, Timothy Z.: *see* Timbaland
Mosley, Walter (biog.) **05:**86
mosquito
  industrial chemistry 291
"Mosquito" (Tearne) 254
Mosul (Iraq) 414
Moten, Etta, *or* Etta Moten Barnett (obit.) **05:**125
motion picture **09:**283; **08:**283; **07:**273; **06:**262; **05:**264; **04:**263; **03:**295; **02:**294; **01:**294; **00:**283
  computer-generated characters (sidebar) **04:**265
  Film Awards *table* 286
  Internet 221
  see also animation
Motlanthe, Kgalema 463
Motley, Constance Baker (obit.) **06:**125
mountain gorilla, *or* Gorilla beringei beringei
  wildlife conservation 237
Mourning, Alonzo (biog.) **07:**94
Movement for Democratic Change, *or* MDC (pol. party, Zimb.) 492
Movement for Multiparty Democracy, *or* MMD (pol. party, Zambia) 492
Movement for the Emancipation of the Niger Delta (Nig. militant group) 445, *il.* 444
Movement of Nigerians for Justice, *or* MNJ (pol. org., Niger) 444
Movement of the Democratic Forces of Casamance, *or* MFDC (Sen. org.) 458, *il.* 459
Mowlam, Mo, *or* Marjorie Mowlam (obit.) **06:**125
moxa treatment, *or* moxibustion (med.)
  traditional Chinese medicine 187, *il.* 186
Mozambique **09:**440; **08:**439; **07:**435; **06:**435; **05:**437; **04:**439; **03:**470; **02:**467; **01:**470; **00:**467
  see also WORLD DATA
Mozambique Liberation Front (pol. party, Moz.): *see* Frelimo
Mozambique National Resistance/Electoral Union, *or* Renamo/UE (guerrilla org., Moz.) 440
Mphahlele, Es'kia (obit.) **09:**147
MPLA (pol. org., Ang.): *see* Popular Movement for the Liberation of Angola
MPRP (pol. party, Mong.): *see* Mongolian People's Revolutionary Party
MRO (satellite): *see* Mars Reconnaissance Orbiter
MSG (Melanesian org.): *see* Melanesian Spearhead Group
Mswati III 468, *il.* 469
MSzP (pol. party, Hung.): *see* Hungarian Socialist Party
Mubarak, Hosni 395
"muerte lenta de Luciana B, La" (Martínez): *see* "Book of Murder, The"
Mugabe, Robert
  South Africa 464
  Zambia 492
  Zimbabwe 492
Muhammad, Wallace D.: *see* Mohammed, Warith Deen
Muhammad, Warith Deen: *see* Mohammed, Warith Deen
Muhammad VI 439
Muhammad al-Zentani, Zentani Libya 430
Mujawar, Ali Muhammad 491
Mukasey, Michael (biog.) **08:**93
Mukherjee, Hrishikesh (obit.) **07:**137
Mullen, Michael G.431
multidrug-resistant tuberculosis, *or* MDR-TB 243
Multinational and Regional Organizations **09:**357; **08:**357; **07:**351; **06:**354; **05:**354; **04:**352; **03:**384; **02:**378; **01:**381; **00:**373
  NATO at 50 (special report) **00:**428
Mumbai (India)
  terrorist attack 192, 298, 355, 410, *ils.* 5, 411, 446
"mundo, El" (Millás) 264
Munil, 'Abd al-Rahman (obit.) **05:**125
Müntefering, Franz *il.* 404
Murakami, Takashi
  art 209, 212
  biography **06:**88
Muralitharan, Muttiah 311
Murasaki: *see* Setouchi, Jakuchō
Murasaki Shikibu
  world's first novel (sidebar) **02:**260
Murcutt, Glenn 204
murder
  El Salvador 396
  Trinidad and Tobago 474
Murdoch, Colin Albert (obit.) **09:**147
Murphy, John Cullen (obit.) **05:**125
Murray, Andy 327
Murray, Elizabeth (obit.) **08:**146
Murray, Len, *or* Lionel Murray, Baron Murray of Epping Forest (obit.) **05:**125
Murthy, Narayana (biog.) **05:**86
Musa, Said 373
Muscat (Oman) 446
Muscat, Joseph 435
Muschamp, Herbert Mitchell (obit.) **08:**146
Museo del Prado (mus., Madrid, Sp.): *see* Prado Museum
museum **07:**222; **06:**213; **05:**213; **04:**213; **03:**234; **02:**232; **01:**233; **00:**220
Museveni, Yoweri 477
Musharraf, Pervez 446
Mushtaq Ali, Syed (obit.) **06:**126
music **09:**273; **08:**272; **07:**262; **06:**250; **05:**253; **04:**252; **03:**283; **02:**282; **01:**281; **00:**272
  country music developments (sidebar) **01:**286
  Latin pop (sidebar) **00:**277
"Música de zorros" (Vargas) 265
Muslim 395
  see also Islam
Muslim Brotherhood (Islamic militant group) 395
Mutharika, Bingu wa 433
Muto, Toshiro
  Japan 420
Muzito, Adolphe
  Congo, Democratic Republic of the 387
Mvouba, Isidore
  Congo, Republic of the 388
Mwanawasa, Levy Patrick
  obituary **09:**147
  Zambia 491
"My Sister, My Love" (Oates)
  American literature 258
Myanmar, *or* Burma **09:**440; **08:**439; **07:**436; **06:**436; **05:**438; **04:**440; **03:**471; **02:**468; **01:**470; **00:**467
  Germany 403
  skyrocketing food prices 182, *il.* 183
  see also WORLD DATA
Mydans, Carl Mayer (obit.) **05:**125
MySpace.com (Am. co.)
  Internet 221

N

Nachman, Jerry, *or* Jerome A. Nachman (obit.) **05:**125
Nadal, Rafael, *or* Rafael Nadal Parera (biog.) **08:**94
  tennis 327
Nadal Prize 264
NAFTA (trade agreement): *see* North American Free Trade Agreement
Nagorno-Karabakh, *or* Artsakh (reg., Azerbaijan) 367, 369
Nagra, Daljit 254
Naguib Mahfouz Medal for Literature
  Literary Prizes *table* 257
Nahyan, Sheikh Khalifah ibn Zayid Al 479
Nahyan, Sheikh Zayid ibn Sultan Al (obit.) **05:**125
Nairobi (Ken.) 423
Najie, Reza
  Film Awards *table* 286
Nakamura, Kiharu, *or* Nakamura, Kazuko (obit.) **05:**126
Nakhichevan (rep., Azerbaijan)
  Azerbaijan 369
Nambu, Yoichiro
  Nobel Prize 67
Namdaemun (gate, Seoul, S.Kor.)
  destruction 425, *il.* 13
Namibia **09:**441; **08:**440; **07:**436; **06:**436; **05:**438; **04:**440; **03:**472; **02:**468; **01:**470; **00:**468
  see also WORLD DATA
Nan Lu
  "Precepts of Traditional Chinese Medicine, The" 186
Nano (automobile) 215
nanotechnology
  "Nanotechnology—Small is Beautiful" (sidebar) **05:**165
Naples (It.)
  garbage pileup 417, *il.* 418
Napolitano, Giorgio 417
Napster (Am. co.) 221
Narayanan, Kocheril Raman (obit.) **06:**126
"Nardbân andar bivaban" (Muvahhid) 267
Nardelli, Robert, *or* Robert Louis Nardelli (biog.) **08:**94
Nargis (storm, 2008): *see* Cyclone Nargis
NASA (U.S. agency): *see* National Aeronautics and Space Administration
NASCAR: *see* National Association for Stock Car Auto Racing
Nasdaq, *or* National Association of Securities Dealers automated quotations
  stock markets *table* 218
Nash, Joe, *or* Joseph V. Nash (obit.) **06:**126
Nash, Rick 322
Nasheed, Mohamed 434, *il.*
Nasir, Ibrahim (obit.) **09:**148
Nasrallah, Hassan, *or* Hassan Abdel Karim Nasrallah (biog.) **07:**95
Nassau (Bah.) 370
Nastase, Adrian 452
natality: *see* birth rate
Natapei, Edward 489
Nathan, S. R. 460
nation building, *or* nation-state building
  "Character and Future of Nation Building, The" (special report) **05:**412
National Action Party, *or* PAN (pol. party, Mex.) 436
National Aeronautics and Space Administration, *or* NASA (U.S. agency)
  space exploration 294, 296
National Aquatics Centre, *or* Water Cube (bldg., Beijing, China)
  Beijing architecture 204, *il.* 194
National Association for Stock Car Auto Racing, *or* NASCAR 305
  Sporting Record *tables* 332
National Association of Securities Dealers automated quotations: *see* Nasdaq
National Ballet of Canada, *or* NBC 278
National Ballet of Finland (Fin. dance co.) 279
National Basketball Association, *or* NBA 307
  Sporting Record *tables* 333
National Book Award 259
  Literary Prizes *table* 256
National Boxing Association (internat. sports org.): *see* World Boxing Association
National Bureau of Economic Research (Am. org.)
  financial crisis of 2008 170
National Coalition Party (pol. party, Fin.) 399
National Congress for the Defense of the Congolese People, *or* CNDP (Congolese rebel group)
  Congo, Democratic Republic of the 387
National Democratic Congress, *or* NDC (pol. party, Gren.) 406
National Democratic Party, *or* NDP (Egy.) 395
National Endowment for the Arts, *or* NEA (U.S. org.) 282
National Football League, *or* NFL (U.S.) 317
  Sporting Record *tables* 341
National Front, *or* BN (pol. party, Mal.) 433
National Hockey League, *or* NHL ice hockey 321
  Sporting Record *tables* 343
National Institutes of Health, *or* NIH (U.S. agency) 251
National League, *or* NL (baseball) baseball 306
  Sporting Record *tables* 333
National Liberation Army, *or* ELN (Colom. guerrilla group)
  hostages 386
National Liberation Forces, *or* FNL, *or* Forces for National Liberation, *or* Forces Nationales de Libération, *or* National Liberation Front (rebel group, Buru.) 378
National Museum of the Prado (mus., Madrid, Sp.): *see* Prado Museum
National Norwegian Ballet (Nor. dance co.) 279
National Oceanic and Atmospheric Administration, *or* NOAA (U.S. agency) 226, 228
National Order Party, *or* NOP (pol. party, Tur.) 191
National Party (pol. party, N.Z.) 442
National People's Congress (govt. org., China) 384
National Prize for Narrative (Sp. lit. award) 264
National Republican Alliance, *or* ARENA, *or* Nationalist Republican Alliance (pol. party, El Sal.)
  El Salvador 396

National Resistance Movement, *or* NRM (pol. org., Ugan.) 478
national security
  security vs. civil liberties (special report) **03:**312
National Stadium (stadium, Beijing, China)
  Beijing 2008 Olympic Games 204, 384, *il.* 194
National Theatre (Br. thea. co.) 280
National Union for the Total Independence of Angola (pol. org., Ang.): *see* UNITA
National Union of Conservative and Unionist Associations (pol. party, U.K.): *see* Conservative Party
Nationalist Party, *or* NP (pol. party, Malta) 435
Nationalist Party, *or* KMT, *or* Kuomintang (pol. party, Tai.) 471
Nationalist Republican Alliance (pol. party, El Sal.): *see* National Republican Alliance
nationalization (econ.)
  Belgium 373
Nationwide Series (sports) 305
Native American, *or* American Indian
  archaeology 202
  Canada 381
  seed banks (sidebar) **09:**235
Native Seeds (Am. agri. org.) 235
NATO: *see* North Atlantic Treaty Organization
natural gas
  Arctic Regions 362
  Bolivia 374
  Bulgaria 377
  business 217
  fossil fuels (sidebar) **09:**216
  Iraq 414
  Mozambique 440
  Russia 454, 488
  Saudi Arabia 458
  Tanzania 472
  Trinidad and Tobago 474
  Turkmenistan 477
  Ukraine 478
Nature Conservancy (Am. org.)
  environment 236
Nauru **09:**441; **08:**440; **07:**436; **06:**437; **05:**439; **04:**441; **03:**473; **02:**469; **01:**471; **00:**468
  see also WORLD DATA
Naushad Ali (obit.) **07:**137
Naypyidaw (Myanmar) 440
Nazarbayev, Nursultan 422
Nazif, Ahmad 395
NBA: *see* National Basketball Association
NBC (Can. ballet co.): *see* National Ballet of Canada
NCAA (sports): *see* college sports
NCLB (U.S. educ.): *see* No Child Left Behind Act
ND (pol. party, Gr.): *see* New Democracy
NDC (pol. party, Gren.): *see* National Democratic Congress
Ndiaye, Iba (obit.) **09:**148
N'Djamena (Chad) 382
Ndong, Jean Eyeghe 401
NDP (pol. party, Can.): *see* New Democratic Party
NDP (pol. party, Egy.): *see* National Democratic Party
NEA (U.S. org.): *see* National Endowment for the Arts
Neanderthal, *or* Homo neanderthalensis, *or* Neandertal (anthro.)
  "Neanderthals—the Latest News" (sidebar) **05:**149
Nebraska (state, U.S.) 485
  distance learning (sidebar) **09:**231
needle (med.)
  traditional Chinese medicine 187
Ne'eman, Yuval (obit.) **07:**138
negative-index metamaterial
  physics 293, *il.*
Negroponte, John (biog.) **06:**89
  Guatemala 406
Neistat, Louis: *see* Nye, Louis
Nelson, Byron, *or* John Byron Nelson (obit.) **07:**138
Nelson, Gaylord Anton (obit.) **06:**126
Nelson, Prince Rogers (Am. singer and songwriter): *see* Prince
"nenes, Los" (Fernández) 265
Nepal **09:**442; **08:**440; **07:**437; **06:**437; **05:**439; **04:**441; **03:**473; **02:**469; **01:**472; **00:**468
  Bhutan 374
  see also WORLD DATA
"Nerdcore Rising" (motion picture) 289
Nerina, Nadia, *or* Nadine Judd (obit.) **09:**148
Ness, Patrick 258
netbook, *or* nettop 224
Netflix (Am. co.) 221
Netherlandic literature **06:**228; **05:**229; **04:**228; **03:**250; **02:**249; **01:**248; **00:**236
Netherlands, The **09:**442; **08:**441; **07:**437; **06:**437; **05:**440; **04:**441; **03:**473; **02:**470; **01:**472; **00:**469
  association football 315
  financial crisis of 2008 174
  speed skating 323
  see also WORLD DATA
Netherlands Antilles 359
Netsch, Walter 208
nettop: *see* netbook
Neumeier, John 280
neuropeptide Y
  genetics 251
Neustadt International Prize for Literature 261, *table* 256
neutrino
  particle physics 291
"Never Forget" (mus. thea.) 281
"Never So Good" (play) 282
Neves, José Maria 381
Neves, Maria das 457
Nevsun Resources Ltd. (Can. co.)
  Eritrea 397
New Caledonia 359
New Delhi (India): *see* Delhi
New Democracy, *or* ND (pol. party, Gr.) 405
New Democratic Party, *or* NDP (pol. party, Can.) 379
New England Patriots (Am. football team) 317
New Equality Party, *or* YMP (pol. party, Azerbaijan) 370
New Forces Party, *or* FN (pol. party, Côte d'Ivoire) 388
New Hampshire (state, U.S.)
  U.S. election of 2008 177
New Horizons (U.S. spacecraft)
  space probes 297
New Jersey (state, U.S.) 487
New Komeito Party (pol. party, Japan) 419
New Patriotic Party, *or* NPP (pol. party, Ghana) 404
"New Photo" (Chin. mag.) 213
New Voices (Am. journ. program)
  citizen journalism 181
New Works Festival 278
New York (state, U.S.) 485
New York City (N.Y., U.S.)
  art 209, 211
  classical music 273
  dance 278
  financial crisis of 2008 *il.* 171
  jazz 275
  photography 212
  September 11 terrorist attack (special report) **02:**6, *map* 11
  theatre 283
New York City Ballet, *or* NYCB (Am. ballet co.) 278, 279
New York City Marathon
  Sporting Record *tables* 350
New York City Opera (Am. opera co.) 273
"New York City Waterfalls" (art) 210
New York Giants (Am. football team) 317
New York Mets (baseball team) 306
New York Philharmonic (Am. orchestra) 273
  North Korea concert 424, *il.*
New York Stock Exchange, *or* NYSE
  stock markets *table* 218
"New York Times, The" (Am. news.) 208
New York Yankees (baseball team) *il.* 306
New Zealand **09:**442; **08:**441; **07:**438; **06:**438; **05:**440; **04:**442; **03:**474; **02:**471; **01:**473; **00:**470
  geology 226
  Kiribati 424
  motion pictures 285
  rugby 318
  Tuvalu 477
  see also WORLD DATA
New Zealand First (pol. party, N.Z.) 443
New Zealand literature 261
Newbern, Frances: *see* Langford, Frances
Newbery Medal
  Literary Prizes *table* 257
Newell, Peter Francis (obit.) **09:**148
Newk: *see* Rollins, Sonny
Newlin, Dika (obit.) **07:**138
Newman, Arnold Abner (obit.) **07:**138
Newman, Paul, *or* Paul Leonard Newman (obit.) **09:**148
Newman, Ryan 305
Newport-Bermuda Race 323
Newson, Marc (biog.) **09:**95
newspaper **07:**253; **06:**243; **05:**244; **04:**242; **03:**272; **02:**273; **01:**271; **00:**261
  citizen journalism (special report) **09:**180
  computers and information systems 220
  Denmark 392
  sudoku (sidebar) **07:**254
  Vietnam 491
Newton, Helmut (obit.) **05:**126
NFL: *see* National Football League
NGC 2770 (galaxy) 295
NGO: *see* nongovernmental organization
Ngugi wa Mirii (obit.) **09:**149
Nguyen Minh Triet 490
Nguyen Tan Dung 490
NHL: *see* National Hockey League
Niamey (Niger) 444
Niane, Katoucha (obit.) **09:**149
Nicaragua **09:**443; **08:**442; **07:**439; **06:**439; **05:**441; **04:**443; **03:**475; **02:**472; **01:**474; **00:**470
  Colombia 386
  see also WORLD DATA
Nicholas, Favard Antonio (obit.) **07:**138
Nicolson, Nigel (obit.) **05:**126
Nicosia (Cyp.): *see* Lefkosia
nicotine 251
Niekro, Joe, *or* Joseph Franklin Niekro (obit.) **07:**139
Nielsen, Inga
  classical music 275
  obituary **09:**149
Niger **09:**444; **08:**443; **07:**439; **06:**439; **05:**441; **04:**443; **03:**475; **02:**472; **01:**474; **00:**471
  see also WORLD DATA
Nigeria **09:**444; **08:**443; **07:**440; **06:**440; **05:**442; **04:**444; **03:**476; **02:**473; **01:**475; **00:**471
  Cameroon 379
  polio 243
  see also WORLD DATA
Nigerian literature 260
NIH (U.S. agency): *see* National Institutes of Health
Nikkei 225 Stock Average
  financial crisis of 2008 421
  stock markets *table* 218
Nikolayev, Andriyan Grigoryevich (obit.) **05:**126
Nilsson, Birgit, *or* Märta Birgit Svensson (obit.) **06:**126
9/11 attacks: *see* September 11 attacks
1932, Famine of (Sov. hist.)
  Ukraine 478, *il.*
"1968 on Record: A Year of Revolution" (phot. exhibition) 212
"ninfa inconstante, La" (Cabrera Infante) 265
Ninja (Congolese rebel) 388
Nintendo Company, Ltd. (Japanese co.) 223
Nissan Motor Co. (Japanese co.)
  business 215
Nissel, Siegmund Walter, *or* Siggi Nissel
  classical music 275
  obituary **09:**149
Nitze, Paul Henry (obit.) **05:**126
Niue
  dependent states 359
  Tuvaluan refugees 477
Niwa, Fumio (obit.) **06:**126
Niyazov, Saparmurad Atayevich
  obituary **07:**139
  Turkmenistan 476
Nkunda, Laurent 387
Nkurunziza, Pierre 378
NL (baseball): *see* National League
NMR: *see* nuclear magnetic resonance
N,N-diethyl-meta-toluamide: *see* DEET
No Child Left Behind Act, *or* NCLB (2001, U.S.)
  education 231
no-confidence, motion of
  French Polynesia 359
  Greece 405
  Malaysia 433
  Mauritania 435
  São Tomé and Príncipe 457
  Solomon Islands 462
"No Country for Old Men" (motion picture)
  Film Awards *table* 286
no-hitter
  baseball 307
Nō theatre, *or* No theatre (Japanese drama)
  Japanese theatre in the U.S. (special report) **06:**258
NOAA (U.S. agency): *see* National Oceanic and Atmospheric Administration
Nobel Prize **09:**64; **08:**64; **07:**64; **06:**62; **05:**62; **04:**66; **03:**62; **02:**68; **01:**62; **00:**30
  chemistry 66
  economics 64
  Literary Prizes *table* 256

literature 65
physics 67
physiology or medicine 68
Noël, Francine 263
Nofziger, Lyn, *or* Franklyn Curran Nofziger (obit.) **07:**139
Noiret, Philippe (obit.) **07:**139
Nomura, Yoshitaro (obit.) **06:**126
non-Hodgkin lymphoma 248
non-insulin-dependent diabetes: *see* type 2 diabetes mellitus
nongovernmental organization, *or* NGO 386
Nonoo, Huda 370
nontheatrical film: *see* documentary film
Noovi, Indra, *or* Indra K. Noovi (biog.) **08:**95
NOP (pol. party, Tur.): *see* National Order Party
Norbu, Thubten Jigme, *or* Taktser Rinpoche, *or* Tashi Tsering (obit.) **09:**149
Nordic Council Literature Prize Literary Prizes *table* 257
Nordic skiing **09:**324; **08:**325; **07:**319; **06:**320; **05:**321; **04:**317; **03:**349; **02:**345; **01:**343; **00:**341
Sporting Record *tables* 346
Norman, Greg 319
Norman, Larry David (obit.) **09:**149
"Norman Conquests, The" (play) 282
Norodom Sihamoni (biog.) **06:**93
Cambodia 378
North American Free Trade Agreement, *or* NAFTA
Canada 381
North Atlantic Treaty Organization, *or* NATO
Afghanistan 363
Albania 364
Croatia 390
France 400
Georgia 402
Germany 403
Greece 405
Lithuania 431
Macedonia 431
military affairs 271
Montenegro 439
NATO at 50 (special report) **00:**428
Netherlands, The 442
Russia 455
Ukraine 478
North Korea: *see* Korea, Democratic People's Republic of
Northern Ballet Theatre (Br. ballet co.) 280
Northern Ireland **09:**481; **08:**480; **07:**478; **06:**478; **05:**479; **04:**481
Northern League (pol. party, It.) 418
Northwest Airlines, Inc. (Am. co.)
business 215
Norton, Andre, *or* Alice Mary Norton (obit.) **06:**126
Norway **09:**445; **08:**444; **07:**440; **06:**440; **05:**442; **04:**444; **03:**477; **02:**473; **01:**476; **00:**473
seed banks (sidebar) **09:**235
wildlife conservation 238
see also WORLD DATA
Norwegian literature **06:**229; **05:**230; **04:**229; **03:**251; **02:**249; **01:**249; **00:**237
Norwegian Opera and Ballet (bldg., Oslo, Nor.)
Norway 445, *il.*
"Not Bourbon" (racehorse)
Thoroughbred racing 314
Note, Kessai
Marshall Islands 435
Nottage, Cynthia DeLores: *see* Tucker, C. DeLores
Nouakchott (Mauritania) 435
Nougaro, Claude (obit.) **05:**126
Nouhak Phoumsavan, *or* Nouhak Phoumsavanh (obit.) **09:**149
Nouvel, Jean
architecture 204
biography **09:**96
novel (lit.)
"Graphic Novels: Not Just Comic Books" (sidebar) **05:**239
"Now or Later" (play) 281
NP (pol. party, Malta): *see* Nationalist Party
NPP (pol. party, Ghana): *see* New Patriotic Party
NPY (gene) 251
NRM (pol. org., Ugan.): *see* National Resistance Movement
NSG (internat. org.): *see* Nuclear Suppliers' Group
Nsibambi, Apolo 477
nuclear chemistry **07:**279; **05:**269
nuclear energy
business 218
environment 233
India 411
United Kingdom 480
nuclear magnetic resonance, *or* NMR 291
nuclear program
China 385
North Korea 421, 424
nuclear proliferation
Myanmar 441
United Nations 355
United States 485
Nuclear Suppliers' Group, *or* NSG (internat. org.)
India 411
nuclear waste
freshwater pollution 237
nuclear weapon
Iran 413
Israel 417
military affairs 271
North Korea 421, 424
United States 485
weapons of mass destruction (sidebar) **04:**249
"Nudo de sangre" (Sánchez Vidal)
Spanish literature 264
Nujoma, Sam, *or* Samuel Shafiihuma Nujoma 441
Nuku'alofa (Tonga) 474
Nunavut
"Nunavut: The Birth of a New Territory" (special report) **00:**398, *map* 399
NUNS (pol. alliance, Ukraine): *see* Our Ukraine–People's Self-Defense
Nussboim, Yitzhak: *see* Ben-Aharon, Yitzhak
nutrition, human
U.S. state governments 487
Nutrizio, Maria Carmen: *see* Schön, Mila
Nuxhall, Joe, *or* Joseph Henry Nuxhall (obit.) **08:**146
NYCB (Am. ballet co.): *see* New York City Ballet
Nye, Louis, *or* Louis Neistat (obit.) **06:**127
Nykvist, Sven Vilhem (obit.) **07:**139
NYSE: *see* New York Stock Exchange

O

Oakes, Warren 184
Oates, Joyce Carol
American literature 258
Obama, Barack
biographies **09:**96; **08:**95
citizen journalism 181, *il.* 180
Cuba 390
financial crisis of 2008 174
Germany 403
Guantánamo Bay military prison 355
Italy 418
jazz 275
North American Free Trade Agreement 381
popular music 277
religion 301
U.S. election of 2008 (special report) **09:**176, *ils.* 176, 49
United States 483
Obama, Malia
election night rally *il.* 176
Obama, Michelle
fashions 241
U.S. election of 2008 *il.* 176
Obama, Sasha
election night rally *il.* 176
Obama/Biden: *see* United States Presidential Election of 2008
Obama Nfubea, Ricardo Mangue
Equatorial Guinea 396
Obama vs. McCain: *see* United States Presidential Election of 2008
Oberlin College (coll., Oberlin, Ohio, U.S.) 275
obesity
childhood obesity (sidebar) **06:**203
children 246
Obiang Nguema Mbasogo, Teodoro 396
Obote, Apollo Milton (obit.) **06:**127
O'Brien, Aidan 313
O'Brien, Conor Cruise (obit.) **09:**150
O'Brien, William Parry (obit.) **08:**146
ocean
meteorology and climate 228
Ochoa, Lorena (biog.) **08:**96
golf 319
O'Day, Anita (obit.) **07:**140
Odetta, *or* Odetta Holmes Felious (obit.) **09:**150
Odinga, Raila Amolo
biography **09:**97
Kenya 423
ODM (pol. party, Ken.): *see* Orange Democratic Movement
O'Donnell, Joe, *or* Joseph Roger O'Donnell (obit.) **08:**146
O'Donnell, May (obit.) **05:**126
Odorrana tormota: *see* Chinese torrent frog
ODS (pol. party, Czech Rep.): *see* Civic Democratic Party
OECD (internat. org.): *see* Economic Co-operation and Development, Organisation for
Oerter, Al, *or* Alfred Oerter, Jr. (obit.) **08:**147
"Of Time and the City" (motion picture) 285
O'Faolain, Nuala (obit.) **09:**150
offshoring, *or* outsourcing (special report) **05:**178
Ogata, Ken, *or* Ogata Akinobu (obit.) **09:**150
Oh Yeon Ho 180
OHCHR (internat. org.): *see* United Nations High Commissioner for Human Rights, Office of the
O'Herlihy, Dan, *or* Daniel Peter O'Herlihy (obit.) **06:**127
Ohio (state, U.S.) 485
U.S. election of 2008 179
OhmyNews.com (S.Kor. co.)
citizen journalism 180
oil: *see* petroleum
oil spill
environment 234
Oklahoma, University of (univ., Norman, Okla., U.S.) 316
Okosuns, Sonny, *or* Sunny Okosun (obit.) **09:**151
old age, *or* elderly, *or* senior citizen
France 400
Netherlands, The 442
Olds, Robin (obit.) **08:**147
O'Leary, Christopher
"Offshoring" (special report) **05:**178
Oliphant, Betty (obit.) **05:**126
Oliver, Jamie (biog.) **06:**89
Olmert, Ehud
biography **07:**95
Israel 416
Olsen, Tillie, *or* Tillie Lerner (obit.) **08:**147
Olympic Flame, *or* Olympic torch
ceremonial lighting *il.* 19
China 383
Olympic Games
air pollution 236
art 210
baseball 307
basketball 308
Brunei 377
Bulgaria 377
China 186, 383
cycling 312
diving 326
"Games of the XXIX Olympiad" (special report) **09:**194
Germany 403
golf 320
gymnastics 320
Italy 419
Olympic torch *il.* 19
Paralympic Games 330
sailing 323
Salt Lake City scandal (sidebar) **00:**307
Singapore 460
South Korea 425
special reports **05:**292; **01:**350
squash 325
swimming 325
tennis 328
Togo 474
track and field 328
Tuvalu 477
volleyball 330
weightlifting 331
wrestling 331
"XX Olympic Winter Games, The" (special report) **07:**296
see also Winter Olympics
Olympic Sculpture Park (park, Seattle, Wash., U.S.) 205
O'Mahoney, David Tynan: *see* Allen, Dave
Oman **09:**446; **08:**444; **07:**441; **06:**441; **05:**443; **04:**445; **03:**477; **02:**474; **01:**476; **00:**473
see also WORLD DATA
Omar, Dullah (obit.) **05:**126
Ondjaki 265
OneGeology 225
O'Neil, Buck, *or* John Jordan O'Neil, Jr. (obit.) **07:**140
Onley, Toni (obit.) **05:**127
online gambling: *see* gambling
online gaming
"The Virtual World of Online Gaming" (sidebar) **07:**196
Ontario (prov., Can.) 381
OPEC, *or* Organization of Petroleum Exporting Countries (internat. org.)
business 217

multinational and regional organizations 357
open-source software 223
Opening Ceremony (Am. co.) 240
opera 273
Norway 445
Operation Airbridge (U.K.) 456
"Operation Atropos" (art) 211
Operophtera brumata (insect): *see* winter moth
opium
Afghanistan 363
Opportunity (Mars rover) 297
optics 293
Orange Bowl (sports) 316
Sporting Record *tables* 341
Orange Broadband Prize 254, *il.*
Literary Prizes *table* 256
Orange Democratic Movement, *or* ODM (pol. party, Ken.) 423
orangutan, *or* Pongo pygmaeus
wildlife conservation 238, *il.* 237
Orbach, Jerry, *or* Jerome Bernard Orbach (obit.) **05:**127
Oregon (state, U.S.) 202
"Órfãos do Eldorado" (Hatoum)
Brazilian literature 266
organ transplant (surg.): *see* transplant
organic chemistry 290
organized crime
Bulgaria 377
Croatia 389
Guatemala 406
Italy 418
Suriname 468
organized labour, *or* labour union
Russia 454
organotin compound 237
Orion (space vehicle)
space exploration 296
Orlando Rodríguez, Antonio
Spanish literature 265
Ornithorhynchus anatinus: *see* platypus
O'Rourke, Ruth Carol: *see* Hussey, Ruth
Orrorin tugenensis
anthropology 200
Ortega, Amancio, *or* Amancio Ortega Gaona (biog.) **09:**98
Ortega, Daniel, *or* José Daniel Ortega Saavedra (biog.) **07:**96
Nicaragua 443
Ortega, Jesús 437
Orthodox Church, The
religion 299, *tables* 302, 303
Orthodox Church in America
religion 299, *table* 303
Ortíz Mena, Antonio (obit.) **08:**147
Ortoli, François-Xavier (obit.) **08:**147
Oscar (motion pictures): *see* Academy Award
OSCE (internat. org.): *see* Security and Co-operation in Europe, Organization for
OSCS (chem. compound): *see* oversulfated chondroitin sulfate
Osgood, Peter Leslie (obit.) **07:**140
Osipova, Natalya 280
Oslo (Nor.) 445
Osman, Aden Abdullah (obit.) **08:**147
Osmond, Humphry Fortescue (obit.) **05:**127
Osteen, Joel (biog.) **06:**89
Osterbrock, Donald Edward (obit.) **08:**148
Ostrinia furnacalis: *see* Asian corn borer moth
Ostrom, John Harold (obit.) **06:**127
Otari, Muhammad Naji al-
Syria 470
"Other Hand, The" (Cleave) 254
"Other Lives" (Brink) 261
Ottawa (Ont., Can.) 379
Ottawa Senators (Can. ice hockey team) 321
Otto, Sylke (biog.) **07:**96
"où les tigres sont chez eux, Là (Blas de Roblès) 263
"Où on va, papa?" (Fournier) 263
Ouagadougou (Burkina Faso) 378
Oumarou, Seyni 444
Our Ukraine-People's Self-Defense, *or* NUNS (pol. alliance, Ukraine) 478
Ourv, Gérard, *or* Max Gérard Tannenbaum (obit.) **07:**140
"Outcast, The" (Jones) 255
OutKast (biog.) **05:**87
outsider art
"Outsider Art: Moving in from the Margins" (special report) **08:**190
outsourcing: *see* offshoring
Ouyahia, Ahmed 364
Ovechkin, Alexander 321
oversulfated chondroitin sulfate, *or* OSCS 242
Oviedo, Lino 449
ÖVP (pol. party, Aus.): *see* Austrian People's Party
Owens, Buck, *or* Alvis Edgar Owens (obit.) **07:**140
Oz, Amos, *or* Amos Klausner (biog.) **06:**90
Ozawa, Ichiro 419

P

P. C. Hooftprijs: *see* Hooft Prize
P4P (government initiative): *see* Purchase for Progress
Paar, Jack Harold (obit.) **05:**127
PAC (Braz.): *see* Growth Acceleration Program
pachycephalosaur
paleontology 252
Pacific Island Countries Trade Agreement
Tuvalu 477
Pacific Islands **09:**359; **08:**359; **07:**353; **06:**355; **05:**355; **04:**354; **03:**386; **02:**380; **01:**383; **00:**375
Pacific Islands Forum (internat. org.) 359
Fiji 398
Pacific League, *or* PL (baseball) 307
Pacific Northwest Ballet (Am. ballet co.) 278
Packer, Kerry Francis Bullmore (obit.) **06:**127
Pacquiao, Manny 310, *il.*
Paczynski, Bohdan (obit.) **08:**148
PAD (pol. party, Thai.): *see* People's Alliance for Democracy
Padmini (obit.) **07:**140
"Pagaría por no verte" (Sasturain)
Latin American literature 265
Page, Bettie (obit.) **09:**151
Page, Larry, *or* Lawrence Page (biog.) **05:**70
Pago Pago (Am.Sam.) 360
Pahor, Borut 461
PAIGC (pol. party, Af.): *see* African Party for the Independence of Guinea-Bissau and Cape Verde
Paik, Nam June (obit.) **07:**140
pain reliever
traditional Chinese medicine 186, 187
painting **08:**211; **07:**176; **06:**155; **05:**156; **04:**157; **03:**159; **02:**167; **01:**162; **00:**144
art 209
"país del miedo, El" (Rosa) 264
Paisley, Ian, *or* Ian Richard Kyle Paisley
biography **08:**96
Ireland 416
United Kingdom 481
Pak Kyongni, *or* Park Kyung-ni (obit.) **09:**151
Pake, George Edward (obit.) **05:**127
Pakistan **09:**446; **08:**445; **07:**441; **06:**441; **05:**444; **04:**445; **03:**478; **02:**474; **01:**476; **00:**473
Afghanistan 363
earthquake (sidebar) **06:**442
education 229
India 192, 411
military affairs 270
skyrocketing food prices 183, *il.* 182
United States 485
see also WORLD DATA
Pakistan People's Party, *or* PPP (pol. party, Pak.) 446
Palacio, Andy Vivien
Belize 373
obituary **09:**151
popular music 276
Palade, George Emil (obit.) **09:**151
Palance, Jack, *or* Walter Jack Palance, *or* Volodymyr Palanyuk (obit.) **07:**141
Palau **09:**447; **08:**446; **07:**443; **06:**443; **05:**445; **04:**446; **03:**478; **02:**475; **01:**477; **00:**475
see also WORLD DATA
paleontology **09:**252; **08:**252; **07:**232; **06:**219; **05:**219; **04:**219; **03:**241; **02:**240; **01:**240; **00:**228
Sue (sidebar) **01:**241
Palestinian (people)
Israeli and Palestinian settlements *map* **03:**448
Israeli-Palestinian conflict 270
United Arab Emirates aid 479
Palestinian Authority (Pal. govt.) 422
Palestinian Autonomous Areas, *or* West Bank (terr., Isr.) **05:**415; **04:**417; **03:**448; **02:**445
election (sidebar) **07:**413
Israel *map* **03:**448, 416
see also Gaza Strip
Paley, Grace (obit.) **08:**148
Palikir (Micronesia) 437
Palin, Sarah
biography **09:**98
ethics investigation 487
fashions 241
U.S. election of 2008 178, *il.* 177
Palin, Todd *il.* 177
palm *il.* 250
palm oil 434
Palme d'Or
Film Awards *table* 286
Palmer, Bruce (obit.) **05:**127
Palmer, Earl (obit.) **09:**152
Pamuk, Orhan (biog.) **06:**90
PAN (pol. party, Mex.): *see* National Action Party
Panama **09:**447; **08:**446; **07:**443; **06:**443; **05:**445; **04:**447; **03:**479; **02:**476; **01:**478; **00:**475
El Salvador 396
see also WORLD DATA
Panama City (Pan.) 447
pancreatic cancer
health and disease 245
pandemic
"Bird Flu—The Next Human Pandemic?" (sidebar) **06:**490
Panhellenic Socialist Movement, *or* PASOK (pol. party, Gr.)
Greece 405
Paniagua, Valentín (obit.) **07:**141
Panichgul, Thakoon 241
Panofsky, Wolfgang Kurt Hermann (obit.) **08:**148
Pantani, Marco, *or* "Il Pirata," *or* "The Pirate" (obit.) **05:**128
Pantridge, Frank, *or* James Francis Pantridge (obit.) **05:**128
Paolozzi, Sir Eduardo Luigi (obit.) **06:**127
Papa Wendo, *or* Antoine Kalosoyi, *or* Wendo Kolosoy (obit.) **09:**152
Papadopoulos, Tassos
Cyprus 391
obituary **09:**152
Papaleo, Anthony: *see* Franciosa, Tony
Papaleo, Guglielmo: *see* Pep, Willie
Papandreou, Georgios 405
Papapetrou, Petros: *see* Petros VII
Papoulias, Karolos 405
Papua New Guinea **09:**448; **08:**447; **07:**444; **06:**444; **05:**446; **04:**447; **03:**479; **02:**476; **01:**478; **00:**475
see also WORLD DATA
Paraguay **09:**448; **08:**447; **07:**444; **06:**444; **05:**446; **04:**447; **03:**479; **02:**477; **01:**479; **00:**476
yellow fever 243, *il.* 244
see also WORLD DATA
Paralympic Games (sidebar) **09:**330
Paramaribo (Sur.) 468
Paraskevaidis, Christos: *see* Christodoulos
Paredes, Carlos (obit.) **05:**128
Parent, Mimi, *or* Marie Parent (obit.) **06:**127
Paris (Fr.) 399
Paris Opéra Ballet, *or* POB (Fr. ballet co.) 279
Park, Nick (biog.) **07:**97
Park Kyung-ni: *see* Pak Kyongni
Park Tae Hwan 326
Parker, Candace 308
Parker, James Thomas (obit.) **06:**128
Parker, Sarah Jessica 240
Parker Bowles, Camilla: *see* Camilla, duchess of Cornwall
Parks, Gordon, *or* Gordon Roger Alexander Buchanan Parks (obit.) **07:**141
Parks, Rosa, *or* Rosa Louise McCauley (obit.) **06:**128
Parr, Martin 213
Parson, Anja (biog.) **08:**97
Parsons, Benny (obit.) **08:**148
Parti Démocratique Gabonais (pol. party, Gab.): *see* Gabonese Democratic Party
participatory journalism: *see* citizen journalism
particle accelerator
Large Hadron Collider 292
particle physics 291
Partido Demócrata Cristiano (pol. party, Chile): *see* Christian Democratic Party
Partito Democratico (pol. party, It.): *see* Democratic Party
Partnership and Cooperation Agreement (EU-Russ. agreement) 454
Partnership for Peace (internat. relations) 439
Partridge, Frances Catherine Marshall (obit.) **05:**128
Party for a European Future (pol. party, Maced.) 432
Parus major (bird): *see* great tit
Paschke, Ed, *or* Edward Francis Paschke, Jr. (obit.) **05:**128
PASOK (pol. party, Gr.): *see* Panhellenic Socialist Movement

"Passionate Life of Edith Piaf, The" (motion picture): *see* "Vie en rose, La"
Passmore, John Arthur (obit.) **05:**128
Patarkatsishvili, Badri, *or* Arkady Shalovich Patarkatsishvili (obit.) **09:**152
Patil, Pratibha 410
Patrick, Danica Sue (biog.) **09:**99
automobile racing 305
Patterson, Floyd (obit.) **07:**142
Patterson, Tom, *or* Harry Thomas Patterson (obit.) **06:**128
Patton, Antwan (biog.) **05:**87
Paul Taylor Dance Company (Am. dance co.) 279
Paulson, Hank 173, 482
Pavarotti, Luciano (obit.) **08:**148
Pavlik, Kelly 310
PBA: *see* Professional Bowlers Association
PC (computer): *see* personal computer
PCRM (pol. party, Moldova): *see* Communists of the Republic of Moldova, Party of
PDG (pol. party, Gab.): *see* Gabonese Democratic Party
PDI-P (pol. party, Indon.): *see* Indonesian Democratic Party of Struggle
PdL (pol. party, It.): *see* People of Freedom
PDSH (pol. party, Maced.): *see* Democratic Party of Albanians
PDVSA (Venez. co.): *see* Petróleos de Venezuela
"Peace" (Bausch) 258
Peacebuilding Commission (UN) 355
peacekeeping mission
Côte d'Ivoire 388
Cyprus 391
Eritrea 397
Ethiopia 398
Germany 403
Liberia 430
military affairs 270
Sierra Leone 460
Somalia 462
Sudan, The 466, 467
United Nations *map* **08:**355, 354
Peacekeeping Operations, Department of, *or* DPKO (UN) 356
peak oil
fossil fuels (sidebar) **09:**216
Pearce, Ann Philippa (obit.) **07:**142
Peck, Morgan Scott (obit.) **06:**128
Pedersen, Carl-Henning (obit.) **08:**149
Pedroia, Dustin 306
Peel, John, *or* John Robert Parker Ravenscroft (obit.) **05:**128
peer-to-peer network
Internet 221
Pei, I. M., *or* Ieoh Ming Pei 205
Peirsol, Aaron 326
Peixoto de Magalhães, Antônio Carlos: *see* Magalhães, Antônio Carlos
Pelevin, Viktor 267
Pelikan, Jaroslav, *or* Jaroslav Jan Pelikan, Jr.
biography **06:**90
obituary **07:**142
Pelosi, Nancy, *or* Nancy Patricia D'Alesandro (biog.) **07:**98
PEMEX (Mex. co.): *see* Mexican Petroleum Co.
PEN/Faulkner Award 259
Literary Prizes *table* 256
PEN/Nabokov Award
Literary Prizes *table* 256
Penick, Mary Frances: *see* Davis, Skeeter
Penn, Irving 213
Penn, Sean (biog.) **05:**87
motion pictures 284
Pennington, Chad 317
Pennsylvania State University, *or* Penn State (univ. system, Pa., U.S.) 316
penology **03:**232; **02:**231; **01:**230; **00:**218
pension
Czech Republic 392
Greece 405
Pentagon
September 11 terrorist attack (special report) **02:**6, *map* 11
People for the Ethical Treatment of Animals, *or* PETA (org.) 456
People of Freedom, *or* PdL, *or* Popolo della Libertà (pol. party, It.) 417
People Power Party, *or* PPP (pol. party, Thai.) 473
People's Alliance (pol. party, Mal.) 433
People's Alliance for Democracy, *or* PAD (pol. party, Thai.) 473
People's Assembly (legislative org., Egy.) 395, *il.*
People's Congress of Kurdistan, *or* KONGRA-GEL (Kurdish militant org.) 476
People's Council, *or* Khalk Maslahaty (Turkmen govt.) *il.* 477
People's Democratic Party (pol. party, Bhut.) 374
People's National Party, *or* PNP (pol. party, Jam.) 419
People's Party (pol. party, Tur.): *see* Republican People's Party
People's United Party, *or* PUP (pol. party, Belize) 373
Pep, Willie, *or* Guglielmo Papaleo (obit.) **07:**142
Perdue, Frank, *or* Franklin Parsons Perdue (obit.) **06:**128
Perella, Anita Lucia: *see* Roddick, Dame Anita
Peres, Shimon 416
Pérez Martínez, Francisco: *see* Umbral, Francisco
performing arts **09:**273; **08:**272; **07:**262; **06:**250; **05:**253; **04:**252; **03:**283; **02:**282; **01:**281; **00:**272
Kabuki in the U.S. (special report) **06:**258
perihelion
astronomy *table* 294
Peronist Party (pol. party, Arg.): *see* Justicialist Party
Perry, Grayson (biog.) **05:**87
Persian Gulf War, Second (2003): *see* Iraq War
Persian literature **09:**267; **08:**267; **07:**247; **06:**236; **05:**236; **04:**236; **03:**258; **02:**257; **01:**257; **00:**245
personal computer, *or* PC 224
personalized medicine **05:**219
Peru **09:**449; **08:**448; **07:**445; **06:**445; **05:**447; **04:**448; **03:**480; **02:**477; **01:**479; **00:**476
see also WORLD DATA
PES (pol. party, Eur.): *see* European Socialists, Party of
PETA (org.): *see* People for the Ethical Treatment of Animals
Peters, Brock, *or* George Fisher (obit.) **06:**128
Peters, Winston 443
Petersen, Robert Einar (obit.) **08:**149
Peterson, Oscar, *or* Oscar Emmanuel Peterson (obit.) **08:**149
Petit, Philippe 289
Petraeus, David, *or* David Howell Petraeus
biography **08:**97
Pakistan 447
United States 484
PetroCaribe (internat. co.) 371
Honduras 408
Petróleos de Venezuela, *or* PDVSA (Venez. co.) 217
petroleum
Angola 365
Arctic Regions 362
Bahamas, The 370
Bolivia 375
business 217
Chad 382
Chile 383
Ecuador 394
fossil fuels (sidebar) **09:**216
Germany 404
Guyana 407
Honduras 408
Iceland 410
Iran 413
Iraq 414
Jordan 422
Kazakhstan 423
Malaysia 434
Mexico 436
multinational and regional organizations 357
Niger 444
Nigeria 444
Oman 446
Palau 447
Portugal 451
Russia 454
Saint Lucia 456
Saudi Arabia 458
South Africa 464
Tanzania 472
United Arab Emirates 479
Venezuela 490
Zambia 492
Petroleum Exporting Countries, Organization of (internat. org.): *see* OPEC
Petrone, Ciro *il.* 285
Petros VII, *or* Petros Papapetrou (obit.) **05:**128
Peugeot-Citroën (Fr. co.) 215
Peynaud, Émile (obit.) **05:**128
Pfizer, Inc. (Am. co.) 218
PGA: *see* Professional Golfers' Association of America
Phan Van Hoa: *see* Vo Van Kiet
pharmaceutical **09:**246; **08:**246; **07:**216; **06:**204; **05:**203
botany 248
business 218
Canada (sidebar) **04:**377
see also prescription drug
Phelps, Michael
Beijing 2008 Olympic Games 194
biography **05:**88
swimming 325, *il.* 326
Philadelphia (Pa., U.S.)
wireless technology 219
Philadelphia Flyers (Am. hockey team) 321
Philadelphia Phillies (baseball team) 306
Philip Morris International (internat. co.) 218
Philip Morris USA (Am. co.)
business 218
Philippine Stock Exchange (stock exchange, Phil.)
financial crisis of 2008 *il.* 174
Philippines **09:**449; **08:**448; **07:**445; **06:**445; **05:**447; **04:**449; **03:**481; **02:**478; **01:**480; **00:**477
military affairs 271
skyrocketing food prices 183
typhoon *il.* 30
see also WORLD DATA
Philips, Frits, *or* Frederik Jacques Philips (obit.) **06:**128
Phnom Penh (Camb.) 378
Phoenix Mars Lander (space probe) 294, 297
phospholipid 252
photography **09:**212; **08:**214; **07:**179; **06:**158; **05:**159; **04:**160; **03:**166; **02:**170; **01:**147; **00:**146
photon
quantum physics 292
physical anthropology **09:**200; **08:**202; **06:**147; **05:**147; **03:**150; **02:**158; **01:**152; **00:**133
physical chemistry **09:**290; **08:**290
physician-assisted suicide 486
physics **09:**291; **08:**290; **07:**280; **06:**272; **05:**270; **04:**271; **03:**263; **02:**263; **01:**262; **00:**250
Einstein centennial (special report) **06:**270
Piano, Renzo (biog.) **06:**91
architecture 208
Picasso, Pablo 212
Piccard, Jacques-Ernest-Jean (obit.) **09:**152
Pickering, William Hayward (obit.) **05:**128
Pickett, Wilson, *or* the Wicked Pickett (obit.) **07:**142
Pielke, Roger A., Jr.
"Kyoto Protocol: What Next?, The" (special report) **06:**194
Pierce, Paul 307, *il.* 308
Pierre-Louis, Michele 408
Pietri, Pedro (obit.) **05:**129
Pikoli, Vusi 464
Pimentel, Irene Flunser 266
Pinault, François (biog.) **07:**98
Pinda, Mizengo 472
Piñera, Sebastián 382
Ping An Insurance (Chin. co.) 385
Ping-Pong: *see* table tennis
Pintasilgo, Maria de Lourdes Ruivo da Silva (obit.) **05:**129
Pinter, Harold
obituary **09:**153
theatre 282
Pinto, Maria 241
pipeline
Arctic Regions 362
Chad 382
Mozambique 440
piracy (copyright law)
digital music 222
piracy (maritime law)
high seas (special report) **06:**210
Seychelles 460
Somalia 270, 354, 463, *il.*
"Piranha Heights" (play) 282
"Pirata, Il" (It. cyclist): *see* Pantani, Marco
"Pirate, The" (It. cyclist): *see* Pantani, Marco
Pires, Pedro 381
PiS (pol. party, Pol.): *see* Law and Justice
PISA: *see* Program for International Student Assessment
Pitney, Gene (obit.) **07:**143
Pitol, Sergio (biog.) **07:**98
Pitt, Brad, *or* William Bradley Pitt (biog.) **09:**99
Pittsburgh Penguins (Am. hockey team) 321, *il.*
Pius XII
religion 300
PJ (pol. party, Arg.): *see* Justicialist Party
PJD (pol. party, Mor.): *see* Justice and Development Party
PKK (Kurdish militant org.): *see* People's Congress of Kurdistan

PL (baseball): *see* Pacific League
plagiarism (special report) **03:**206
"Plague of Doves, The" (Erdrich)
American literature 258
Planeta Prize, *or* Premio Planeta de Novela 264
Literary Prizes *table* 257
platypus, *or* duck-billed platypus, *or* Ornithorhynchus anatinus
paleontology 253
zoology 248
PLC (pol. party, Nic.): *see* Constitutionalist Liberal Party
Pleshette, Suzanne (obit.) **09:**153
Plushchenko, Yevgeny, *or* Yevgeny Viktorovich Plushchenko (biog.) **05:**88
Pluto
reclassification (sidebar) **07:**283
PMF: *see* private military firm
PN (pol. party, Urug.): *see* Blanco Party
PNP (pol. party, Jam.): *see* People's National Party
PO (pol. party, Pol.): *see* Civic Platform
POB (Fr. ballet co.): *see* Paris Opéra Ballet
pocket billiards **06:**298; **05:**301; **04:**296; **03:**324; **02:**324; **01:**321; **00:**315
Podgorica (Montenegro) 439
Poe, Fernando, Jr., *or* Ronald Allan Kelley Poe (obit.) **05:**129
Pohamba, Hifikepunye
biography **06:**91
Namibia 441
Pohnpei (is., Micronesia) 437
Poinsettia Bowl (sports) 316
Pointer, June (obit.) **07:**143
Poirier, Louis: *see* Gracq, Julien
poker (sidebar) **06:**241
"Pokhronite menya za plintusom" (Sanayev) 267
Polanco, Jesús de, *or* Jesús de Polanco Gutiérrez (obit.) **08:**149
Poland **09:**450; **08:**449; **07:**446; **06:**446; **05:**448; **04:**450; **03:**482; **02:**479; **01:**481; **00:**478
education 230
motion pictures 288
U.S. missile defense system 455
see also WORLD DATA
polar bear
Arctic Regions 362
polariton 293
pole vault 328
polio
Angola 366
Burkina Faso 378
health and disease 243
sidebar **05:**203
United Nations 355
Polish Peasants Party, *or* PSL (pol. party, Pol.) 459
political campaign (politics): *see* campaign
political prisoner
Belarus 372
Politkovskaya, Anna, *or* Anna Stepanovna Mazepa (obit.) **07:**143
Pollack, Sydney Irwin (obit.) **09:**153
pollination 250
colony collapse disorder (sidebar) **09:**249
pollution **04:**194; **03:**212; **02:**213; **01:**209; **00:**196
polo **03:**334; **02:**333; **01:**331; **00:**325
polysaccharide, *or* glycan
biochemistry 291
Pongo pygmaeus (primate): *see* orangutan
Pontecorvo, Gillo, *or* Gilberto Pontecorvo (obit.) **07:**143
Ponti, Carlo, *or* Carlo Fortunaro Pietro Ponti (obit.) **08:**149
Ponting, Ricky, *or* Ricky Thomas Ponting (biog.) **07:**99
cricket 311
Pony Chung: *see* Chung Se Yung
Popescu-Tariceanu, Calin 452
Pople, Sir John Anthony (obit.) **05:**129
Popolo della Libertà (pol. party, It.): *see* People of Freedom
Popovich, Gregg (biog.) **08:**97
Popular Army for the Restoration of the Republic and Democracy (pol. group, Cent.Af.Rep.) 382
Popular Movement for the Liberation of Angola, *or* MPLA (pol. org., Ang.) 365
popular music **09:**276; **08:**275; **07:**265; **06:**252; **05:**256; **04:**255; **03:**286; **02:**284; **01:**284; **00:**275
Internet 222
Popular Party, *or* PP (pol. party, Sp.) 465
Port-au-Prince (Haiti) 408
Port Louis (Mauritius) 436
Port Moresby (Pap.N.G.) 448
Port of Spain (Tr. and Tob.) 474
Port Vila (Van.): *see* Vila
Portillo Cabrera, Alfonso 406
Porto-Novo (Benin) 373
"Portraits of the Artist as an Old Man" (phot. exhibit) 213
Portugal **09:**451; **08:**450; **07:**447; **06:**447; **05:**449; **04:**451; **03:**483; **02:**480; **01:**482; **00:**479
see also WORLD DATA
Portuguese literature **09:**265; **08:**265; **07:**246; **06:**233; **05:**234; **04:**233; **03:**255; **02:**254; **01:**254; **00:**242
Portuondo, Omara 276
"Posthumous Keats" (Plumly) American literature 259
Poston, Tom, *or* Thomas Gordon Poston (obit.) **08:**150
potato
seed banks (sidebar) **09:**235
potherb (culinary and medicinal plant): *see* herb
Potter, Maureen (obit.) **05:**129
Poulin, Jacques 263
pound sterling, *or* sterling
United Kingdom 481
poverty
education 230, *il.*
El Salvador 396
Ethiopia 398, *il.*
Jordan 422
Liberia 429
Madagascar 432
Paraguay 448
Peru 449
Philippines 450
Sierra Leone 460
skyrocketing food prices 182
Swaziland 468
United Nations 355
wildlife conservation 238
POW: *see* prisoner of war
Powell, Asafa 328
PP (pol. party, Sp.): *see* Popular Party
PPP (pol. party, Pak.): *see* Pakistan People's Party
PPP (pol. party, Thai.): *see* People Power Party
Prabowo Subianto
Indonesia 412
Prachanda, *or* Pushpa Kamal Dahal
biography **09:**99
Nepal 442
Prada Group (It. co.) 239
Prado Museum, *or* Museo del Prado, *or* National Museum of the Prado, *or* Royal Museum of Painting (mus., Madrid, Sp.)
architecture 205, *il.* 204
Prague (Czech Rep.) 391, *il.* 213
Prague Spring (Czech hist.) 213, *il.*
Praia (C.Verde) 381
Pramoedya Ananta Toer (obit.) **07:**143
"Prayer for My Daughter, A" (play) 282
PRD (pol. party, Mex.): *see* Democratic Revolution, Party of the
PRD (pol. party, Pan.): *see* Democratic Revolutionary Party
Preah Vihear (temple, Camb.) 378, *il.* 379
Thailand 473
Preakness Stakes (horse race) 312
Sporting Record *tables* 338
Preece, Warren Eversleigh (obit.) **08:**150
Premio Cervantes: *see* Cervantes Prize for Hispanic Literature
Premio Luis da Camões da Literatura: *see* Camões Prize
Premio Planeta de Novela: *see* Planeta Prize
Premio Strega: *see* Strega Prize
Presbyterian churches 299
prescription drug
Canada (sidebar) **04:**377
Medicare program (sidebar) **05:**285
Presidential Election of 2008: *see* United States Presidential Election of 2008
press: *see* journalism
Presson, Jacqueline: *see* Allen, Jay Presson
Preston, Billy, *or* William Everett Preston (obit.) **07:**144
Pretoria, *or* Tshwane (S.Af.) 463
Préval, René, *or* René García Préval (biog.) **07:**99
Haiti 408
Price, David A.
"Remembering the Jamestown Colony After 400 Years" (special report) **08:**182
Prigov, Dmitry Aleksandrovich (obit.) **08:**150
Prilepin, Zakhar 267
primary education: *see* elementary education
primate 200
wildlife conservation 237, *il.*
Primavera Prize (lit. award) 264
Prince, *or* Prince Rogers Nelson (biog.) **05:**89
Prince, Richard 209
"Princess of the Stars" (ship) *il.* 30
Prinz, Birgit (biog.) **08:**98
prison **03:**232; **02:**231; **01:**230; **00:**218
prisoner of war, *or* enemy combatant, *or* POW
"POWs and the Global War on Terrorism" (special report) **05:**250
United States 484
Pristina (Kosovo) 425
Pritam, Amrita Kaur (obit.) **06:**128
Pritzker Prize (arch.) 204
privacy, rights of
computers and information systems 223
Internet and privacy concerns (special report) **01:**178
private military firm, *or* military services provider, *or* PMF, *or* private security company
"Outsourcing War—The Surge in Private Military Firms" (special report) **07:**260
Private Sector Forum on Food Sustainability and the Millineum Development Goals (UN)
skyrocketing food prices 183
privatization 439
Prix d'Amerique (horse race) 314
Prix de l'Arc de Triomphe (horse race) 313
Prix Femina (Fr. lit. prize) 263
Literary Prizes *table* 257
Prix Goncourt (Fr. lit. prize) 263
Literary Awards *table* 257
Prix Médicis (Fr. lit. prize) 263
Prix Renaudot (Fr. lit. prize)
French literature 263, *il.* 262
Prodi, Romano 417
Professional Bowlers Association, *or* PBA
Sporting Record *tables* 334
Professional Golfers' Association of America, *or* PGA 319
Sporting Record *tables* 342
Professional Journalists, Society of, *or* SPJ (Am. org.) 181
Profumo, John Dennis (obit.) **07:**144
Program for International Student Assessment, *or* PISA 230
Progressive Democrats (pol. party, Ire.) 416
Progressive Encounter–Broad Front, *or* EP-FA (pol. party, Urug.) 488
Proposition 8 (law, Calif., U.S.)
U.S. state governments 486, *il.*
Prosperous Armenia (pol. party, Arm.) 367
prostate cancer 246
Protestantism
religion *tables* 302, 303
protests: *see* demonstrations and protests
Proulx, Monique 263, *il.*
Proust, Jean-Paul 438
Provisional Contribution on Financial Transactions, *or* CPMF 376
Provisional Irish Republican Army (Irish mil. org.): *see* Irish Republican Army
Proxmire, Edward William (obit.) **06:**129
Pryor, Richard (obit.) **06:**129
PS (pol. party, Port.): *see* Socialist Party
PSD (pol. party, Port.): *see* Social Democratic Party
PSD (pol. party, Rom.): *see* Social Democratic Party
PSL (pol. party, Pol.): *see* Polish Peasants Party
PSUV (pol. party, Venez.): *see* United Socialist Party of Venezuela
ptyctodont
paleontology 253
Public Forum for Liberty and Justice (pol. party, Georgia) 401
publishing **07:**253; **06:**243; **05:**244; **04:**242; **03:**272; **02:**273; **01:**271; **00:**261
Puckett, Kirby (obit.) **07:**144
Puerto Rico 359
archaeology 203
Puffy AmiYumi (biog.) **07:**100
Pujols, Albert, *or* José Alberto Pujols (biog.) **07:**101
baseball 306
Pulitzer Prize
literature 259, *il.*
Pullman, Philip (biog.) **05:**89

PUP (pol. party, Belize): *see* People's United Party
Purchase for Progress, *or* P4P (government initiative)
  skyrocketing food prices 183
Puri, Amrish (obit.) **06:**129
Purnaiya Taylor, Kamala: *see* Markandaya, Kamala
Purvanov, Georgi 377
Puskas, Ferenc (obit.) **07:**144
Putin, Vladimir
  Georgia 402
  military affairs 271
  Russia 453
  Uzbekistan 488
Putrajaya (Mal.) 433
Puttaswamayya, Muthuraj Singanalluru: *see* Rajkumar
puzzle
  Sudoku (sidebar) **07:**254
Pyongyang (N.Kor.) 424

Q

Qaddafi, Muammar al-
  biography **05:**89
  Libya 430, *il.*
  Switzerland 470
Qaeda, al-
  Afghanistan 363
  Denmark 392
  Iraq 414
  Pakistan 446
  terrorism 355
  United States 484
Qaeda in the Islamic Maghreb, al-, *or* AQIM
  Mauritania 435
Qa'id, Muhammad Hassan: *see* Libi, Abu Yahya al-
Qasimi, Ahmad Nadeem (obit.) **07:**145
Qasimov, Alim 276
Qatar **09:**452; **08:**451; **07:**448; **06:**448; **05:**450; **04:**452; **03:**484; **02:**481; **01:**482; **00:**480
  education 232
  financial crisis of 2008 174
  Russia 454
  see also WORLD DATA
Qi Gong, *or* Qigong (meditation technique) 186
"Qinqiang" (Jia Pingwa) 268
quantum dot 292
quantum entanglement 292
"Quantum of Solace" (motion picture) 284
quantum physics 292
qubit
  quantum physics 292
Quebec (prov., Can.) 379
  geology and geochemistry 225, *il.*
Quebec City (Que., Can.)
  400th anniversary *il.* 32
"Quedagh Merchant" (ship) 203
Quezon City (Phil.) 449
Quine, Robert (obit.) **05:**129
Quito (Ec.) 394
Quoirez, Françoise: *see* Sagan, Françoise
Qutb, Sayyid 458

R

Rabat (Mor.) 439
Rabemananjara, Charles 432
Rabinowitz, Victor (obit.) **08:**150
Racan, Ivica (obit.) **08:**150
racism
  automobile racing 304
  cricket 311
  Obama's 2008 campaign speeech 177
Radcliffe, Daniel, *or* Daniel Jacob Radcliffe (biog.) **08:**98
Radcliffe, Ted, *or* Theodore Roosevelt Radcliffe (obit.) **06:**129
Rademakers, Fons, *or* Alphonse Marie Rademakers (obit.) **08:**150
radio **07:**253; **06:**242; **05:**242; **04:**241; **03:**271; **02:**273; **01:**271; **00:**260
  censorship 379
  satellite radio (sidebar) **05:**243
Radmanovic, Nebojsa 375
Rahman, A. R., *or* A. S. Dileep Kumar, *or* Allah Rakha Rahman (biog.) **05:**90
Rahman, Shamsur (obit.) **07:**145
Rai, Aishwarya (biog.) **05:**90
Raich, Benjamin (biog.) **07:**101
Räikkönen, Kimi 304
railroad, *or* railway
  Civil Engineering Projects *table* 207
Rain, *or* Jung Ji Hoon (biog.) **08:**99
rainforest
  wildlife conservation 238
Rainier III, Prince, *or* Rainier-Louis-Henri-Maxence-Bertrand de Grimaldi (obit.) **06:**129
Raisin, Ross 255
Raitt, John Emmet (obit.) **06:**129
Rajapakse, Mahinda 466
Rajkumar, *or* Muthuraj Singanalluru Puttaswamayya (obit.) **07:**145
Rajoy, Mariano 465
Rakhmon, Imomali, *or* Imomali Rakhmonov 472
Rakosi, Carl, *or* Callman Rawlev (obit.) **05:**129
Rakowski, Mieczyslaw Franciszek (obit.) **09:**153
Raksin, David (obit.) **05:**129
rally (meeting): *see* demonstrations and protests
rally (automobile racing) **09:**305; **08:**303; **07:**295; **06:**294, **05:**297; **04:**291; **03:**319; **02:**319; **01:**316; **00:**308
Rally and Issues for Monaco (pol. party, Mon.) 438
Rally for Democracy and Progress, *or* RDP (pol. party, Nam.) 441
Ram, Kanshi (obit.) **07:**145
Ramallah (Isr.-occupied terr.) 416
  classical music 273
Ramanna, Raja (obit.) **05:**129
Rambert Dance Company (Br. ballet co.) 280
"Ramblin' Boy" (album by Haden) jazz 275
Rambo, Dottie, *or* Joyce Reba Luttrell (obit.) **09:**154
  popular music 277
Ramgoolam, Navin 436
Ramirez, Manny, *or* Manuel Aristides Ramirez
  baseball 307
  biography **09:**100
Ramondino, Fabrizia 264
Ramone, Johnny, *or* John Cummings (obit.) **05:**129
Ramos-Horta, José 394
Ramsay, Gordon (biog.) **09:**100
RAMSI (multinatl. security force): *see* Regional Assistance Mission to Solomon Islands
Ranbaxy Laboratories (Indian co.)
  pharmaceuticals 218
Randall, Kikkan 324
Randall, Tony, *or* Leonard Rosenberg (obit.) **05:**130
Rankin, Ian 255
Rankin, Nell (obit.) **06:**129
Rao, Pamulaparti Venkata Narasimha (obit.) **05:**130
Rao, Raja (obit.) **07:**145
Raposa Serra do Sol Indian Reserve (area, Braz.) 376
Rapson, Ralph 208
Rashad, Phylicia, *or* Phylicia Avers Allen (biog.) **09:**101
Rasizade, Artur 369
Raskin, Jef (obit.) **06:**130
Rasmussen, Anders Fogh 392
"Ratatouille" (motion picture)
  Film Awards *table* 286
Ratmansky, Aleksey 278, 279
Ratzinger, Joseph Alois: *see* Benedict XVI
Ratzinger, Joseph Cardinal: *see* Benedict XVI
Rau, Johannes (obit.) **07:**146
Rauschenberg, Robert, *or* Milton Rauschenberg (obit.) **09:**154
Ravalomanana, Marc 432
"Raven's Pass" (racehorse) 313
Ravenscroft, John Robert Parker: *see* Peel, John
"Ravine, The" (Quarrington) 260
Rawley, Callman: *see* Rakosi, Carl
Rawlins, Rondell 408
Rawls, Lou (obit.) **07:**146
Ray, Rachael, *or* Rachael Domenica Ray (biog.) **07:**101
Raymond, Usher, IV: *see* Usher
RCD (pol. party, Tun.): *see* Democratic Constitutional Assembly
RDB (Dutch dance co.): *see* Royal Danish Ballet
RDP (pol. party, Nam.): *see* Rally for Democracy and Progress
Reagan, Ronald, *or* Ronald Wilson Reagan (obit.) **05:**131
real estate industry
  financial crisis of 2008 170
REAL identification act, *or* Real ID Act (2005, U.S.)
  U.S. state governments 486
RealNetworks, Inc. (Am. co.)
  online piracy 222
rebel group
  Colombia 386
  Mali 434
recession
  Bahrain 370
  Canada 381
  Denmark 392
  Estonia 397
  financial crisis of 2008 170, 218
  Germany 403
  Italy 418
  Japan 420
  Singapore 461
  Spain 465
  United States 482
"Red Cliff," *or* "Chi bi" (motion picture) 289
Redgrave, Vanessa 282
Redman, Dewey (obit.) **07:**146
Reed, Jerry, *or* Jerry Reed Hubbard 277
Reed, Leonard (obit.) **05:**130
Rees, Merlyn: *see* Merlyn-Rees, Merlyn Merlyn-Rees, Baron
Reeve, Christopher (obit.) **05:**130
Reeve, Dana (obit.) **07:**146
Reeve, Philip 258
referendum
  Costa Rica 388
  Ecuador 394, *il.*
  Hungary 409
  Ireland 356
  Moldova 438
  Myanmar 440
  U.S. state governments 486
Reform Party (pol. party, Est.) 397
Reform Treaty (European Union): *see* Lisbon, Treaty of
refugee **06:**289; **05:**289; **04:**288; **03:**315; **02:**314; **01:**312; **00:**304
  Afghanistan 363
  Bhutan 374
  Botswana 376
  Burundi 378
  Cameroon 379
  Central African Republic 382
  Chad 382, *il.*
  Iraq 414
  Jordan 421
  Lebanon 428
  Mauritania 436
  Morocco 439
  Nauru 441
  Nepal 442
  North Korea 425
  Pakistan 446
  Serbia 459
  Somalia 462
  Sudan, The 466, *map* 468
  Syria 470
  Uganda 477
  United Nations 354, *il.* 355
  Yemen 491
Regional Assistance Mission to Solomon Islands, *or* RAMSI (multinatl. security force) 462
Rehman, Noormohamed Abdul: *see* Merchant, Ismail
Rehman, Shabana (biog.) **05:**90
Rehnquist, William Hubbs (obit.) **06:**130
Reichelt, Hannes 324
Reichs, Kathy, *or* Kathleen Joan Toelle Reichs (biog.) **08:**99
Reinado, Alfredo 394
Reinleldt, Fredrik 469
Reinhart, Tanva Miriam (obit.) **08:**150
religion **09:**298; **08:**296; **07:**288; **06:**277; **05:**278; **04:**277; **03:**301; **02:**300; **01:**299; **00:**290
  "Britain: The Radical Stronghold of European Muslims" (special report) **07:**476
  "Christianity's Newest Converts" (special report) **02:**306
  education 229
  Roman Catholic Church scandal (sidebar) **03:**304
  "Roman Catholicism at a Crossroads" (special report) **06:**280
  Saudi Arabia 458
  "Serious Fracture in the Anglican Church, A" (special report) **09:**188
  "Turkey's Secular/Islamic Conundrum" (special report) **09:**190
  Turkmenistan 477
"Relocated" (play) 282
Rembrandt, *or* Rembrandt van Rijn
  "Rembrandt Research Project, The" (special report) **07:**180
Rembrandt Research Project (special report) **07:**180
Remengesau, Tommy, Jr. 447
Remington, Charles Lee (obit.) **08:**151
remittance
  Guatemala 406
  Haiti 408
  Kyrgyzstan 427
  Mexico 437
  Morocco 439
  Tajikistan 472
  U.S. migrants (sidebar) **07:**432
  Vanuatu 489
Ren Zhongyi (obit.) **06:**130
Renamo/UE (guerrilla org., Moz.): *see* Mozambique National Resistance/Electoral Union
Renault SA (Fr. co.) 215

renewable energy source 233
Jamaica 419
Nicaragua 443
renminbi 385
repatriation
Burundi 378
Congo, Democratic Republic of the 387
Mauritania 436
reportage: *see* journalism
Representatives, House of (U.S. govt.)
financial crisis of 2008 173
U.S. election of 2008 179
reproductive rate: *see* birth rate
Republican National Convention (politics)
U.S. election of 2008 178
Republican Party, *or* GOP (pol. party, U.S.)
U.S. election of 2008 176, 485
United States (sidebar) **07:**481
Republican Party of Armenia, *or* HHK (pol. party, Arm.) 367
Republican People's Party, *or* CHP, *or* Cumhurivet Halk Partisi, *or* People's Party, *or* RPP (pol. party, Tur.) 190
Resch, Alexander 309
"Reserve, The" (Banks) 258
Reserve Bank of Australia 368
reserve forces: *see* militia
Reserve Primary Fund (U.S. money-market fund) 173
reservist: *see* militia
Resolution 1706 (UN)
Darfur crisis 467
Resolution 1803 (UN)
Iran 413
Resteiner, Eric 406
Reve, Gerard Kornelis van het, *or* Simon van het Reve (obit.) **07:**146
"Rêve de Machiavel, Le" (Bataille) French literature 262
Revel, Jean-François, *or* Jean-François Ricard (obit.) **07:**146
"Revenger's Tragedy, The" (play) 282
Revolutionary Armed Forces of Colombia (Colom. militant group): *see* FARC
"Revolutionary Road" (motion picture) 284
Reyes, Raúl 386
Reykjavík (Ice.) 410
Reynolds, Nick, *or* Nicholas Wells Reynolds (obit.) **09:**154
Reza, Yasmina 280, *il.* 281
Rhea (astron.) 294
Rhodes, Colin
"Outsider Art: Moving in from the Margins" (special report) **08:**190
Ribeiro, João Ubaldo 266
Ricard, Jean-François: *see* Revel, Jean-François
rice
Madagascar 432
seed banks (sidebar) **09:**235
skyrocketing food prices 182
Rice, Condoleezza (biog.) **07:**102
Czech Republic 392
Libya 430
Mumbai terrorist attack 193, 485
Rice, Stephanie 326
Richards, Ann, *or* Dorothy Ann Willis (obit.) **07:**147
Richards, George Maxwell
Trinidad and Tobago 474
Richards, Lloyd (obit.) **07:**147
Richardson, Ian (obit.) **08:**151
Richardson, William Lyle: *see* McGavin, Darren
Ricoeur, Jean Paul Gustave (obit.) **06:**130
Ridiger, Aleksey Mikhailovich: *see* Aleksey II
Riedel, Claus Josef (obit.) **05:**132
Riesch, Maria 324
Rieveschl, George (obit.) **08:**151
Riffaterre, Michael, *or* Michael Camille Riffaterre (obit.) **07:**147
Riga (Latvia) 428
Riggins, Jay, Jr.: *see* Dixon, Floyd
Rijn, Rembrandt van: *see* Rembrandt
Rimitti, Cheikha (obit.) **07:**147
Rimland, Bernard (obit.) **07:**147
"Rinna" (Ghiṭanī) 268
Rinpoche, Taktser: *see* Norbu, Thubten Jigme
Rio Group (Lat.Am. org.) 394
Rio Tinto (Austl. co.) 217
riot
Armenia 367
Burkina Faso 378
China 383
Egypt 395
food crisis 182
Greece 174, 405, *il.*
Guinea 407
Italy 419
Mongolia 438, *il.* 439
Mozambique 440
Nicaragua 443
Tonga 474
Tunisia 475
Ripley, Alexandra, *or* Alexandra Braid (obit.) **05:**132
Ripoll, Shakira Isabel Mebarak: *see* Shakira
Risi, Dino (obit.) **09:**154
"Ritournelle de la faim" (Le Clézio) 262
"River: The Joni Letters" (album) 275, 277
Rivers, Glenn, *or* Doc Rivers, *or* Glenn Anton Rivers
basketball 307
biography **09:**102
Riyadh (Saud.Arab.) 458
Rizzuto, Phil, *or* Piero Francis Rizzuto (obit.) **08:**151
Roa Bastos, Augusto Antonio (obit.) **06:**130
Roach, Max, *or* Maxwell Roach (obit.) **08:**151
road
Civil Engineering Projects *table* 207
"Road Home, The" (Tremain) English literature 254, *il.*
roadside bombing
Afghanistan 363
Robbe-Grillet, Alain (obit.) **09:**155
Robbins, Jerome 278
Roberto, Holden Álvaro (obit.) **08:**151
Roberts, John G., Jr., *or* John Glover Roberts, Jr. (biog.) **06:**92
Robichaud, Louis Joseph (obit.) **06:**131
Robinson, Eddie, *or* Edward Gay Robinson (obit.) **08:**152
Robinson, Gail
classical music 275
Robinson, Patrick 240
Robinson, Peter David
biography **09:**102
United Kingdom 481
Robinson, Ray Charles: *see* Charles, Ray
Robinson, V. Gene
Anglican Church 188, *il.* 189
Robison, Emily, *or* Emily Burns Erwin (biog.) **07:**80
Rochberg, George (obit.) **06:**131
Roche, James Michael (obit.) **05:**132
Rock and Roll Hall of Fame (museum, Cleveland, Ohio, U.S.) 277
Rockefeller, Laurance Spelman (obit.) **05:**132
Roddick, Dame Anita, *or* Anita Lucia Perella (obit.) **08:**152
Ródenas, Antonio Esteve: *see* Gades, Antonio
rodeo **06:**318; **05:**319; **04:**315; **03:**347; **02:**343; **01:**341; **00:**339
Sporting Record *tables* 344
Roderick, John (obit.) **09:**155
Rodger, George 213
Roger, Brother, *or* Roger Louis Schutz-Marsauche (obit.) **06:**131
Rogers, Adrian Pierce (obit.) **06:**131
Rogers, Ted, *or* Edward Samuel Rogers, Jr. (obit.) **09:**155
Rogers, Todd 331, *il.*
Roh Moo-hyun 425
"Roi de Kahel, Le" (Monénembo) French literature 263
Rollins, Sonny, *or* Newk, *or* Theodore Walter Rollins 275, *il.*
Roma, *or* Gypsy, *or* Tsigan (people) 230, 418
"Roma—Europe's Largest Minority, The" (special report) **06:**290
Roman Catholicism
Malawi 433
Philippines 449
religion 300, *il.*, *tables* 302, 303
"Roman Catholicism at a Crossroads" (special report) **06:**280
sexual abuse scandal (sidebar) **03:**304
Vatican City State 489
Vietnam 491, *il.* 490
Romania **09:**452; **08:**451; **07:**448; **06:**448; **05:**450; **04:**452; **03:**484; **02:**481; **01:**483; **00:**480
see also WORLD DATA
Rome (It.) 417
"Romeo and Juliet, on Motifs of Shakespeare" (dance) 279
Romney, Mitt, *or* Willard Mitt Romney
U.S. election of 2008 177
Romo, Tony, *or* Antonio Ramiro Romo (biog.) **08:**100
Rompuy, Herman Van 372
Rong Yiren (obit.) **06:**131
Rorty, Richard McKay (obit.) **08:**152
Rose Bowl (sports) 316
Sporting Record *tables* 341
Rose-Innes, Henrietta 261
Roseau (Dom.) 393
Rosen, Jay 180
Rosenbaum, David E. (obit.) **07:**148
Rosenberg, Leonard: *see* Randall, Tony
Rosenblatt, Susan: *see* Sontag, Susan
Rosenthal, A. M., *or* Abraham Michael Rosenthal (obit.) **07:**148
Rosenthal, Joe (obit.) **07:**148
"Rosmersholm" (play) 282
Rossner, Judith Perelman (obit.) **06:**131
Rostropovich, Mstislav Leopoldovich (obit.) **08:**153
Rotblat, Sir Joseph (obit.) **06:**131
Rotella, Mimmo, *or* Domenico Rotella (obit.) **07:**148
Roth, Philip 258
Rothschild, Baron Elie Robert de (obit.) **08:**153
Rothschild, Baron Guy de, *or* Baron Guy Édouard Alphonse Paul de Rothschild (obit.) **08:**153
rouble (currency): *see* ruble
Rouch, Jean-Pierre (obit.) **05:**132
Rourke, Mickey 284
rowing **06:**318; **05:**319; **04:**315; **03:**347; **02:**343; **01:**341; **00:**339
Sporting Record *tables* 345
Rowlands, Patsy, *or* Patricia Rowlands (obit.) **06:**131
Royal Ballet of Flanders (Belg. dance co.) 279
Royal Bank of Scotland Group
financial crisis of 2008 174
Royal Danish Ballet, *or* RDB (Dan. dance co.) 279
Royal Dutch/Shell Group (internat. corp.) 414
Royal Museum of Painting (mus., Madrid, Sp.): *see* Prado Museum
Royal Shakespeare Company, *or* RSC (Br. thea. co.) 281
Royal Society Prize for Science Books, *or* Aventis Prize 255
Royal Swedish Ballet (Swed. dance co.) 279
RPF (pol. party, Rwanda): *see* Rwanda Patriotic Front
RPP (pol. party, Tur.): *see* Republican People's Party
Rrurrambu, George, *or* George Burarrawanga (obit.) **08:**153
RSC (Br. thea. co.): *see* Royal Shakespeare Company
Rubin, Rick, *or* Frederick Jay Rubin (biog.) **08:**100
Rubin, William Stanley (obit.) **07:**148
ruble, *or* rouble (currency)
Belarus 372
Russia 454
Rucker, Darius 277
Rudd, Kevin, *or* Kevin Michael Rudd (biog.) **08:**101
Australia 368
East Timor 394
Tuvalu 477
Rudiger, Aleksey Mikhailovich: *see* Aleksey II
"Rudolf Nureyev" (Kavanagh) 255
Rudolph, Paul 208
Rufus, James: *see* Forman, James
rugby **09:**318; **08:**319; **07:**314; **06:**311; **05:**314; **04:**310; **03:**340; **02:**338; **01:**335; **00:**330
Sporting Record *tables* 342
Rugova, Ibrahim (obit.) **07:**148
Ruiz Zafón, Carlos 264, *il.*
Rukeyser, Louis (obit.) **07:**149
Rule, Jane Vance (obit.) **08:**154
Rumsfeld, Donald 355
Rupert, Anton, *or* Anthony Edward Rupert (obit.) **07:**149
Rusal (Russ. co.): *see* United Company RUSAL
Ruscha, Ed, *or* Edward Joseph Ruscha (biog.) **05:**91
Rushton, Tim 279
Russell, Anna, *or* Anna Claudia Russell-Brown (obit.) **07:**149
Russell, Nipsey, *or* Julius Russell (obit.) **06:**131
Russell, Roberta Brooke: *see* Astor, Brooke Russell
Russell 2000 index (fin.)
stock markets *table* 218
Russert, Tim, *or* Timothy John Russert, Jr. (obit.) **09:**155
Russia **09:**453; **08:**452; **07:**449; **06:**449; **05:**450; **04:**453; **03:**485; **02:**482; **01:**484; **00:**481
archaeology 203
business 217, *table* 218

classical music 273
computer crime 223
Georgia 402
international relations
Algeria 365
Belarus 372
Bulgaria 377
China 385
Czech Republic 392
Estonia 397
European Union 356
France 400
Germany 403
Latvia 428
Lithuania 431
Moldova 438
North Korea 421
Poland 450
Serbia 460
Shanghai Cooperation Organization 358
Ukraine 478
United States 484
Uzbekistan 488
Vatican City State 489
Venezuela 490
literature 267
military affairs 270
motion pictures 288
religion 299
space exploration 296, *table*
sports
association football 315
Beijing 2008 Olympic Games 194
gymnastics 321
ice hockey 322
swimming 327
tennis 328
track and field 328
wrestling 331
see also WORLD DATA
Russian Booker Prize
Literary Prizes *table* 257
Russian literature 267
Russian literature **09:**267; **08:**266; **07:**246; **06:**234; **05:**234; **04:**234; **03:**256; **02:**255; **01:**254, **00:**242
Russian Orthodox Church 299
Russo, Patricia F., *or* Patricia Fiorello Russo (biog.) **05:**91
Rutan, Burt, *or* Elbert L. Rutan (biog.) **06:**92
Rwanda **09:**455; **08:**454; **07:**451; **06:**452; **05:**453; **04:**456; **03:**487; **02:**484; **01:**487; **00:**484
Congo, Democratic Republic of the 387
see also WORLD DATA
Rwanda Patriotic Front, *or* FPR, *or* Front Patriotique Rwandais, *or* RPF, *or* Rwandan Patriot Front (pol. party, Rwanda) 455
Rwasa, Agathon 378
Ryan, Claude (obit.) **05:**132
Ryan, Kay (biog.) **09:**103
Ryan, Tony, *or* Thomas Anthony Ryan (obit.) **08:**154
Ryder Cup (golf) 319
Sporting Record *tables* 342
Ryūnosuke Akutagawa Prize: *see* Akutagawa Prize

S

S&P 500, *or* Standard & Poor's 500 (stock index)
stock markets *table* 218
SAA (international agreement): *see* Stabilization and Association Agreement
Saakashvili, Mikheil, *or* Mikhail Saakashvili (biog.) **05:**91
Georgia 401
Saarinen, Eero 208
Saavedra, José Daniel Ortega: *see* Ortega, Daniel
Sabah, Sheikh Jabir al-Ahmad al (obit.) **07:**149
Sabah, Sheikh Nassar Muhammad al-Ahmad al- 426
Sabah, Sheikh Saad al-Abdullah al-Salim al- (obit.) **09:**155
Sabah, Sheikh Sabah al-Ahmad al-Jabir al- 426
Sabanci, Sakip (obit.) **05:**132
SABENA World Airlines (Belgian airline): *see* Brussels Airlines
Saca González, Elías Antonio, *or* Tony Saca (biog.) **05:**92
El Salvador 396
Sachs, Jeffrey D. (biog.) **06:**92
SACP (pol. party, S.Af.): *see* South African Communist Party
SADC (Af. org.): *see* Southern African Development Community
Sadie, Stanley (obit.) **06:**131
Sadr, Muqtada al- (biog.) **08:**101
Iraq 414
safe haven 487
Saffir, Herbert Seymour (obit.) **08:**154
Safina, Dinara 328
SAG (labour org.): *see* Screen Actors Guild
Sagan, Françoise, *or* Françoise Quoirez (obit.) **05:**132
Sagar, Ramanand (obit.) **06:**132
Sagittinanda, Turiya: *see* Coltrane, Alice
Saharawi (people) 439
Sahrawi, Abu Yahya al-: *see* Libi, Abu Yahya al-
Said, Mohamed Ali 387
Said, Qaboos bin, *or* Qabus ibn Sa'id 446
sailing, *or* yachting **09:**323; **08:**325; **07:**319; **06:**319; **05:**320; **04:**315; **03:**348; **02:**344; **01:**341; **00:**340
Sporting Record *tables* 345
Saint George's (Gren.) 406
St. John, Sir Harold Bernard (obit.) **05:**136
Saint John's (Ant. and Barbuda) 366
Saint Kitts and Nevis **09:**456; **08:**455; **07:**452; **06:**452; **05:**454, **04:**456; **03:**488; **02:**484; **01:**487; **00:**484
see also WORLD DATA
Saint Laurent, Yves, *or* Yves-Henri-Donat-Mathieu Saint Laurent
fashions 241
obituary **09:**155
Saint Lucia **09:**456; **08:**455; **07:**452; **06:**453; **05:**454, **04:**456; **03:**488; **02:**485; **01:**488; **00:**485
see also WORLD DATA
Saint Vincent and the Grenadines **09:**456; **08:**456; **07:**452; **06:**453; **05:**455; **04:**457; **03:**489; **02:**486; **01:**488; **00:**485
see also WORLD DATA
Salih, 'Ali 'Abdallah 491
Salinger, Pierre Emil George (obit.) **05:**133
salmon (fish) 383
Salmona, Rogelio (obit.) **08:**154
Salmond, Alex, *or* Alexander Elliot Anderson Salmond
biography **09:**103
United Kingdom 480
Salonen, Esa-Pekka (biog.) **08:**102
Salvador, Henri Gabriel (obit.) **09:**156
Sam Rainsy Party, *or* SRP (pol. party, Camb.) 378
Samak Sundaravej (biog.)
biography **09:**104
Thailand 473
Sambi, Ahmed Abdallah Mohamed 360, 386
same-sex union
legal debate over same-sex marriages (special report) **05:**206
U.S. state governments 486, *il.*
Sami (people) 362
Samoa **09:**457; **08:**456; **07:**453; **06:**453; **05:**455; **04:**457; **03:**489; **02:**486; **01:**488; **00:**485
see also WORLD DATA
Sampson, Anthony Terrell Seward (obit.) **05:**133
Samsung Electronics (Kor. co.)
computer systems 220
San Francisco Ballet, *or* SFB (Am. ballet co.) 278
San José (C.R.) 388
San Marino **09:**457; **08:**456; **07:**453; **06:**454, **05:**455; **04:**457; **03:**489; **02:**486; **01:**488; **00:**485
see also WORLD DATA
San Marino (San Mar., Eur.) 457
San Salvador (El Sal.) 396
San Sebastian International Film Festival
Film Awards *table* 287
Sanaa (Yem.) 491
Sanader, Ivo 389
Sánchez, Yoani 390
Sánchez Vidal, Agustín 264
sanction
Belarus 372
Iran 413
United States 485
Uzbekistan 488
"Sandbox, The" (play) 283, *il.*
Sandinista Front, *or* FSLN, *or* Sandinista National Liberation Front (pol. party., Nic.) 443
SanDisk (Am. co.) 224
Sandor, Gyorgy (obit.) **06:**132
Sandwich Islands (state, U.S.): *see* Hawaii
Sanford, Isabel (obit.) **05:**133
Sangster, Robert (obit.) **05:**133
Santiago (Chile) 382
education *il.* 232
Santo Domingo (Dom.Rep.) 393
Santolària, Albert Pintat 365
Santos, Lúcia de Jesus dos, *or* Lucia Ahobora (obit.) **06:**132
Santos Leite, Ricardo Izecson dos: *see* Kaká
São Paulo Stock Market, *or* Bovespa
stock markets *table* 218
São Tomé (São Tomé and Príncipe) 457
São Tomé and Príncipe **09:**457; **08:**457; **07:**453; **06:**454, **05:**456; **04:**458; **03:**489; **02:**487; **01:**489; **00:**486
see also WORLD DATA
SAP: *see* Swedish Social Democratic Party
Saracino, Peter
"Advances in Battlefield Medicine" (special report) **08:**176
"Outsourcing War—The Surge in Private Military Firms" (special report) **07:**260
"POWs and the Global War on Terrorism" (special report) **05:**250
Sarajevo (Bosnia and Herzegovina)
Bosnia and Herzegovina 375
Saramago, José 266, *il.*
Sarcophilus harrisii (marsupial): *see* Tasmanian devil
Sardjoe, Ram 468
Sark (is., Eng. Channel) 359
Sarkisyan, Serzh 367, 370
Sarkisyan, Tigran 367
Sarkozy, Nicolas
biography **07:**102
China 386
church and state 300
European Union 357
fashions 241
France 399, *il.*
France (sidebar) **08:**400
Georgia 402
SARS, *or* severe acute respiratory syndrome
special report **04:**204, *map* 201
Sassou-Nguesso, Denis 388
Sastre, Carlos 312
satellite 271
satellite, Earth: *see* Earth satellite
satellite radio
competition with terrestrial radio (sidebar) **05:**243
Satō, Shōzo
"Kabuki Goes West" (special report) **06:**258
Satrapi, Marjane (biog.) **09:**104
Saturn (planet) 294
Satyanand, Anand 442
Saudi Arabia **09:**458; **08:**457; **07:**454; **06:**454; **05:**456; **04:**458; **03:**490; **02:**487; **01:**489; **00:**486
Arab League 358
Bangladesh 371
education 232
skyrocketing food prices 182
Syria 470
see also WORLD DATA
Saunders, Dame Cicely Mary Strode (obit.) **06:**132
Saunders, Justine Florence (obit.) **08:**154
Savater, Fernando 264
Savchenko, Aliona 323, *il.* 322
savings and loan (bank)
financial crisis of 2008 172
Savoy, Gene, *or* Douglas Eugene Savoy (obit.) **08:**154
Saytiyev, Buvayasa
wrestling 331
SBX: *see* snowboard cross
SBY (pres. of Indon.): *see* Yudhoyono, Susilo Bambang
scandal
automobile racing 304
Bulgaria 377
Canada 380
Colombia 386
Finland 399
Germany 403
Greece 405
Liechtenstein 431
Malaysia 433
Peru 449
Tanzania 472
see also corruption
Scanlon of Davyhulme, Hugh Parr Scanlon, Baron (obit.) **05:**133
"Scaphandre et le papillon, Le" (motion picture): *see* "Diving Bell and the Butterfly, The"
Scavullo, Francesco (obit.) **05:**133
Schaffer, Jan
citizen journalism 181
Schart Hyman, Trina (obit.) **05:**133
Schatz, Albert (obit.) **06:**132
Schechtel, Sidney: *see* Sheldon, Sidney
Scheider, Roy Richard (obit.) **09:**156
Schell, Maria Margarethe Anna (obit.) **06:**132
Schembechler, Bo, *or* Glenn Edward Schembechler (obit.) **07:**149
Schenkel, Chris, *or* Christopher Eugene Schenkel (obit.) **06:**132
Schildkraut, Joseph Jacob (obit.) **07:**149

Schilling, Curt, *or* Curtis Montague Schilling (biog.) **05:**92
Schirra, Wally, *or* Walter Marty Schirra, Jr. (obit.) **08:**154
Schlager, Erika
"Roma—Europe's Largest Minority, The" (special report) **06:**290
Schlesinger, Arthur Meier, Jr., *or* Arthur Bancroft Schlesinger (obit.) **08:**155
Schmeling, Max, *or* Maximilian Adolph Otto Siegfried Schmeling (obit.) **06:**132
Schmid, Samuel 470
Schnabel, Julian
Film Awards *table* 286
Schoenfeld, Gerald (obit.) **09:**156
Schoening, Peter K. (obit.) **05:**133
Schön, Mila, *or* Maria Carmen Nutrizio (obit.) **09:**156
Schonthal, Ruth (obit.) **07:**150
Schott, Marge, *or* Margaret Unnewehr (obit.) **05:**133
Schriever, Bernard Adolph (obit.) **06:**132
Schrift, Shirley: *see* Winters, Shelley
Schulze, Ingo 261
Schutz-Marsauche, Roger Louis: *see* Roger, Brother
Schwartz, Julius ("Julie") (obit.) **05:**133
Schwartz, Melvin (obit.) **07:**150
Schwarzkopf, Dame Elisabeth (obit.) **07:**150
"Schweigeminute" (Lenz) 262
SCO: *see* Shanghai Cooperation Organization
Scofield, Paul, *or* David Paul Scofield (obit.) **09:**156
Scorpions (S.Af. police) 464
Scotland (U.K.) 315, 480
Scott, Coretta: *see* King, Coretta Scott
Scott, the Most Rev. Edward Walter ("Ted") (obit.) **05:**134
Scott, George Lewis (obit.) **06:**133
Scottish Ballet (Scot. dance co.) 280
Scottish National Party, *or* SNP (pol. party, Scot., U.K.) 479
Screen Actors Guild, *or* SAG 241
sculpture **02:**167; **01:**162; **00:**144
art 210
SD (political party, Slovenia): *see* Social Democratic Party
SDF (pol. party, Camer.): *see* Social Democratic Front
SDL (Chin. co.): *see* Shengda Literature Ltd.
SDSM (pol. party, Maced.): *see* Social Democratic Union of Macedonia
"Sea, The" (play) 281
sea ice
Arctic Regions 362
Sea Launch Zenit (spacecraft) 297
Seagate Technology (Am. co.) 224
Seamans, Robert Channing, Jr. (obit.) **09:**157
search engine 220
Sebastian, Sir Cuthbert Montraville 456
Sechin, Igor 454
Second Persian Gulf War: *see* Persian Gulf War, Second
Second World War (1939-45): *see* World War II
secondary education **09:**229; **08:**231; **07:**202; **06:**187; **05:**188; **04:**187; **03:**204; **02:**206; **01:**204; **00:**191
secularism 300
Turkey 190
securities market: *see* stock exchange
Security and Co-operation in Europe, Organization for, *or* OSCE (internat. org.)
Belarus 372
Kazakhstan 422
Russia 453
Security Council (UN) 354
Côte d'Ivoire 388
Chad 382
Croatia 390
Ethiopia 398
Iran 413
military affairs 270
Somalia 463
Sudan, The 467, 468
"What Ails the UN Security Council?" (special report) **04:**348
Sedaris, David, *or* David Raymond Sedaris (biog.) **06:**93
sediment (geol.) 225
seed bank, *or* gene bank (sidebar) **09:**235
Norway 445, *il.* 15
Seibu Lions (baseball team) 307
Seidler, Harry (obit.) **07:**150
Sein Lwin, U (obit.) **05:**134
Sejdiu, Fatmir 425
Selberg, Atle (obit.) **08:**155
Selby, Hubert, Jr. ("Cubby") (obit.) **05:**134
Selebi, Jackie 464
Sell, Hildegarde Loretta: *see* Hildegarde
Selzer, Richard Sylvan: *see* Blackwell, Mr.
Sembene, Ousmane (obit.) **08:**155
Seminara, Elvira 264
"Señales de vida" (novel by Schvartz) 265
Senate (U.S. govt.)
Liechtenstein tax-evasion scandal 431
U.S. election of 2008 179
Senate Armed Services Committee (U.S. govt.)
terrorism 355
Sendler, Irena, *or* Irena Krzyzanowska (obit.) **09:**157
Senegal **09:**458; **08:**458; **07:**454; **06:**455; **05:**457; **04:**459; **03:**491; **02:**488; **01:**489; **00:**487
see also WORLD DATA
senior citizen: *see* old age
"Señor, El": *see* Lopez, Al
Seoul (S. Kor.) 425
September 11 attacks **02:**278
Saudi Arabia 458
special report **02:**6, *map* 11
Serb (people) 426, *map*
Serbia, *or* Srbija **09:**459; **08:**458; **07:**455
European Union 356
Kosovo 425
motion pictures 288
Serbia and Montenegro (hist. nation, Eur.) **06:**456; **05:**457; **04:**459
see also WORLD DATA
Seregni, Liber (obit.) **05:**134
Serra, José 376
Serra, Richard (biog.) **08:**102
Serrault, Michel (obit.) **08:**155
Servan-Schreiber, Jean-Jacques (obit.) **07:**150
Setouchi, Jakuchō, *or* Murasaki Japanese literature 269, *il.*
Settle, Mary Lee (obit.) **06:**133
Sevele, Feleti
Tonga 474
Seven, Group of
Japan 420
severe acute respiratory syndrome: *see* SARS
"Sex and the City" (motion picture) 284
sexual abuse 299
Seybold, John Warren (obit.) **05:**134
Seychelles **09:**460; **08:**459; **07:**456; **06:**457; **05:**458; **04:**460; **03:**491; **02:**488; **01:**490; **00:**487
see also WORLD DATA
Sezer, Ahmet Necdet 191
SFB (Am. ballet co.): *see* San Francisco Ballet
SGSV (agri. project, Nor.): *see* Svalbard Global Seed Vault
Shackleton, Derek (obit.) **08:**156
Shackleton, Sir Nicholas John (obit.) **07:**151
Shadbolt, Maurice Francis Richard (obit.) **05:**134
"Shadow Country" (Matthiessen) American literature 258
Shah, Syed Ahmad: *see* Faraz, Ahmed
Shakespeare, William 281
Shakhlin, Boris Anfiyanovich (obit.) **09:**157
Shakira, *or* Shakira Isabel Mebarak Ripoll (biog.) **07:**103
Shalhoub, Tony, *or* Anthony Marcus Shalhoub (biog.) **07:**103
Shamir, Moshe (obit.) **05:**134
Shand, Camilla Rosemary: *see* Camilla, duchess of Cornwall
Shanghai (China) 384
job fair *il.* 175
Shanghai Cooperation Organization, *or* SCO 358
Shanghai-Hangzhou Maglev Train (rail project, China) 384
Shangri-La (presidential retreat, Maryland, U.S.): *see* Camp David
Shanley, John Patrick 284
Sharapova, Mariya 327
Sharī'ah (Islamic law) 300
Sharov, Vladimir 267
Sharp, Mitchell William (obit.) **05:**134
Shaw, Artie, *or* Arthur Arshawsky (obit.) **05:**134
Shearer, Hugh Lawson (obit.) **05:**135
Shearer, Moira, *or* Moira Shearer King (obit.) **07:**151
Sheckley, Robert (obit.) **06:**133
Sheikh, Suraiya Jamal: *see* Suraiya
Shekhar, Chandra (obit.) **08:**156
Sheldon, Sidney, *or* Sidney Schechtel (obit.) **08:**156
Shemer, Naomi Sapir (obit.) **05:**135
Shengda Literature Ltd., *or* SDL (Chin. co.) 269
Shenzhou 7 296
China 384
space exploration 296
Shepherd, Melinda C.
"Games of the XXIX Olympiad" (special report) **09:**194
"Games of the XXVIII Olympiad" (special report) **05:**292
"XX Olympic Winter Games, The" (special report) **07:**296
Sheppard of Liverpool, David Stuart Sheppard, the Right Reverend Lord, *or* David Sheppard (obit.) **06:**133
Sherrin, Ned, *or* Edward George Sherrin (obit.) **08:**156
Shi-fu: *see* Khun Sa
Shi'ite (Islam)
Bahrain 370
Iraq 414, *il.*
Saudi Arabia 458
"Sunni-Shi'ite Division Within Islam, The" (special report) **08:**178
Shimomura, Osamu
Nobel Prize 66, *il.* 67
Shin Sang Ok (obit.) **07:**151
ship construction 389
Shipman, Harold Frederick, *or* Dr. Death (obit.) **05:**135
shipwreck 391, *il.*
Shirakawa, Masaaki (biog.) **09:**105
Japan 420
Shoman, Abdul Majeed (obit.) **06:**133
Shomron, Dan (obit.) **09:**157
Shore, Jane 259
Short, Bobby, *or* Robert Waltrip Short (obit.) **06:**133
shot put 328
Shoulders, Jim, *or* James Arthur Shoulders (obit.) **08:**156
Shumway, Norman Edward (obit.) **07:**151
Shuvalov, Igor 454
Siaosi George Tupou V: *see* Tupou V
Sichuan, *or* Ssu-ch'uan, *or* Szechwan (province, China)
China 384, *il.*
geophysics 226
Sichuan earthquake (2008)
China 225, 384, *il.* 384
United Nations 355
Sidibé, Malick (biog.) **08:**103
Sidibé, Modibo 434
Sidorski, Syarhey 372
Siegbahn, Kai Manne Börje (obit.) **08:**157
Siemens AG (Ger. co.) 405
Sierra Leone **09:**460; **08:**459; **07:**456; **06:**457; **05:**459; **04:**461; **03:**491; **02:**489; **01:**490; **00:**487
see also WORLD DATA
Sihamoni, Norodom: *see* Norodom Sihamoni
Sik, Ota (obit.) **05:**135
Sikhism
religion *tables* 302, 303
Sikorski, Radek 450
Sikua, Derek 462
Silajdzic, Haris 375
silicon 293
Silk, George (obit.) **05:**135
Sills, Beverly, *or* Belle Miriam Silverman, *or* Bubbles Silverman (obit.) **08:**157
Sills, Paul (obit.) **09:**158
Silva, Leônidas da: *see* Leônidas
Silva, Marina 376
Sima del Elefante (archae. site, Sp.) 200
Simic, Charles (biog.) **08:**103
American literature 259
Simon, Claude, *or* Claude Eugène Henri Simon (obit.) **06:**133
Simon, Simone (obit.) **06:**133
Simoneau, Léopold (obit.) **07:**152
Simpson, Jessica 277
Simpson, Lorna (biog.) **08:**103
Simpson Miller, Portia 419
Simwinga, Hammerskjoeld (biog.) **08:**104
Sin, Jaime Cardinal (obit.) **06:**133
Singapore **09:**460; **08:**459; **07:**456; **06:**457; **05:**459; **04:**461; **03:**492; **02:**489; **01:**491; **00:**488
stock markets *table* 218
see also WORLD DATA
Singer, Sir Hans Wolfgang (obit.) **07:**152
Singh, Kushal Pal (biog.) **08:**104
Singh, Manmohan
biography **05:**93
India 410
Singh, V. P., *or* Vishwanath Pratap Singh (obit.) **09:**158

Singh, Vijay 319
single-sex marriage: *see* same-sex union
Siniora, Fouad 428
Sinn Fein (pol. party, Ire. and U.K.) 415, 481
"Sinn Fein" (yacht) 324
Sinti (people): *see* Roma
Sippy, G. P., *or* Gopaldas Parmanand Sippy (obit.) **08:**157
Sisco, Joseph John (obit.) **05:**135
Sistani, Ali al-, *or* Ali al-Husseini al-Sistani (biog.) **05:**93
Sister Emmanuelle, *or* Madeleine Cinquin (obit.) **09:**158
Sivori, Enrique Omar (obit.) **06:**134
"Six Degrees: Our Future on a Hotter Planet" (Lynas) 258
Six Nations championship (rugby)
  rugby football 318
  Sporting Record *tables* 342
Siza, Álvaro 205
Skate, Sir William Jack, *or* Bill Skate (obit.) **07:**152
Skeleton Coast (reg., Nam.) 202
skeleton sledding **09:**309; **08:**308; **07:**304; **06:**300; **05:**302; **04:**297; **03:**325; **02:**324
  Sporting Record *tables* 334
Skerrit, Roosevelt 393
ski jumping 324, *il.* 325
  Sporting Record *tables* 346
skiing **09:**324; **08:**325; **07:**319; **06:**320; **05:**320; **04:**316; **03:**349; **02:**344; **01:**342; **00:**340
  Sporting Record *tables* 346
Skopje (Maced.) 431
Skurla, Vassily Mikhailovich: *see* Laurus, Metropolitan
Slade, Julian Penkivil (obit.) **07:**152
Slatkin, Leonard 274
slavery
  modern-day slavery (special report) **01:**310, *map*
SLD (pol. party, Pol.): *see* Democratic Left Alliance
slide (geol.): *see* landslide
Slingin' Sammy: *see* Baugh, Sammy
slotMusic 224
Slovakia **09:**461; **08:**460; **07:**457; **06:**458; **05:**460; **04:**462; **03:**493; **02:**490; **01:**491; **00:**489
  education 230
  see also WORLD DATA
Slovenia **09:**461; **08:**461; **07:**458; **06:**459; **05:**461; **04:**462; **03:**493; **02:**490; **01:**492; **00:**489
  Croatia 389
  European Union 356
  see also WORLD DATA
"Slumdog Millionaire" (motion picture) 284
Slump of 1929 (econ.): *see* Great Depression
Slutskaya, Irina (biog.) **06:**93
Smalley, Richard Errett (obit.) **06:**134
smartphone 219, *il.*
Smer-SD (pol. party, Slovakia): *see* Direction–Social Democracy
Smilansky, Yizhar: *see* Yizhar, S.
Smiley, Tavis (biog.) **07:**104
Smirnov, Igor 438
Smith, Anna Deavere (biog.) **09:**105
Smith, Anna Nicole, *or* Vickie Lynn Hogan (obit.) **08:**158
Smith, Claydes Charles (obit.) **07:**152
Smith, Ian Douglas (obit.) **08:**158
Smith, Jacqui
  United Kingdom 480
Smith, Jeff, *or* Jeffrey L. Smith (obit.) **05:**135
Smith, Jimmy, *or* James Oscar Smith (obit.) **06:**134
Smith, Linda (obit.) **07:**152
Smith, Lowell Dennis (obit.) **08:**158
Smith, Mike, *or* Michael George Smith (obit.) **09:**158
Smith, Roger Bonham (obit.) **08:**158
Smith, Samuel Timothy: *see* McGraw, Tim
smoking 487
  see also tobacco
SN 2008D (supernova) 295
Snodgress, Carrie, *or* Caroline Snodgress (obit.) **05:**135
Snoek, Michael 213
snooker **06:**299; **05:**302; **04:**297; **03:**325; **02:**324; **01:**321; **00:**315
  Sporting Record *tables* 334
Snow, Tony, *or* Robert Anthony Snow (obit.) **09:**158
snowboard cross, *or* SBX 325
snowboarding **09:**325; **08:**326; **07:**320; **06:**320; **05:**321; **04:**317; **03:**350; **02:**345; **01:**343; **00:**341
  Sporting Record *tables* 346
SNP (pol. party, Scot., U.K.): *see* Scottish National Party
SNS (Internet): *see* social networking site
Snyder, Tom, *or* Thomas Snyder (obit.) **08:**158
Soboleva, Yelena 328
soccer: *see* football
Social Democratic Front, *or* SDF (pol. party, Camer.) 379
Social Democratic Party, *or* SPÖ (pol. party, Aus.) 369
Social Democratic Party (pol. party, Fin.) 398
Social Democratic Party, *or* PSD (pol. party, Port.) 451
Social Democratic Party, *or* PSD (pol. party, Rom.) 452
Social Democratic Party, *or* SD (political party, Slovenia) 462
Social Democratic Party of Germany, *or* SPD (pol. party, Ger.) 402, *il.* 404
Social Democratic Union of Macedonia, *or* SDSM (pol. party, Maced.) 432
Social Democratic Workers' Party: *see* Swedish Social Democratic Party
social networking site, *or* SNS
  distance learning (sidebar) **09:**231
  Internet 221; (sidebar) **08:**225
social protection **06:**284; **05:**284; **04:**283; **03:**308; **02:**309; **01:**305; **00:**296
  Roma (special report) **06:**290
  slavery in 21st century (special report) **01:**310
Socialist Party (pol. party, Fr.) 400
Socialist Party, *or* PS (pol. party, Port.) 451
Socialist Union of Popular Forces, *or* USFP (pol. party, Mor.) 439
Socialist Workers' Party (pol. party, Sp.) 465
socialized medicine (special report) **01:**222
Sócrates, José 451
Soderbergh, Steven 284
Soe Win (obit.) **08:**159
Sofia (Bulg.) 377
software 223
Sokolof, Philip (obit.) **05:**136
solar system 294
solid-state chemistry **09:**290
solid-state physics 293
Solis, Octavio 283
"solitudine dei numeri primi, La" (Giordano) 263, *il.* 264
Solomon Islands **09:**462; **08:**461; **07:**458; **06:**459; **05:**461; **04:**463; **03:**494; **02:**491; **01:**493; **00:**490
  see also WORLD DATA
Solotaroff, Ted (obit.) **09:**159
solstice
  astronomy *table* 294
Solt, Mary Ellen, *or* Mary Ellen Bottom (obit.) **08:**159
Solyom, Laszlo 409
Solzhenitsyn, Aleksandr Isayevich
  obituary **09:**159
  Russia 453
Somalia **09:**462; **08:**462; **07:**459; **06:**460; **05:**461; **04:**463; **03:**494; **02:**491; **01:**493; **00:**490
  Ethiopia 398
  military affairs 270
  multiple states (sidebar) **02:**492, *map*
  polio 243
  United Nations 354
  Yemen 491
  see also WORLD DATA
Somaliland, Republic of 462
Somare, Sir Michael 448
Somchai Wongsawat 473
"Somebeachsomewhere" (racehorse) 314
"Somers Town" (motion picture) 285
Soni, Rebecca 326
Sonja (queen of Nor.) 445
Sons of Iraq (U.S.-backed Sunni militia in Iraq): *see* Awakening Councils
Sontag, Susan, *or* Susan Rosenblatt (obit.) **05:**136
Sony Corporation (Japanese corp.)
  new technology 224
Soomro, Mohammadmian 446
Sorenstam, Annika 319
Soriano, Juan, *or* Juan Francisco Rodríguez Montova (obit.) **07:**152
Soro, Guillaume 388
Sorokin, Vladimir 267
Sorrentino, Gilbert (obit.) **07:**152
Sorsa, (Taisto) Kalevi (obit.) **05:**136
Sotheby's (art auction firm) 209
Soto, Geovany 307
Soto, Jesús-Rafael (obit.) **06:**134
Soto Alejo, Federico Aristides: *see* Güines, Tatá
Sottsass, Ettore 208
Souare, Ahmed Tidiane 407
"Soul of All Great Designs, The" (Bissoondath) 260, *il.*
Soumaré, Cheikh Hadjibou 458
South Africa **09:**463; **08:**462; **07:**459; **06:**460; **05:**462; **04:**464; **03:**495; **02:**493; **01:**494; **00:**490
  AIDS 356
  Congo, Democratic Republic of the 387
  cricket 311
  military affairs 271
  motion pictures 289
  Mozambique 440
  stock markets *table* 218
  see also WORLD DATA
South African Communist Party, *or* SACP (pol. party, S.Af.) 464
South African literature 261
South America
  indigenous peoples (special report) **00:**520, *map* 521
South American Common Market (S.Am. econ. org.): *see* Mercosur
South American Indian
  special report **00:**520, *map* 521
South Dakota (state, U.S.)
  distance learning (sidebar) **09:**231
  U.S. state governments 485
South Korea: *see* Korea, Republic of
South Orkney Islands 361
South Ossetia (reg., Georgia)
  Belarus 372
  classical music 273
  European Union 357
  Georgia 401
  military affairs 270
  Poland 450
  Russia 454
"South Pacific" (play) 282
South Stream (gas pipeline project) 377
South Tarawa (Tarawa, Kiri.) 424
South West Africa People's Organization, *or* SWAPO (pol. org., Nam.) 441
Southeast Asia
  military affairs 271
  motion pictures 289
Southeast Asian Games 427
Southeast Asian Nations, Association of: *see* ASEAN
Southern African Development Community, *or* SADC (Af. org.) 358
  Zambia 492
  Zimbabwe 492
Southern California, University of, *or* USC (univ., Los Angeles, Calif., U.S.) 232
Southern Cone Common Market (S.Am. econ. org.): *see* Mercosur
Southwest Airlines Co. (Am. co.)
  business 215
Souzay, Gérard, *or* Gérard Marcel Tisserand (obit.) **05:**136
sovereign wealth fund
  China 385
soybean 182
Soyuz TMA-12 296
space exploration **09:**296; **08:**294; **07:**284; **06:**275; **05:**273; **04:**275; **03:**266; **02:**266; **01:**265; **00:**254
  China 384
  India 411
  milestones in spaceflight (sidebar) **02:**268
space probe 297
space shuttle 296, *table*
SpaceX Falcon 1 (launch vehicle)
  space exploration 297
Spain **09:**465; **08:**464; **07:**461; **06:**462; **05:**464; **04:**466; **03:**497; **02:**494; **01:**495; **00:**492
  association football 315
  basketball 309
  Cuba 390
  dance 279
  freshwater pollution 237
  literature 264
  motion pictures 288
  stock markets *table* 218
  tennis 328
  wildlife conservation 238
  see also WORLD DATA
spam, *or* junk e-mail
  computer security and crime 223
Spanish literature **09:**264; **08:**264; **07:**244; **06:**232; **05:**232; **04:**232; **03:**254; **02:**253; **01:**252; **00:**240
Spark, Dame Muriel, *or* Muriel Sarah Camberg (biog.) **07:**153
SPD (pol. party, Ger.): *see* Social Democratic Party of Germany
special education 230
speed skating **09:**323; **08:**324; **07:**318; **06:**317; **05:**318; **04:**314; **03:**346; **02:**342; **01:**340; **00:**338
  Sporting Record *tables* 344

"Speed-the-Plow" (play) 282
Spelling, Aaron (obit.) **07:**153
Spencer, Baldwin 366
Spencer, John, *or* John Speshock (obit.) **06:**134
Spencer, John (obit.) **07:**153
Spender, John Humphrey (obit.) **06:**134
Spielberg, Steven 284
Spillane, Mickey, *or* Frank Morrison Spillane (obit.) **07:**153
Spiric, Nikola 375
Spirit (Mars rover) 297
Spitzer, Eliot (biog.) **05:**93
resignation 487
Spitzer Infrared Space Telescope
astronomy 295
SPJ (Am. org.): *see* Professional Journalists, Society of
SPO (pol. party, Aus.): *see* Social Democratic Party
sport utility vehicle, *or* SUV 214, *il.*
sports **01:**314; **00:**306
Springall, Charles Edward: *see* Drake, Charlie
Sprouse, Stephen (obit.) **05:**136
squash **09:**325; **08:**326; **07:**320; **06:**321; **05:**321; **04:**317; **03:**350; **02:**345; **01:**343; **00:**341
Sporting Record *tables* 346
Srbija: *see* Serbia
Sri Jayawardenepura Kotte (Sri Lanka) 466
Sri Lanka **09:**466; **08:**465; **07:**462; **06:**463; **05:**465; **04:**467; **03:**498; **02:**495; **01:**496; **00:**494
cricket 311
military affairs 271
see also WORLD DATA
SRP (pol. party, Camb.): *see* Sam Rainsy Party
Ssu-ch'uan (province, China): *see* Sichuan
Stabilization and Association Agreement, *or* SAA (EU)
Bosnia and Herzegovina 375
Montenegro 439
Stalford, Jo Elizabeth
obituary **09:**159
Staley, Layne Thomas
obituary **03:**133
Standard & Poor's 500 (stock index): *see* S&P 500
"Standard Operating Procedure" (motion picture) 289
Stanfield, Robert L.
obituary **04:**137
Stang, Sister Dorothy
obituary **06:**134
Stanishev, Sergey 377
Stanley Cup (sports trophy) 321
Sporting Record *tables* 343
Stanton, Frank Nicholas (obit.) **07:**154
Staples, Mavis (biog.) **06:**94
Stapleton, Maureen, *or* Lois Maureen Stapleton (obit.) **07:**154
star (astron.) 294
Stark, Ray (obit.) **05:**136
State, Department of (U.S. govt.)
Bosnia and Herzegovina 375
State Ballet of the Republic of Georgia, *or* State Ballet of Georgia (Georgian ballet co.) 278
state of emergency
Egypt 395
Italy 418
State Symphony Orchestra (N. Kor. orchestra)
North Korea-U.S. concert *il.* 424
Status of Forces Agreement (U.S.-Iraq agreement) 415
Stautner, Ernie, *or* Ernest Stautner (obit.) **07:**154
steel 217, 233
steeplechase **09:**314; **08:**315; **07:**309; **06:**307; **05:**309; **04:**305; **03:**334; **02:**332; **01:**330; **00:**325
Steffen, Britta 326
Stegner, Wallace 259
Steinmeier, Frank-Walter
biography **09:**106
Germany 403, *il.* 404
stem cell **08:**246; **05:**204; **03:**239
special report **00:**210
trachea transplant 246, *il.*
"Step from Death, A" (memoir by Wojwode) 259
Stephen, Marcus 441
sterling: *see* pound sterling
Stern, Mario Rigoni 264
Sternbach, Leo Henryk (obit.) **06:**134
steroid
Thoroughbred racing 313
Steve & Barry's (Am. co.) 240
Stewart, John Coburn
obituary **09:**159
popular music 277
Stewart, Jon, *or* Jonathan Stewart Leibowitz (biog.) **05:**94
Stewart, Patrick (biog.) **09:**106
Stiglitz, Joseph E. 172
Stingley, Darryl Floyd (obit.) **08:**159
stock exchange, *or* stock market **06:**175; **05:**176; **04:**177; **03:**192; **02:**195; **01:**193; **00:**177
business 218
electronic trading (special report) **00:**180
financial crisis of 2008 170
Israel 417
Slovenia 462
stock markets *table* 218
Taiwan 471
Turkey 476
Stockdale, James Bond (obit.) **06:**134
Stockhausen, Karlheinz (obit.) **08:**159
Stockholm (Swed.) 469
Stoller, Ezra (obit.) **05:**136
Stolojan, Theodor 452
Stoltenberg, Jens 445
Stonehenge (mon., Eng., U.K.) 201
Stoppard, Tom 281
storage (comp.sci.) 292
Storchak, Sergey 454
Stott, Ken *il.* 281
strainmeter 227
Stram, Hank, *or* Henry Louis Stram (obit.) **06:**135
Strategic Framework Agreement (U.S.-Iraq agreement) 415
Stratford Festival (thea. festival, Ont., Can.) 283
Straus, Roger Williams, Jr. (obit.) **05:**136
Strauss, Richard 279
Strawson, Sir Peter Frederick (obit.) **07:**154
Streep, Meryl 284
"Street Scene" (play) 282
Strega Prize, *or* Premio Strega 263
Literary Prizes *table* 257
Streicker, John
"Climate Change—The Global Effects" (special report) **08:**170
stress
colony collapse disorder 249
genetics 251
Stretton, Ross (obit.) **06:**135
Strickland de la Hunty, Shirley Barbara, *or* Shirley Strickland (obit.) **05:**136
strike
business 215, *il.*
Côte d'Ivoire 389
Cameroon 379
Czech Republic 392
Egypt 395
France 399
Germany 404
Guinea 407
Kuwait 426
Mali 434
Namibia 441
Peru 449
Screen Actors Guild 241
Thoroughbred racing 313
Uruguay 488
Vietnam 491
Zambia 492
Stringer, Howard (biog.) **06:**94
Stroessner Matiauda, Alfredo (obit.) **07:**154
Struchkova, Raisa Stepanovna (obit.) **06:**135
STS-122 (space shuttle mission)
space exploration 296, *table*
STS-123 (space shuttle mission)
space exploration 296, *table*
STS-124 (space shuttle mission)
space exploration 296, *table*
STS-125 (space shuttle mission)
space exploration 296
STS-126 (space shuttle mission)
space exploration 296, *table*
Stubbs, Levi, *or* Levi Stubbles
obituary **09:**159
popular music 277
student loan 232
Stuhlinger, Ernst (obit.) **09:**160
Sturanovic, Zeljko 439
Styron, William Clark, Jr.
American literature 259
obituary **07:**155
Su Doku: *see* sudoku
Su Zhu: *see* Hua Guoleng
Suárez Mason, Carlos Guillermo (obit.) **06:**135
sub-Saharan Africa
education 229
United Nations 356
subprime mortgage
financial crisis of 2008 170
Germany 404
sidebar **08:**484
United States 482
subway
Civil Engineering Projects *table* 207
Sucre (Bol.) 374
Sudan, The **09:**466; **08:**465; **07:**462; **06:**463; **05:**466; **04:**467; **03:**498; **02:**496; **01:**497; **00:**494
Chad 382
Darfur crisis (sidebar) **09:**467
military affairs 270
United Nations 354
see also WORLD DATA
sudoku, *or* Su Doku (sidebar) **07:**254
"Sue"
discovery and sale (sidebar) **01:**241
sugar 419
Sugar Bowl (sports) 316
Sporting Record *tables* 341
Suharto (obit.) **09:**160
suicide 425
suicide bombing
Afghanistan 363
DARPA (sidebar) **09:**272
Iraq 414
Morocco 440
Pakistan 271, 446
Sri Lanka 466
Yemen 491
Sukarnoputri, Megawati 412
Sulaiman, Muhammad 470
Suleiman, Michel
Lebanon 428, *il.* 429
Sumac, Yma, *or* Zoila Augusta Emperatriz Chavarri del Castillo (obit.) **09:**160
"Summer Book," *or* "Tatil kitabi" (motion picture) 288
Summitt, Pat 308
sumo **09:**331; **08:**331; **07:**325; **06:**327; **05:**327
Sporting Record *tables* 351
Sun
eclipses *table* 294
SUN (gene) 250
Sun Coalition for Europe (pol. org., Maced.) 432
"Sun Kings: The Unexpected Tragedy of Richard Carrington and the Tale of How Modern Astronomy Began, The" (Clark) 258
Sun Yu (Chin. pol.) 385
Sun Yun-liang (obit.) **08:**160
Sundance Film Festival 289
Film Awards *table* 286
Sunni (Islam)
Bahrain 370
Iraq 414
Saudi Arabia 458
"Sunni-Shi'ite Division Within Islam, The" (special report) **08:**178
Super Bowl XLII (football) 317
Sporting Record *tables* 341
superconductivity 293
solid-state chemistry 290
superinsulator 293
supernova 295
Suplicy, Marta 376
Supreme Court (Braz.) 376
Supreme Court (Colombia) 386
Supreme Court (U.S.) 484
Suraiya, *or* Suraiya Jamal Sheikh (obit.) **05:**137
Surayud Chulanont 473
Suriname **09:**468; **08:**466; **07:**463; **06:**464; **05:**466; **04:**468; **03:**499; **02:**496; **01:**497; **00:**494
see also WORLD DATA
Surt (Libya) 430
sustainable architecture: *see* green architecture
sustainable development
wildlife conservation 238
SUV: *see* sport utility vehicle
Suva (Fiji) 398
Suzuki, Zenko (obit.) **05:**137
Svalbard (dependent state, Nor.) 445
Svalbard Global Seed Vault, *or* SGSV (agri. project, Nor.) 445, *il.* 15
seed banks (sidebar) **09:**235
Svejnar, Jan 391
Svensson, Esbjörn (obit.) **09:**161
Svensson, Marta Birgit: *see* Nilsson, Birgit
Sveriges Socialdemokratiska Arbetar Partiet: *see* Swedish Social Democratic Party
Sveriges Socialdemokratiska Arbetarepartiet: *see* Swedish Social Democratic Party
SVP (pol. party, Switz.): *see* Swiss People's Party
Swan, Wayne 368
SWAPO (pol. org., Nam.): *see* South West Africa People's Organization
Swaziland **09:**468; **08:**466; **07:**463; **06:**464; **05:**466; **04:**468; **03:**499; **02:**497; **01:**498; **00:**495
see also WORLD DATA
Sweden **09:**469; **08:**467; **07:**464; **06:**465; **05:**467; **04:**469; **03:**499; **02:**497; **01:**498; **00:**495
motion pictures 288
see also WORLD DATA

Swedish literature **06:**229; **05:**230; **04:**229; **03:**251; **02:**250; **01:**249; **00:**237
Swedish Social Democratic Party, *or* SAP, *or* Sveriges Socialdemokratiska Arbetar Partiet, *or* Sveriges Socialdemokratiska Arbetarepartiet, *or* Swedish Social Democratic Workers' Party (pol. party, Swed.) 469
Sweeney, Charles William (obit.) **05:**137
"Sweeney Todd: The Demon Barber of Fleet Street" (motion picture)
Film Awards *table* 286
Sweezy, Paul Marlor (obit.) **05:**137
swimming **09:**325; **08:**326; **07:**320; **06:**321; **05:**322; **04:**318; **03:**350; **02:**346; **01:**344; **00:**341
Beijing 2008 Olympic Games 194
Sporting Record *tables* 347
Swindin, George Hedley (obit.) **06:**135
Swinton, Tilda 241
Film Awards *table* 286
Swire, Vivienne Isabel: *see* Westwood, Vivienne
Swiss National Bank (bank, Switz.) 174
Swiss People's Party, *or* SVP (pol. party, Switz.) 470
Switzerland **09:**469; **08:**467; **07:**464; **06:**465; **05:**467; **04:**470; **03:**500; **02:**497; **01:**499; **00:**496
financial crisis of 2008 174
see also WORLD DATA
"Symphony No. 7" (work by Shostakovich) 273
synchronized swimming **09:**327; **08:**327; **07:**322; **06:**323; **05:**323; **04:**319; **03:**352; **02:**347; **01:**345; **00:**343
"Syngué sabour" (Rahimi) 263
Syria **09:**470; **08:**468; **07:**465; **06:**466; **05:**468; **04:**470; **03:**501; **02:**498; **01:**499; **00:**497
Iran 413
Israel 417
Lebanon 429
skyrocketing food prices 183
Turkey 476
see also WORLD DATA
SZ (pol. party, Czech Republic): *see* Green Party
SzDSz–Hungarian Liberal Party (pol. party, Hung.) 409
Szechwan (province, China): *see* Sichuan
Szolkowy, Robin 323, *il.* 322

T

T. rex (dinosaur): *see* Tyrannosaurus rex
T2DM: *see* type 2 diabetes mellitus
Ta Mok (obit.) **07:**155
table tennis, *or* Ping-Pong **03:**352; **02:**347; **01:**345; **00:**343
Singapore 460
Sporting Record *tables* 348
Tabori, George, *or* Gyorgy Tabori (obit.) **08:**160
Tadic, Boris 459
Tahina spectabilis (tree) *il.* 250
tai chi chuan, *or* Chinese boxing, *or* tai chi, *or* t'ai chi ch'uan, *or* taijiquan (martial art) 186
Taipei (Tai.) 471
Taiwan **09:**471; **08:**469; **07:**466; **06:**467; **05:**469; **04:**471; **03:**502; **02:**499; **01:**500; **00:**497
Belize 373
China 385
El Salvador 396
Nauru 441
Saint Kitts and Nevis 456
stock markets *table* 218
see also WORLD DATA
Taiwan Solidarity Union, *or* TSU (pol. party, Tai.) 471
Taj Mahal Palace & Tower (hotel, Mumbai, India)
Mumbai terrorist attack 192, *ils.* 5, 192, 193
Tajikistan **09:**472; **08:**470; **07:**466; **06:**468; **05:**470; **04:**472; **03:**502; **02:**500; **01:**501; **00:**499
Uzbekistan 488
see also WORLD DATA
Takamoto, Iwao (obit.) **08:**160
Takarli, Fu'ad al- (obit.) **09:**161
Takei, Yasuo (obit.) **07:**155
Talabani, Jalal 414
Talat, Mehmet Ali 391
Taliaferro, Dorothy L.: *see* Martin, Del
Talihan (militia gov., Afg.) 363, *il.*
areas of control *map* **02:**384
military affairs 270
Pakistan 446
Tallinn (Est.) 397
Tambo, Adelaide, *or* Adelaide Frances Tshukudu (obit.) **08:**160
Tampa Bay Buccaneers (Am. football team) 317
Tampa Bay Rays (baseball team) 306
Tanaka, Atsuko (obit.) **06:**135
Tandja, Mamadou 444
Tang, Ignacio Milam 396
Tange, Kenzo (obit.) **06:**135
Tani, Ryoko (biog.) **05:**94
Tanizaki Jun'ichirō Shō: *see* Jun'ichirō Tanizaki Prize
Tannenbaum, Max Gerard: *see* Ourv, Gérard
Tanzania **09:**472; **08:**470; **07:**467; **06:**468; **05:**470; **04:**472; **03:**503; **02:**500; **01:**502; **00:**499
Burundi 378
see also WORLD DATA
Taras, John (obit.) **05:**137
Target (Am. corp.) 222, 240
tariff, *or* customs duty, *or* duty
skyrocketing food prices 182
Tarlev, Vasile 438
TARP (U.S. govt.): *see* Troubled Asset Relief Program
Tarpenning, Marc (biog.) **08:**78
Taruc, Luis (obit.) **06:**135
Tashkent (Uzbekistan) 488
Tasmanian devil, *or* Sarcophilus harrisii 247, *il.*
Tata, Ratan, *or* Ratan Naval Tata
biography **09:**107
business 215
Tata Motors Ltd. (Indian co.) 214
"Tatil kitabi" (motion picture): *see* "Summer Book"
Taube, Henry (obit.) **06:**135
Taufa'ahau Tupou IV, *or* Tupou IV (obit.) **07:**157
tax evasion
Switzerland 470
taxation
Argentina 366
Australia 368
Bolivia 374
Brazil 376
Canada 381
Estonia 397
Germany 403
Greece 406
Ireland 415
Japan 420, 421
Liechtenstein 430
skyrocketing food prices 182
Sweden 469
Switzerland 470
U.S. state governments 486
United Kingdom 479
"Taxi to the Dark Side" (motion picture) 289
Taylor, Charles (pres. of Lib.) 430
Sierra Leone 460
Taylor, Charles, *or* Charles Margrave Taylor (biog.) **08:**105
Taylor, Claudia Alta: *see* Johnson, Lady Bird
Taylor, June (obit.) **05:**137
Taylor, Theodore Brewster (obit.) **05:**137
Taylor, Zola (obit.) **08:**160
TB: *see* tuberculosis
Tbilisi (Georgia) 401, 454, *il.* 402
"Tchamantche" (album) 276
Tcherina, Ludmila, *or* Monika Avenirovna Tchemerzina, *or* Monique Avenirovna Tchemerzina (obit.) **05:**137
TCU (univ., Fort Worth, Tex., U.S.): *see* Texas Christian University
Te Atairangikaahu, Dame, *or* Te Arikinui Dame Te Atairangikaahu (obit.) **07:**155
teaching 230
Tearne, Roma 254
Tebaldi, Renata (obit.) **05:**138
Tebow, Tim 316, *il.* 317
teenager: *see* adolescence
"Tees Valley Giants, The" (art) 210
Tegucigalpa (Hond.) 408
Tehelka.com (Indian news portal) sting operation (sidebar) **02:**438
Tehran (Iran) 413
Teicher, Lou, *or* Louis Milton Teicher (obit.) **09:**161
Teikoku Gikai (Japanese govt.): *see* Diet
Teitelbaum, Moses (obit.) **07:**155
Teitelboim, Volodia (obit.) **09:**161
telecommunication **03:**176; **02:**181; **01:**180; **00:**159
Costa Rica 388
telephone industry 219
see also cellular telephone
television **07:**250; **06:**239; **05:**240; **04:**239; **03:**269; **02:**269; **01:**268; **00:**257
fan fiction (sidebar) **02:**277
Internet 221
Media in the Muslim world (sidebar) **02:**272
reality TV programs (sidebar) **02:**271
September 11 terrorist attacks (special report) **02:**8
Telleli, Carmen Orlando: *see* Giardello, Joey
Telles, Lygia Fagundes 266
Tellkamp, Uwe 261, *il.* 262
TEM (instru.): *see* transmission electron microscope
"Temenos" (art) 210
Temnospondyli paleontology 253
Templeton, Sir John Marks obituary **09:**161
religion 301
Tendulkar, Vijay Dhondopant (obit.) **09:**162
Tennant, David 281
Tennessee (state, U.S.) 485
Tennessee, University of (univ. system, Tenn., U.S.) 308
Tennessee Plowboy, the: *see* Arnold, Eddy
tennis **09:**327; **08:**328; **07:**322; **06:**323; **05:**323; **04:**319; **03:**352; **02:**347; **01:**345; **00:**343
Sporting Record *tables* 349
tenpins: *see* bowling
Teoctist, *or* Arapasu, Toader (obit.) **08:**160
Ter-Petrosyan, Levon 367
Terkel, Studs, *or* Louis Terkel (obit.) **09:**162
term limit (pol.)
Cameroon 379
Senegal 459
terrestrial radio: *see* radio
terrorism **06:**208; **05:**209; **04:**209; **03:**228; **02:**229; **01:**226; **00:**214
Afghanistan 363
Algeria 364
Bosnia and Herzegovina 375
counterterrorism efforts (special report) **03:**312
DARPA (sidebar) **09:**272
India 410, *il.* 411
Jordan 422
Morocco 440
Pakistan 446
"POWs and the Global War on Terrorism" (special report) **05:**250
Spain 465
"Terror in Mumbai" (special report) **09:**192
Swaziland 469
U.S. attack (special report) **02:**6, *map* 11
United Kingdom 480
United Nations 355
United States 483
Yemen 491
Test (cricket) 311
testing (special report) **02:**208
Tetley, Glen, *or* Glenford Andrew Tetley, Jr. (obit.) **08:**160
Tew, Margaret Mary: *see* Douglas, Dame Mary
Texas, University of (univ. system, Tex., U.S.) 316
Texas Christian University, *or* TCU (univ., Fort Worth, Tex., U.S.) 316
Texas Tech University (univ., Lubbock, Tex., U.S.) 316
text messaging, *or* texting, *or* TXT computers (sidebar) **06:**165
TFG (Som. govt.): *see* Transitional Federal Government
"Tha Carter III" (album) 277
Thaci, Hashim (biog.) **09:**107
Kosovo 425
Thackeray, Bal (biog.) **06:**94
Thailand **09:**473; **08:**471; **07:**468; **06:**469; **05:**471; **04:**473; **03:**503; **02:**501; **01:**502; **00:**500
Cambodia 378
China 385
skyrocketing food prices 183, *il.*
see also WORLD DATA
Thaksin Shinawatra 473
Thaler, William John (obit.) **06:**135
Than Shwe 440
Thani, Sheikh Hamad ibn Jasim ibn Jabr al- 452
Thani, Hamad ibn Khalifah al- Qatar 452
Thanom Kittikachorn (obit.) **05:**138
Tharp, Marie (obit.) **07:**155
Tharp, Twyla 278
That Luang (temple, Vientiane, Laos) 427
Thaves, Bob (obit.) **07:**155
theatre **09:**280; **08:**279; **07:**269; **06:**257; **05:**260; **04:**260; **03:**291; **02:**291; **01:**290; **00:**280
Kabuki in the U.S. (special report) **06:**258
Thein Sein 440
Thelwell, Norman (obit.) **05:**138
therapeutics, *or* therapy, *or* treatment (med.)
traditional Chinese medicine 187

"There Will Be Blood" (motion picture)
Film Awards *table* 286
Theron, Charlize (biog.) **05:**95
"They're Playing Our Song" (mus. thea.) 282
Thiele, Colin Milton (obit.) **07:**156
Thimphu (Bhut.) 374
"Things Fall Apart" (Achebe) 260
Thinley, Lyonchen Jigmi 374
third-wave feminism
"Feminism Reimagined: The Third Wave" (special report) **08:**196
Thomas, Frank (obit.) **05:**138
Thomas, Gerry, *or* Gerald Ehrmann Thomas (obit.) **06:**136
Thomas, Kristin Scott
Film Awards *table* 287
Thomas, Tillman 406
Thomas Cup (badminton)
Sporting Record *tables* 332
Thompson, David 371
Thompson, Fred, *or* Fred Dalton Thompson
U.S. election of 2008 177
Thompson, Hank (obit.) **08:**161
Thompson, Hunter Stockton (obit.) **06:**136
Thompson, Lucky, *or* Eli Thompson (obit.) **06:**136
Thomson, Kenneth Roy (obit.) **07:**156
Thorn, Gaston Egmond (obit.) **08:**161
Thorn, George Widmer (obit.) **05:**138
Thornburg, Elizabeth June: *see* Hutton, Betty
Thoroughbred racing **09:**312; **08:**313; **07:**307; **06:**305; **05:**307; **04:**303; **03:**331; **02:**330; **01:**328; **00:**322
synthetic surfaces (sidebar) **08:**314
Thorpe, Billy, *or* William Richard Thorpe (obit.) **08:**161
"Three Cups of Tea" (Mortenson and Relin) 229
"Three Monkeys," *or* "Uc maymun" (motion picture) 288
"Through Black Spruce" (Boyden)
Canadian literature 260
Thulin, Ingrid (obit.) **05:**138
Thwaites, Michael Rayner (obit.) **06:**136
Tibbets, Paul Warfield, Jr. (obit.) **08:**161
Tibet (aut.area, China) 298, 383
Nepal 442
protest near Dharmshala *il.* 17
"Ties of Protection and Safekeeping" (art) 211
Tillerson, Rex W. (biog.) **09:**108
Tillion, Germaine Marie Rosine (obit.) **09:**162
Timbaland, *or* Timothy Z. Mosley (biog.) **09:**108
"Time and Materials: Poems, 1997–2005" (Hass) 259
Time Warner Inc., *or* Time Inc. (Am. co.) 221
"Time We Have Taken, The" (Carroll) 261
Timor-Leste: *see* East Timor
Tirana (Alb.) 363
Tirolijo: *see* Marulanda Velez, Manuel
Tisch, Preston Robert (obit.) **06:**136
Tisserand, Gérard Marcel: *see* Souzay, Gérard
titanium nitride 293
Tiwanaku (culture and archae. site, Bol.) 203, *il.*
TNK-BP (internat. co.) 217
"To Catch the Lightning" (Cheuse)
American literature 258
tobacco 218
Zambia 492
Todd, Ron, *or* Ronald Todd (obit.) **06:**136
Togo **09:**473; **08:**471; **07:**468; **06:**469; **05:**472; **04:**474; **03:**504; **02:**502; **01:**503; **00:**501
see also WORLD DATA
Toguri, Ikuko: *see* D'Aquino, Iva Toguri
Tokyo (Japan) 419
Tokyo Rose: *see* D'Aquino, Iva Toguri
Tōkyō Shibaura Denki KK (Japanese corp.): *see* Toshiba Corporation
Tokyo Shibaura Electric Company, Ltd. (Japanese corp.): *see* Toshiba Corporation
Toland, John Willard (obit.) **05:**138
Toltz, Steve 261, *il.*
Tomasi Kulimoetoke II (obit.) **08:**161
Tomeing, Litokwa 435
Tomescu, Constantina 330
Tomlinson, LaDainian (biog.) **07:**104
Tong, Anote 424
Tong Sang, Gaston 359
Tonga **09:**474; **08:**472; **07:**469; **06:**470; **05:**472; **04:**474; **03:**504; **02:**502; **01:**503; **00:**501
see also WORLD DATA
Tony Award, *or* Antoinette Perry Award (Am. thea. award) 283
Topi, Bamir 363
Topolanek, Mirek 391
Toribiong, Johnson 447
Tories (pol. party, U.K.): *see* Conservative Party
Toronto International Film Festival
Film Awards *table* 287
Toronto Stock Exchange, *or* TSE
stock markets *table* 218
Torres, Dara 326
Beijing 2008 Olympic Games 194
Torrijos, Martin 447
torture 395
Tory Party (pol. party, U.K.): *see* Conservative Party
Toshiba Corporation, *or* Tōkyō Shibaura Denki KK, *or* Tokyo Shibaura Electric Company, Ltd. (Japanese corp.) 224
Toti, Andrew (obit.) **06:**136
Touadéra, Faustin Archange 382
Tour de France 312
Tour of Italy, *or* Giro d'Italia 312
Tour of Spain, *or* Vuelta a España 312
Touré, Ali Farka, *or* Ali Ibrahim Touré (obit.) **07:**156
Touré, Amadou Toumani 434
tourism
Antarctica 360
Bulgaria 377
Cape Verde 381
Egypt 395
Honduras 409
Lebanon 429
Montenegro 439
Oman 446
Palau 447
Saint Kitts and Nevis 456
Taiwan 471
Thailand 473
Turkey 476
Tuvalu 477
United Arab Emirates 479
Vanuatu 489
Tovar, Rigo, *or* Rigoberto Tovar García (obit.) **06:**136
Tower, Joan 274
Townsend, Henry (obit.) **07:**156
toxic waste 236
Toyota Motor Corp. (Japanese co.)
automobile racing 305
business 215
trachea, *or* windpipe
transplant 246, *il.*
track and field: *see* athletics
trade deficit
Bulgaria 377
South Korea 425
Tunisia 475
Turkey 476
trade surplus
China 384
trade union (labour org.): *see* organized labour
Trahtman, Avraham, *or* Avraham Trakhtman (biog.) **09:**109
Trajkovski, Boris (obit.) **05:**138
trans fat
U.S. state governments 487
Transantarctic Mountains (mts., Antarc.) 361
Transdniestria 438
Transitional Federal Government, *or* TFG (Som. govt.) 462
transmission electron microscope, *or* TEM 290, *il.*
Transparency International (internat. org.)
Bosnia and Herzegovina 375
Indonesia 413
Nigeria 444
Qatar 452
Sierra Leone 460
transplant, *or* graft (surg.)
human trachea 246, *il.*
Traoré, Rokia 276
travel industry: *see* tourism
Treasury, Department of the (U.S. govt.)
financial crisis of 2008 171
Treasury security (fin.) 173
treatment (med.): *see* therapeutics
"Treffen sich zwei" (Hanika) 261
Treisman, David: *see* Caminer, David
Tremain, Rose 254, *il.*
Tremblay, Michel 263
Tretchikoff, Vladimir, *or* Vladimir Grigoryevich Trechikov (obit.) **07:**156
Trinidad and Tobago **09:**474; **08:**472; **07:**469; **06:**470; **05:**472; **04:**475; **03:**505; **02:**502; **01:**503; **00:**501
Grenada 406
see also WORLD DATA
Triodus
paleontology 253
Tripoli (Libya) 430
"Triptych, 1976" (art) 209
TRNC (pol. div., Cyp.): *see* Turkish Republic of Northern Cyprus
"Trois hommes seuls" (Oster) 262
tropical cyclone 228
tropical depression 373
tropical storm 408
Trotman of Osmotherly, Alexander James Trotman, Baron (obit.) **06:**136
"Trouble the Water" (motion picture) 289
Troubled Asset Relief Program, *or* TARP (U.S. govt.) 482
Trovoada, Patrice 457
Troy, Doris, *or* Doris Higgensen (obit.) **05:**138
Troyat, Henri (obit.) **08:**161
True Finns (pol. party, Fin.) 399
Trueman, Frederick Sewards (obit.) **07:**156
Truman, Margaret, *or* Mary Margaret Truman Daniel (obit.) **09:**162
Trump, Donald, *or* Donald John Trump (biog.) **05:**95
Truth and Reconciliation Commission (Lib.) 430
truth commission, *or* truth and reconciliation commission
Bosnia and Herzegovina 375
Togo 474
Tsang, Donald (biog.) **08:**105
TSE (stock exchange, Toronto, Can.): *see* Toronto Stock Exchange
Tsegaye, Gabre-Medhin (obit.) **07:**157
Tsekou, Evi 405
Tsering, Tashi: *see* Norbu, Thubten Jigme
Tshukudu, Adelaide Frances: *see* Tambo, Adelaide
Tshwane (S.Af.): *see* Pretoria
Tsien, Roger Y.
Nobel Prize 66, *il.*
Tsigan (people): *see* Roma
Tsipras, Alexis 405
Tsonga, Jo-Wilfried 327
TSU (pol. party, Tai.): *see* Taiwan Solidarity Union
tsunami (2004, Indian Ocean)
deadliest tsunami (sidebar) **05:**58
Tsvangirai, Morgan (biog.) **08:**106
Zimbabwe 492
Tuareg (people) 434, 444
tuberculosis, *or* TB 243, 356
Tucker, C. DeLores, *or* Cynthia DeLores Nottage (obit.) **06:**137
Tucker, Ira B. (obit.) **09:**163
popular music 277
Tudor, Antony 278
Tuiatua Tupua Tamasese Efi 457
Tuila'epa Sa'ilele Malielegaoi 457
Tunis (Tun.) 475
Tunisia **09:**475; **08:**473; **07:**469; **06:**470; **05:**473; **04:**475; **03:**505; **02:**503; **01:**504; **00:**502
see also WORLD DATA
tunnel
Civil Engineering Projects *table* 207
Tupou IV: *see* Taufa'ahau Tupou IV
Tupou V, *or* Siaosi George Tupou V 474, *il.*
Turbay Ayala, Julio César (obit.) **06:**137
Turk, Danilo 461
Turkey **09:**475; **08:**473; **07:**470; **06:**471; **05:**473; **04:**475; **03:**505; **02:**503; **01:**505; **00:**502
archaeology 201
Armenia 367
education 232
European Union 357
Greece 405
motion pictures 288
religion 300
"Turkey's Secular/Islamic Conundrum" (special report) **09:**190
see also WORLD DATA
Turkish literature **06:**235; **05:**236; **04:**236; **03:**258; **02:**257; **01:**257; **00:**245
Turkish Republic of Northern Cyprus, *or* TRNC (pol. div., Cyp.) 391
Turkmenistan **09:**476; **08:**474; **07:**471; **06:**472; **05:**474; **04:**476; **03:**506; **02:**505; **01:**505; **00:**504
see also WORLD DATA
Turks and Caicos Islands 359
"Turm, Der" (Tellkamp) 261, *il.*
Turner, Ike, *or* Izear Luster Turner, Jr. (obit.) **08:**162

Turner, Ted 301
Turner Prize (arts award) 210, *il.* 52
Tusk, Donald 450, *il.* 451
Tuttle, William (obit.) **08:**162
Tuvalu **09:**477; **08:**475; **07:**471; **06:**472; **05:**474; **04:**477; **03:**507; **02:**505; **01:**506; **00:**504
see also WORLD DATA
"Tuya" (Piñeiro) 265
12 Hours of Sebring (auto race) 305
Twenty, Group of, *or* G-20 357
environment 236
financial crisis of 2008 175
South Africa 464
24 Hours of Daytona (auto race) 305
XXIX Olympiad, Games of the: *see* Beijing 2008 Olympic Games
Twitchett, Denis Crispin (obit.) **07:**157
Twitter (computer and phone service) 221
Two Thousand Guineas (horse race)
Sporting Record *tables* 338
TXT: *see* text messaging
Tyler Prize for Environmental Achievement 237
Tymoshenko, Yuliya, *or* Yuliya Volodymyrivna (biog.) **09:**109
Ukraine 478
Tyndall, John Hutchyns (obit.) **06:**137
type 2 diabetes mellitus, *or* non-insulin-dependent diabetes, *or* T2DM (sidebar) **08:**247
typhoon *il.* 30
Tyrannosaurus rex, *or* T. rex (dinosaur) 252

U

UAL (Am. co.)
airline industry 215
UAV: *see* unmanned aerial vehicle
Uber Cup (badminton)
Sporting Record *tables* 332
UBS AG, *or* United Bank of Switzerland AG (Swiss bank) 470
UBS Virtual Maestro 274
"Uc maymun" (motion picture): *see* "Three Monkeys"
UCI (internat. sports org.): *see* Union Cycliste Internationale
Ucko, Peter John (obit.) **08:**162
UDP (pol. party, Belize): *see* United Democratic Party
UEFA: *see* Union des Associations Européennes de Football
Uganda **09:**477; **08:**475; **07:**472; **06:**473; **05:**475; **04:**477; **03:**508; **02:**506; **01:**506; **00:**504
Congo, Democratic Republic of the 387
United Nations 355
see also WORLD DATA
UGDD (pol. party, Gab.): *see* Gabonese Union for Democracy and Development
Uhlaender, Katie 309, *il.*
Ukraine **09:**478; **08:**475; **07:**472; **06:**474; **05:**475; **04:**478; **03:**508; **02:**506; **01:**507; **00:**505
Beijing 2008 Olympic Games 194
religion 299
Russia 455
see also WORLD DATA
Ulaanbaatar (Mong.) 438
ultrasonic communication 248
Uluivuda, Ratu Josefa Iloilovatu: *see* Iloilo, Ratu Josefa
Ulysses (space probe) 297
Umbral, Francisco, *or* Francisco Pérez Martínez (obit.) **08:**162
UMNO (pol. party, Mal.): *see* United Malays National Organization
UMP (pol. party, Djibouti): *see* Union for a Presidential Majority
UMP (pol. party, Fr.): *see* Union for a Popular Movement
UN (internat. org.): *see* United Nations
UN Climate Change Conference environment 356
UN Convention on the Law of the Sea, *or* UNCLOS 362, 371
UN Mission in Liberia 430
UN Stabilization Mission in Haiti, *or* MINUSTAH 408
"Unaccustomed Earth" (Lahiri) 259
UNAIDS (UN program) 356
UNAMID: *see* African Union/United Nations Hybrid Operation in Darfur
UNASUR (S.Am. org.): *see* Union of South American Nations
UNCLOS (international law): *see* UN Convention on the Law of the Sea
Underwood, Carrie, *or* Carrie Marie Underwood (biog.) **08:**106
unemployment
Albania 364
Angola 366
Australia 368
Denmark 393
financial crisis of 2008 175, *il.*
Germany 403
Indonesia 412
Iran 413
Ireland 415
Japan 421
Jordan 422
Kosovo 426
Liberia 429
Macedonia 432
Montenegro 439
Poland 451
San Marino 457
Sierra Leone 460
South Africa 464
Spain 465
Sweden 469
Taiwan 471
Tunisia 475
United Kingdom 480
United States 483, *il.*
Uruguay 488
UNESCO, *or* United Nations Educational, Scientific and Cultural Organization (internat. org.) 229
UNFCC (internat. agreement): *see* United Nations Framework Convention on Climate Change
UNHCR (UN com.): *see* United Nations High Commissioner for Refugees
UNICEF, *or* United Nations Children's Fund (internat. org.)
Italy 418
Union Cycliste Internationale, *or* UCI (internat. sports org.) 312
Union des Associations Européennes de Football, *or* UEFA 315, *tables* 341
Union for a Popular Movement, *or* UMP (pol. party, Fr.) 400
Union for a Presidential Majority, *or* UMP (pol. party, Djibouti) 393
Union for Monaco (pol. party, Mon.) 438
Union of South American Nations, *or* UNASUR (S.Am. org.) 358
Venezuela 490
UNITA, *or* National Union for the Total Independence of Angola (pol. org., Ang.) 365
United Arab Emirates **09:**479; **08:**476; **07:**473; **06:**475; **05:**476; **04:**478; **03:**509; **02:**507; **01:**508; **00:**506
skyrocketing food prices 183
see also WORLD DATA
United Bank of Switzerland AG (Swiss bank): *see* UBS AG
United Company RUSAL, *or* Rusal (Russ. co.) 217
United Democratic Party, *or* UDP (pol. party, Belize) 373
United Kingdom, *or* Britain **09:**479; **08:**478; **07:**474; **06:**475; **05:**477; **04:**479; **03:**510; **02:**507; **01:**508; **00:**507
arts and entertainment
dance 280
literature 254
motion pictures 284, *table* 286
popular music 276
theatre 280
"Britain: The Radical Stronghold of European Muslims" (special report) **07:**476
election of 2001 (sidebar) **02:**509
election of 2005 (sidebar) **06:**477
environment 233
European Union 357
financial crisis of 2008 174
Germany 403
international relations
Antigua and Barbuda 366
Congo, Democratic Republic of the 387
dependent states 359
Mauritius 436
sports
basketball 309
Beijing 2008 Olympic Games 194
cycling 312
stock markets *table* 218
see also WORLD DATA
United Malays National Organization, *or* UMNO (pol. party, Mal.) 433
United National Movement, *or* UNM (pol. party, Georgia) 401
United National Party, *or* UNP (pol. party, Sri Lanka) 466
United Nations, *or* UN (internat. org.) **09:**354; **08:**354; **07:**348; **06:**350; **05:**350; **04:**346; **03:**380; **02:**374; **01:**376; **00:**368
Afghanistan 363
Cameroon 379
Cape Verde 381
Equatorial Guinea 396
Eritrea 397
Guatemala 406
Italy 418
Kosovo 426
Macedonia 431
Maldives 434
military affairs 270
Nepal 442
Pope Benedict's U.S. visit 489
Serbia 459
Seychelles 460
skyrocketing food prices 182
Somalia 463
Sudan, The 466, 467
Taiwan 471
United Arab Emirates 479
"What Ails the UN Security Council?" (special report) **04:**348
United Nations Children's Fund (internat. org.): *see* UNICEF
United Nations Educational, Scientific and Cultural Organization (internat. org.): *see* UNESCO
United Nations Environment Programme 233
United Nations Framework Convention on Climate Change, *or* UNFCC (internat. agreement) 234
United Nations High Commissioner for Refugees, *or* UNHCR 378, 491
United People's Freedom Alliance, *or* UPFA (pol. party, Sri Lanka) 466
United Progressive Alliance, *or* UPA (pol. org., India) 410
United Russia, *or* UR (pol. party, Russ.) 453
United Self-Defense Forces of Colombia, *or* AUC (paramil. org., Colom.) 386
United Socialist Party of Venezuela, *or* PSUV (pol. party, Venez.) 490
United States **09:**482; **08:**481; **07:**479; **06:**479; **05:**480; **04:**482; **03:**513; **02:**511; **01:**511; **00:**509
archaeology 202
arts and entertainment
dance 278
jazz 275
Kabuki theatre (special report) **06:**258
literature 258
motion pictures 283, *table* 286
popular music 277
theatre 282
Bush administration policies (special report) **04:**412
business 214
census of 2000 (special report) **02:**514, *maps* 515
climate 227
Clinton's impeachment and trial (sidebar) **00:**513
computers and information systems 219
death penalty *map* **03:**231
Defense Advanced Research Projects Agency 270, 272
distance learning 230, 231
election reform (sidebar) **02:**517
elections (sidebar) **07:**481
emergency management (special report) **06:**182
environment 234
fashions 239
financial crisis of 2008 170
fossil fuels (sidebar) **09:**216
geology and geochemistry 226
gun control (special report) **01:**228
health and disease
childhood obesity (sidebars) **06:**203
traditional Chinese medicine 186, 243
honeybee population decline 249
"Immigration's Economic Impact" (special report) **07:**486
international relations
Afghanistan 363
Antigua and Barbuda 366
Arctic Regions 362
Australia 368
Bahrain 370
Belarus 372
Bolivia 374
Burkina Faso 373
Canada 381
Chile 383
China 385
Congo, Democratic Republic of the 387

Cuba 390
Czech Republic 392
Dominica 393
Dominican Republic 394
El Salvador 396
Estonia 397
France 400
Germany 403
India 193, 411
Iraq 414, 415
Israel 416
Jamaica 419
Japan 419, 421
Kazakhstan 422
Latvia 428
Lebanon 429
Liberia 430
Libya 430
Liechtenstein 431
Lithuania 431
Luxembourg 431
Marshall Islands 435
Mexico 437
Micronesia 437
North Korea 424
Oman 446
Poland 451
Pope Benedict's visit 489, *il.*
Russia 455
Saudi Arabia 458
South Korea 425
Switzerland 470
Taiwan 471
Tanzania 472
United States 446
Venezuela 490
Vietnam 491
Yemen 491
midterm elections (sidebar) **03:**517
military bases in Afghanistan *map* **02:**384
presidential election of 2008 (special report) **09:**176
presidential elections (special reports) **05:**484; **01:**514, *map* 515
religion 299
September 11 terrorist attacks (special report) **02:**6, *map* 11
skyrocketing food prices 182
space exploration 296, *table*
sports
association football 316
automobile racing 305
baseball 306
basketball 308
Beijing 2008 Olympic Games 194
equestrian 312
football 316
gymnastics 320
ice hockey 322
swimming 325
track and field 329
volleyball 330
stock markets *table* 218
see also WORLD DATA
United States Air Force, The 271
United States Congress: *see* Congress of the United States
United States Geological Survey (geol. org., U.S.) 226, 362
fossil fuels (sidebar) **09:**216
United States Navy, The 271, *il.*
United States Presidential Election of 2008 (special report) **09:**176
UNM (pol. party, Georgia): *see* United National Movement
unmanned aerial vehicle 270
unmanned satellite: *see* Earth satellite
Unnewehr, Margaret: *see* Schott, Marge
UNP (pol. party, Sri Lanka): *see* United National Party
"Up the Yangtze" (motion picture) 289
UPA (pol. org., India): *see* United Progressive Alliance
UPFA (pol. party, Sri Lanka): *see* United People's Freedom Alliance
Uppman, Theodor (obit.) **06:**137
Upshaw, Dawn (biog.) **08:**107
Upshaw, Gene (obit.) **09:**163
UR (pol. party, Russ.): *see* United Russia
uranium enrichment
Iran 413
Urban Challenge, *or* Grand Challenge (U.S. govt.)
DARPA (sidebar) **09:**272
Uribe Vélez, Álvaro 386, 394
Uruguay **09:**488; **08:**488; **07:**488; **06:**485; **05:**488; **04:**488; **03:**519; **02:**519; **01:**519; **00:**517
see also WORLD DATA
U.S. Open (golf) 319
Sporting Record *tables* 342
U.S. Open (tennis) 328
Sporting Record *tables* 349
U.S. Women's Open (golf)
Sporting Record *tables* 342
USC (univ., Los Angeles, Calif., U.S.): *see* Southern California, University of
USDA: *see* Agriculture, U.S. Department of
USFP (pol. party, Mor.): *see* Socialist Union of Popular Forces
USGS (geol. org., U.S.): *see* United States Geological Survey
Usher, *or* Usher Raymond IV (biog.) **06:**95
U.S. Sugar (Am. co.) 234
Ustinov, Sir Peter Alexander, *or* Peter Alexander Ustinov (obit.) **05:**138
Utzon, Jørn (obit.) **09:**163
Uzbekistan **09:**488; **08:**488; **07:**488; **06:**485; **05:**488; **04:**488; **03:**519; **02:**519; **01:**519; **00:**517
Kazakhstan 423
Tajikistan 472
see also WORLD DATA

V

vaccine 245, 248
Vaduz (Liech.) 430
Vaiaku (Tuv.) 477
Valderrama, Juanito, *or* Juan Valderrama Blanca (obit.) **05:**139
Valdez, Paulino Salgado: *see* Batata
Valenti, Jack (obit.) **08:**162
Valentine, Alfred Lewis ("Alf") (obit.) **05:**139
Valletta (Malta) 435
Valli, Alida, *or* Alida Maria Laura von Altenberger (obit.) **07:**157
Valparaíso (Chile) 382
"Vals im Bashir" (motion picture): *see* "Waltz with Bashir"
value-added tax, *or* VAT
Latvia *il.* 428
Valuyev, Nikolay 310
Van Allen, James Alfred (obit.) **07:**157
Van Andel, Jay (obit.) **05:**139
van de Wetering, Ernst
"Rembrandt Research Project, The" (special report) **07:**180
Van Duyn, Mona (obit.) **05:**139
van Rijn, Rembrandt: *see* Rembrandt
Vancouver International Film Festival
Film Awards *table* 287
Vandross, Luther Ronzoni (obit.) **06:**137
Vane, Sir John Robert (obit.) **05:**139
Vanhanen, Matti 398
vanilla 432
Vanua'aku Pati (pol. party, Van.) 489
Vanuatu **09:**489; **08:**488; **07:**489; **06:**486; **05:**489; **04:**489; **03:**520; **02:**519; **01:**519; **00:**518
see also WORLD DATA
Varlaro, Luigi Francisco: *see* Cornell, Don
Vasconcellos, Josefina Alys Hermes de (obit.) **06:**137
Vásquez, Juan Estebán Aristizábal: *see* Juanes
VAT: *see* value-added tax
Vatican City State **09:**489; **08:**489; **07:**489; **06:**486; **05:**489; **04:**489; **03:**520; **02:**520; **01:**520; **00:**518
religion 300
see also WORLD DATA
Vatopedi monastery (monastery, Gr.) 405
Vaziyev, Makhar 280
Vázquez, Israel 311
Vázquez Rosas, Tabaré Ramón
biography **06:**95
Uruguay 488
VCP (pol. party, Viet.): *see* Vietnam Communist Party
veganism 185
Vegetable Orchestra (Aus. orchestra) 274
Velthuijs, Max (obit.) **06:**137
Veltroni, Walter 418
Venator Group, Inc. (Am. co.): *see* Woolworth Co.
Venetiaan, Ronald 468
Venezuela **09:**490; **08:**489; **07:**489; **06:**486; **05:**490; **04:**489; **03:**520; **02:**520; **01:**520; **00:**518
Barbados 371
Bolivia 375
Chile 383
Colombia 386
Cuba 390
Dominican Republic 394
Nicaragua 443
Portugal 451
Saint Vincent and the Grenadines 457
see also WORLD DATA
Venice Commission (Eur. com.)
Azerbaijan 369
Venice Film Festival
Film Awards *table* 287
Venstre (pol. party, Den.): *see* Liberal Party
"Venus on Earth" (album) 276
Vera Cruz, Tomé 457
Verhofstadt, Guy 372
Verizon Communications, Inc. (Am. corp.) 221
Vezzali, Valentina
Beijing 2008 Olympic Games 194, 419
Viacom, Inc. (Am. co.) 223
"Vicky Cristina Barcelona" (motion picture) 284
Victoria (Sey.) 460
"Vidas perpendiculares" (Enrigue)
Latin American literature 265
video game: *see* computer game
"Vie en rose, La," *or* "La Môme," *or* "The Passionate Life of Edith Piaf" (motion picture)
Film Awards *table* 286
Vieira, João Bernardo 407
Vienna (Aus.) 369
Vientiane (Laos) 427
Viereck, Peter Robert Edwin (obit.) **07:**158
Viertel, Peter (obit.) **08:**162
Vietnam **09:**490; **08:**490; **07:**490; **06:**487; **05:**490; **04:**490; **03:**521; **02:**521; **01:**521; **00:**519
skyrocketing food prices 183
see also WORLD DATA
Vietnam Communist Party, *or* VCP (pol. party, Viet.) 491
Viking
Newfoundland celebration (sidebar) **01:**409, *map*
Vila, *or* Port Vila (Van.) 489
Viljoen, Marais (obit.) **08:**162
Villamizar, Alberto (obit.) **08:**163
Vilnius (Lith.) 431
violence
Benin 373
Bolivia 374
El Salvador 396
Germany 402
Iraq 414
Kenya 423
Macedonia 432
Mexico 436
Mongolia 438
Nigeria 445
religion 298
Virunga National Park (park, Dem. Rep. of the Congo)
wildlife conservation 238
Viscardi, Henry, Jr. (obit.) **05:**139
Vishneva, Diana (biog.) **08:**107
Vista (operating system): *see* Windows Vista
Vo Van Kiet, *or* Phan Van Hoa (obit.) **09:**163
Vodennikov, Dmitry 267
Vogt, Marguerite Maria (obit.) **08:**163
Voight, Angelina: *see* Jolie, Angelina
volleyball **09:**330; **08:**330; **07:**324; **06:**326; **05:**326; **04:**322; **03:**355; **02:**350; **01:**348; **00:**346
Sporting Record *tables* 351
Volodymyrivna, Yuliya: *see* Tymoshenko, Yuliya
"voluntad y la fortuna, La" (Fuentes) 265, *il.*
Volvo Aktiebolaget (Swed. automaker) 215, 469
von Bülow, Sunny, *or* Martha Sharp Crawford (obit.) **09:**164
von Otter, Anne Sofie (biog.) **06:**95
Vonk, Hans (obit.) **05:**139
Vonn, Lindsey, *or* Lindsey Kildow
Alpine skiing 324
biography **09:**110
Vonnegut, Kurt, Jr. (obit.) **08:**163
Voronin, Vladimir 438
vote: *see* election
Voulgarakis, Georgios 405
Vuelta a España: *see* Tour of Spain
Vujanovic, Filip 439
Vyroubova, Nina (obit.) **08:**163

W

"W." (motion picture) 284
wa Mutharika, Bingu: *see* Mutharika, Bingu wa
Wachovia Corp.
financial crisis of 2008 172
Wade, Abdoulaye 458
Wade, Dwyane 308
Waena, Sir Nathaniel 462
Waghef, Yahya Ould Ahmed El 435
Wagner, Katharina 273
Wagner, Richard 273
Wagoner, Porter (obit.) **08:**163
Walcott, Sir Clyde Leopold (obit.) **07:**158
Waldheim, Kurt Josef (obit.) **08:**164

Wales (U.K.) 229, 318, 479
Wales, Jimmy, *or* Jimmy Donal Wales (biog.) **07:**105
Walker, Cindy (obit.) **07:**158
Walker, Kara (biog.) **07:**105
Wall Street (fin. area, N.Y.C., N.Y., U.S.)
financial crisis of 2008 171
"Wall Street Journal, The" (Am. news.) 222
Wallace, David Foster (obit.) **09:**164
Waller, Charlie, *or* Charles Otis Waller (obit.) **05:**140
Walser, Martin 262
Walsh, Bill, *or* William Ernest Walsh (obit.) **08:**164
Walsh, Kerri (biog.) **09:**92
volleyball 331
"Waltz with Bashir," *or* "Vals im Bashir" (motion picture) 289, *il.*
WaMu (Am. corp.): *see* Washington Mutual
Wan Azizah *il.* 433
Wang Daohan (obit.) **06:**138
Wang Guangmei (obit.) **07:**158
Wang Yung-ching (obit.) **09:**164
Wangchuk, Jigme Khesar Namgyal Bhutan 374, *il.*
Wangchuk, Jigme Singye 374
Wanjiru, Samuel 330
war, *or* warfare
war journalism (special report) **04:**246
warfare in the 21st century (special report) **03:**280
war, prisoner of: *see* prisoner of war
war crime
Bosnia and Herzegovina 375
Liberia 430
terrorism 355
Uganda 478
United States 484
War in Iraq (2003): *see* Iraq War
Ward, Derrick 317
Ward, Rodger (obit.) **05:**140
Warden, Jack, *or* John H. Lebzelter (obit.) **07:**159
warfare: *see* war
Wariner, Jeremy 329
Warren, Rick (biog.) **05:**95
Warrick, Ruth (obit.) **06:**138
Warsaw (Pol.) 450
Washington (state, U.S.) 486
Washington (D.C., U.S.) 482
September 11 terrorist attack (special report) **02:**6, *map* 11
Washington Mutual, *or* WaMu (Am. corp.)
financial crisis of 2008 172
Wasim Hasan Raja (obit.) **07:**159
Wasserman, Al, *or* Albert Wasserman (obit.) **06:**138
Wasserstein, Wendy (obit.) **07:**159
Watanabe, Yoko (obit.) **05:**140
Wataya, Risa (biog.) **05:**79
water
astronomy 294
Côte d'Ivoire 389
Tajikistan 472
Uzbekistan 489
world water crisis (special report) **04:**192, *map*
Water Cube (bldg., Beijing, China): *see* National Aquatics Centre
"Water Lily Pond" (art) 209
"Water Witch" (ship) 203
Wawasan Brunei 2035 377
WBA (internat. sports org.): *see* World Boxing Association
WBC (baseball): *see* World Baseball Classic
WBC (internat. sports org.): *see* World Boxing Council
"We Will Not Fight: The Untold Story of the First World War's Conscientious Objectors" (Ellsworth-Jones) 255
weapon
warfare in the 21st century (special report) **03:**280
weapon of mass destruction, *or* WMD 270
definition (sidebar) **04:**249
Wearable Power (U.S. govt.) 271
Wearne, Alice Eileen (obit.) **08:**164
Weaver, Dennis, *or* William Dennis Weaver (obit.) **07:**159
Web log (Internet): *see* blog
Webb, Kate, *or* Catherine Merrial Webb (obit.) **08:**165
Weber, Dick, *or* Richard Anthony Weber (obit.) **06:**138
Wegner, Hans Jorgen (obit.) **08:**165
weight lifting **09:**331; **08:**331; **07:**325; **06:**327; **05:**327; **04:**323; **03:**356; **02:**350; **01:**349; **00:**346
Sporting Record *tables* 351
Weijden, Maarten van der 326
Weinberger, Caspar Willard (obit.) **07:**159
Weinzweig, John Jacob (obit.) **07:**159
Weir, Johnny 322
Weizman, Ezer (obit.) **06:**138
Weizsacker, Carl Friedrich Freiherr, Baron von (obit.) **08:**165
Welch, Laura Lane: *see* Bush, Laura
Welch, Stanton 278
"Welcome to the Sticks," *or* "Bienvenue chez les Ch'tis" (motion picture) 285
welfare: *see* social protection
Weller, Thomas Huckle (obit.) **09:**165
Wellington (N.Z.) 442
Wells Fargo (Am. co.)
financial crisis of 2008 172
Wen Jiabao 383
Wenchuan (China)
earthquake 226, 384, *il.* 227
Wernham, Bertha: *see* Wilson, Bertha
West, Kanye (biog.) **08:**108
popular music 277
West Bank (reg., Pal.): *see* Palestinian Autonomous Areas
West End (area, London, U.K.)
theatre 280
West Indies 359
western lowland gorilla, *or* Gorilla gorilla gorilla
wildlife conservation 238
Western Sahara 439
Westlake, Donald Edwin (obit.) **09:**165
Westmoreland, William Childs (obit.) **06:**138
Weston, Ruth: *see* Brown, Ruth
Westwood, Vivienne, *or* Vivienne Isabel Swire (biog.) **05:**96
Wexler, Jerry, *or* Gerald Wexler
obituary **09:**165
popular music 277
Wexler, Sy, *or* Simon Wexler (obit.) **06:**138
WFP (UN): *see* World Food Programme
whaling 368
archaeology 203, 252
Wharton, William, *or* Albert William du Aime (obit.) **09:**165
wheat
skyrocketing food prices 182
Wheeldon, Christopher 278, 279
Wheeler, Harvey, *or* John Harvey Wheeler (obit.) **05:**140
Wheeler, John Archibald (obit.) **09:**165
"When Will There Be Good News?" (Atkinson) 255
Whipple, Fred Lawrence (obit.) **05:**140
Whithread Book of the Year Award: *see* Costa Book of the Year Award
White, Oliver: *see* Hill, Oliver
White, Reggie (obit.) **05:**140
White, Shaun, *or* "Flying Tomato"
biography **07:**106
snowboarding 325
White, Thelma, *or* Thelma Wolpa (obit.) **06:**138
"White Tiger" (Adiga) 254
"WhiteKnightTwo" (aircraft) *il.* 35
Whiteley, John Richard (obit.) **06:**138
Whitley, Chris, *or* Christopher Becker Whitley (obit.) **06:**138
Whitney, Phyllis Ayame (obit.) **09:**165
Whitney Biennial (art exhibition) 211, *il.*
Whitney Museum of American Art (museum, N.Y.C., N.Y., U.S.) 212
WHO: *see* World Health Organization
Wi-Fi: *see* wireless technology
Wicked Pickett, the: *see* Pickett, Wilson
Wickremanayake, Ratnasiri 466
Widdowson, Ethel Eva: *see* Crane, Eva
Widmark, Richard (obit.) **09:**166
Widmer, Arthur (obit.) **07:**160
Wiesenthal, Simon (obit.) **06:**139
Wii (video-game console) 223, *il.*
Wijdenbosch, Jules 468
Wijetunga, Dingiri Banda (obit.) **09:**166
Wilchin, Paul: *see* Winchell, Paul
Wild, Jack (obit.) **07:**160
Wilders, Geert 442
wildlife conservation **09:**237; **08:**237; **07:**208; **06:**193; **05:**195; **04:**196; **03:**213; **02:**215; **01:**210; **00:**198
Wilkes, Cathy
art 210, *il.* 211
Wilkin, Marijohn (obit.) **07:**160
Wilkins, Maurice Hugh Frederick (obit.) **05:**140
Wilkins Ice Shelf (ice formation, Antarc.) 361, *il.*
Wilkinson Microwave Anisotropy Probe, *or* WMAP 295
William of Wales, Prince, *or* William Arthur Philip Louis Windsor (biog.) **08:**108
Williams, Sir Daniel 406
Williams, Jesse *il.* 283
Williams, Jody
"Ten Years of Progress Toward a World Free of Land Mines" (special report) **08:**186
Williams, Lucinda, *or* Lucinda Gayl Williams (biog.) **08:**109
Williams, Milan B. (obit.) **07:**160
Williams, Rowan 188, 298
Williams, Serena 327
Williams, Shane 318
Williams, Venus 327
Williamson, Jack, *or* John Stewart Williamson (obit.) **07:**160
Willis, Bill (obit.) **08:**165
Willis, Dorothy Ann: *see* Richards, Ann
Wilson, August, *or* Frederick August Kittel (obit.) **06:**139
theatre 283
Wilson, Bertha, *or* Bertha Wernham (obit.) **08:**165
Wilson, Sallie (obit.) **09:**166
WiMax (tech.) 219
Wimbledon (tennis) 328
Sporting Record *tables* 349
Winchell, Paul, *or* Paul Wilchin (obit.) **06:**139
wind shear 228
wind turbine *il.* 233
Windhoek (Nam.) 441
Windows Vista (operating system)
new technology 224
windpipe: *see* trachea
Windsor, William Arthur Philip Louis: *see* William of Wales, Prince
Winehouse, Amy
biography **09:**110
fashions 241
popular music 277
Wines, James
"Green Architecture: Building for the 21st Century" (special report) **08:**192
Winfield, Paul Edward (obit.) **05:**140
Winston, Stan, *or* Stanley Winston (obit.) **09:**166
Winter, Fred, *or* Frederick Thomas Winter (obit.) **05:**141
winter moth, *or* Operophtera brumata (insect) 247
Winter Olympics
special report **03:**344
"XX Olympic Winter Games, The" (special report) **07:**296
Winterbottom, Michael
Film Awards *table* 287
Winters, Shelley, *or* Shirley Schrift (obit.) **07:**160
Winton, Timothy John 261
Wintour, Anna (biog.) **08:**109
Wiranto 412
wireless technology 219
wireless revolution (special report) **03:**178
Wise, Robert Earl (obit.) **06:**139
Witherington, Cecile Pearl: *see* Cornioley, Pearl
Witten, Edward (biog.) **05:**96
Wittstock, Charlene
Prince Albert II association 438
WJC: *see* World Jewish Congress
WMAP: *see* Wilkinson Microwave Anisotropy Probe
WMD (weaponry): *see* weapon of mass destruction
WNBA: *see* Women's National Basketball Association
Woertz, Patricia A. (biog.) **07:**106
Woiwode, Larry 259
Wojtyla, Karol Jozef: *see* John Paul II
Wolde-Giyorgis, Girma 397
Wolf, Henry (obit.) **06:**139
Wolf, Markus Johannes (obit.) **07:**160
Wolfe, Nathan (biog.) **09:**110
Wolfowitz, Paul (biog.) **06:**96
Wolpa, Thelma: *see* White, Thelma
women
computer games 223
fashions 241
feminism (special report) **08:**196
health and disease 244
Kuwait 426
Rwanda 455
status of women worldwide (special report) **00:**298
Women's National Basketball Association, *or* WNBA 308
Sporting Record *tables* 333
Woo, William Franklin (obit.) **07:**160
Wood, Fiona (biog.) **06:**96
Wood, Mervyn Thomas (obit.) **07:**160

Woodbridge, George Charles (obit.) **05:**141
Wooderson, Sydney Charles (obit.) **07:**161
Woodiwiss, Kathleen, *or* Kathleen Erin Hogg (obit.) **08:**165
Woodrull, John Youie (obit.) **08:**165
Woods, Abraham Lincoln, Jr. (obit.) **09:**166
Woods, Rose Mary (obit.) **06:**139
Woods, Tiger, *or* Eldrick Woods 318
Woodward, Bob, *or* Robert Upshur Woodward (biog.) **05:**97
Woolmer, Bob, *or* Robert Andrew Woolmer (obit.) **08:**166
Woolworth Co., *or* F.W. Woolworth Co., *or* Venator Group, Inc., *or* Woolworths (Am. co.) 480
world affairs **08:**354; **07:**348; **06:**350; **05:**350; **04:**346; **03:**380; **02:**374; **01:**376; **00:**368
World Bank (internat. org.)
Chad 382
Eritrea 397
Ethiopia 398
European Union 357
financial crisis of 2008 175
Gambia, The 401
Grenada 406
Italy 418
Jordan 422
Madagascar 432
Saint Lucia 456
World Baseball Classic, *or* WBC baseball (sidebar) **07:**301
World Boxing Association, *or* National Boxing Association, *or* WBA (internat. sports org.) 310
World Boxing Council, *or* WBC (internat. sports org.) 310
World Council of Churches 300
World Court (UN): *see* International Court of Justice
world credit crisis: *see* global financial crisis
World Cup (assoc. football) 316
sidebars **07:**311; **03:**336
World Cup (bobsleigh) 309
World Cup (cricket)
sidebars **08:**311; **04:**301
World Cup (golf)
Sporting Record *tables* 342
World Cup (lugeing) 309
World Cup (rugby) 318
Sporting Record *tables* 342
World Cup (skeleton) 309
World Cup (skiing) 324
Sporting Record *tables* 346
World Food Programme, *or* WFP (UN) 429
skyrocketing food prices 182
World Games (sidebar) **06:**321
World Health Organization, *or* WHO (UN) 242, 355, 378
World Heritage List 359, 378
World Jewish Congress, *or* WJC Switzerland 470
"World Made by Hand" (Kunstler) American literature 258
"World of Warcraft" (online game) online gaming (sidebar) **07:**196
world rally championship, *or* WRC (auto racing) 305
World Series (baseball) 306
Sporting Record *tables* 333
World Trade Center, *or* ground zero (bldg. complex, N.Y.C., N.Y., U.S.) 208
rebuilding (sidebar) **04:**155
September 11 terrorist attack (special report) **02:**6, *map* 11
World Trade Organization, *or* WTO 366, 381
World War I (1914-18) 255
World War II, *or* Second World War, *or* WWII (1939-45) 255
worldwide economic slowdown: *see* global financial crisis
Wotherspoon, Jeremy 323
Wray, Fay, *or* Vina Fay Wray (obit.) **05:**141
Wray, Link, *or* Frederick Lincoln Wray (obit.) **06:**139
WRC (auto racing): *see* world rally championship
"Wrestler, The" (motion picture) 284, *table* 287
wrestling **09:**331; **08:**331; **07:**325; **06:**327; **05:**327; **04:**323; **03:**356; **02:**350; **01:**349; **00:**347
Sporting Record *tables* 351
Wright, Belinda, *or* Brenda Wright (obit.) **08:**166
Wright, Sir Edward Maitland (obit.) **06:**140
Wright, Rev. Jeremiah 177
Wright, Rebecca Diane (obit.) **07:**161
Wright, Rick, *or* Richard William Wright (obit.) **09:**167
Wright, Robert Craig (obit.) **06:**140
Wright, Teresa, *or* Muriel Teresa Wright (obit.) **06:**140
Wriston, Walter Bigelow (obit.) **06:**140
WTO (internat. org.): *see* World Trade Organization
Wu Minxiag 327
Wuorinen, Charles 273
WWII (1939-45): *see* World War II
Wyatt, Jane (obit.) **07:**161
Wyman, Jane, *or* Sarah Jane Fulks (obit.) **08:**166

X

X Games 325
X-ray spectroscopy 291
Xavi 315
Xbox 360 223
Xi Jinping (vice pres. of China) China 384
Xiao Ke (obit.) **09:**167
Xie Jin (obit.) **09:**167
Xue Muqiao (obit.) **06:**140

Y

Y chromosome 200
yachting: *see* sailing
Yadav, Ram Baran 442
Yahoo! (Am. co.) 220
Yakovlev, Aleksandr Nikolayevich (obit.) **06:**140
Yale School of Art and Architecture (school, New Haven, Conn., U.S.) 208
Yamanaka, Shinya
biography **09:**111
yang (Eastern philosophy): *see* yinyang
Yang, Edward, *or* Yang Dechang (obit.) **08:**166
Yang, Jerry 220
Yang Wei 320
Yang Yi 269
Yankee Stadium (stadium, N.Y.C., N.Y., U.S.) 307, *il.* 306
Pope Benedict's U.S. visit 489, *il.*
Yao Wenyuan (obit.) **06:**140
Yaoundé (Camer.) 379
Yar'Adua, Umaru Musa
biography **08:**110
Nigeria 444
Yard, Molly, *or* Mary Alexander obituary **06:**140
Yardley, George Harry (obit.) **05:**141
Yaren (Nauru) 441
Yarmy, Donald James: *see* Adams, Don
Yassin, Sheikh Ahmed (obit.) **05:**141
Yasunari Kawabata Prize 269
"Year of Magical Thinking, The" (play) 282
Yelizarov, Mikhail 267
yellow fever 243, 448, *il.* 244
Yeltsin, Boris, *or* Boris Nikolayevich Yeltsin (obit.) **08:**166
Yemen **09:**491; **08:**491; **07:**491; **06:**491; **05:**491; **04:**491; **03:**522; **02:**522; **01:**521; **00:**519
paleontology 252, *il.* 253
Qatar 452
see also WORLD DATA
yen (Japanese currency) 421, *il.* 420
Yen, Vivian Wu (obit.) **09:**167
Yerevan (Arm.) 367
Yermakova, Anastasiya 327
Yi Ku (obit.) **06:**141
Yiddish literature **06:**235; **05:**236; **04:**236; **03:**258; **02:**257; **01:**256; **00:**245
Yingxiu (town, China) earthquake *il.* 384
yinyang, *or* in-yō, *or* yin and yang, *or* yin-yang (Eastern philosophy) 186
Yizhar, S., *or* Yizhar Smilansky (obit.) **07:**161
YMP (pol. party, Azerbaijan): *see* New Equality Party
Yokoyama, Mitsuteru (obit.) **05:**141
Yomiuri Giants (baseball team) 307
Yomiuri Prize for Literature 269
Yoshimoto, Banana 269
Yoshizawa, Akira (obit.) **06:**141
Young, Sir Colville 373
Young, Kevin 259
"Young Stalin" (Montefiore) 255
Young Vic (Br. thea. co.) 282
Younger Dryas climate interval 226
YouTube (Am. co.) 223
Yudhoyono, Susilo Bambang, *or* SBY (biog.) **06:**96
Indonesia 412
Yugoslav region: *see* Serbia
Yugoslavia **03:**522; **02:**522; **01:**522; **00:**522
Yuliya Tymoshenko Bloc, *or* BYT (pol. party, Ukraine) 478
Yuro, Timi, *or* Rosemarie Timotea Aurro (obit.) **05:**141
Yushchenko, Viktor, *or* Viktor Andriyovych Yushchenko
biography **06:**97
religion 299, *il.*
Ukraine 478, *il.*
Yusuf Ahmed, Abdullahi 462

Z

Zachopoulos, Christos 405
Zaev, Zoran 432
Zagajewski, Adam (biog.) **05:**97
Zagreb (Croatia) 389
Zahir Shah, Mohammad (obit.) **08:**167
Zaimoglu, Feridun 261
Zaki, Ahmed, *or* the Black Tiger (obit.) **06:**141
Zambia **09:**491; **08:**491; **07:**491; **06:**491; **05:**491; **04:**491; **03:**523; **02:**523; **01:**523; **00:**523
see also WORLD DATA
Zanzibar (isl., Tan.) 472
Zapatero, José Luis Rodríguez
biography **05:**97
Spain 465
Zardari, Asif Ali (biog.) **09:**111
Pakistan 446
Zaret, Hy, *or* Hyman Harry Zaritsky (obit.) **08:**167
"Zarkava" (racehorse) 313
Zarqawi, Abu Musab al-, *or* Ahmad Fadil Nazal al-Khalaylch (obit.) **07:**161
Zatlers, Valdis 428
Zavagli Ricciardelli delle Camminate, Renato: *see* Gruau, René
Zawinul, Joe, *or* Josef Erich Zawinul (obit.) **08:**167
Zayed International Prize for the Environment 237
Zeidane, Zeine Ould 435
Zeidi, Muntadar al- 484, *il.*
Zelaya, Manuel, *or* Manuel Zelaya Rosales 408, *il.* 409
Zell, Sam, *or* Samuel Zielonka (biog.) **08:**110
Zenawi, Meles 397
Zennström, Niklas (biog.) **08:**111
Zenón, Miguel 275
"Zenyatta" (racehorse) 313
Zephyr-6 (mil. vehicle) 271
ZERP (ecology): *see* ecological and fisheries protection zone
Zhai Zhigang 296
Zhang Bairen (obit.) **06:**141
Zhang Chunqiao (obit.) **06:**141
Zhang Hanzhi (obit.) **09:**167
Zhang Huan (biog.) **08:**111
Zhang Ziyi (biog.) **06:**97
Zhao Ziyang (obit.) **06:**141
Zhvania, Zurab (obit.) **06:**141
Zia, Khaleda 371, *il.*
Zielonka, Samuel: *see* Zell, Sam
Zimbabwe **09:**492; **08:**492; **07:**492; **06:**491; **05:**492; **04:**492; **03:**524; **02:**524; **01:**523; **00:**523
Botswana 376
education 229
health and disease 243, *il.* 244
Malawi 433
South Africa 464
Southern African Development Community 358
United Nations 356
Zambia 492
see also WORLD DATA
Zimmerman, Joseph James, Jr. (obit.) **05:**141
Zinovyev, Aleksandr Aleksandrovich (biog.) **07:**161
Zoellick, Robert B., *or* Robert Bruce Zoellick (biog.) **08:**112
Zoggeler, Armin 310
Zongo, Tertius
Burkina Faso 378
zoo **03:**215; **02:**216; **01:**212; **00:**200
zoology **09:**247; **08:**248; **07:**224; **06:**215; **05:**215; **04:**215; **03:**236; **02:**235; **01:**234; **00:**222
"Zorro" (mus. thea.) 281
Zou Kai 320
Zubkov, Aleksandr 309
Zubkov, Viktor
Russia 453
Zuck, Alexandra Cymboliak: *see* Dee, Sandra
Zuckerberg, Mark, *or* Mark Elliot Zuckerberg (biog.) **08:**112
social networking sites 221
Zuleta, Emiliano (obit.) **06:**141
Zuma, Jacob (biog.) **09:**112
South Africa 463, *il.* 41
Zune (digital music player) 224
zur Hausen, Harald
Nobel Prize 68, *il.*
Zvobgo, Eddison (obit.) **05:**141

Index of Special Features in *Britannica Book of the Year*, 2000–2009

Interviews
"Global Challenges to the United States in a New Millennium: An Interview with Jimmy Carter" **04:**06

Maps
Annual CO_2 Emissions **06:**195
Arctic Ice Cap, The **08:**230
Arctic Territorial Claims **08:**362
Atlantic Hurricanes' Tracks **06:**170
Canadian Election 2008 **09:**380
Caspian-Mediterranean Oil Pipeline **06:**366
Darfur Conflict Zones and Refugee Camps **09:**468
Deadliest Tsunami, The **05:**58
Death Penalty in the United States **03:**231
Diego Garcia: A Strategic Base **04:**354
Disintegration of Antarctica's Larsen Ice Shelf **03:**387
East Timor (Timor Lorosae) **00:**438
Ethnic Breakdown of Kosovo **09:**426
European Union **04:**351
Federally Administered Tribal Areas in Pakistan **05:**444
Forms of Slavery in the 21st Century **01:**310
Freshwater Stress **04:**192
Funding Civil War with Diamonds **01:**390
Glacial-Age Megaflood **08:**228
Global Temperature Changes **07:**201
Great Limpopo Transfrontier Park **03:**471
Greek- and Turkish-Controlled Areas of Cyprus **05:**388
Health Care: Who Decides When the Patient Cannot **06:**207
HIV/AIDS Prevalence in Africa, 1998 **00:**450
Human Cases of Avian Influenza 2003–06 **07:**214
Ill-fated Flight Paths ("9-11") **02:**11
Indonesia: Religious Majority by Province **02:**440
Israeli and Palestinian Settlements in the West Bank and Gaza Strip **03:**448
Leftists in Latin America **06:**489
Mumbai Targets of Terrorist Attack **09:**193
Muslims in Western Europe **07:**477
North Korean Ballistic Missile Capabilities **07:**420
Nunavut **00:**399
Projections of Surface Temperature Changes **08:**173
SARS Epidemic, 2002-2003 **04:**201
Selected Neanderthal and Early Modern Human Sites in Europe, Northern Africa, and Southwestern Asia **05:**149
Somalia **02:**492
South America's Indigenous Populations **00:**521
Strong La Niña Conditions **00:**169
United Nations Ongoing Peacekeeping Missions **08:**355
U.S. Election 2000 **01:**515
U.S. Election 2004 **05:**485
U.S. Election 2008 **09:**178
U.S. Hispanic Population **02:**515
U.S. Military Bases in and Around Afghanistan **02:**384
Viking Travels 9th–11th Century **01:**409

Photo Essays
"Images of the Year [1999]" **00:**6
"Life Cycle of the SARS Epidemic, February–July 2003" **04:**204
"Redefining Art" **03:**162

Sidebars
"Alarming State of the U.S. Electricity Grid" (Christopher O'Leary) **05:**185
"Alzheimer Disease: Clues from Convents" (Ellen Bernstein) **02:**225
"Ancient Grains" (Stephen Philips) **06:**145
"Animé" (Horst Schröder) **01:**298
"Antiquing for the Ages: The Search for Hidden Treasures" (Linda M. Kruger) **02:**174
"Astronomers Reclassify Pluto as a Dwarf Planet" (Kenneth Brecher) **07:**283
"Australia's 2007 Election: The End of an Era" (A.R.G. Griffiths) **08:**368
"Banana War, The" (Geza Feketekuty) **00:**176
"Baseball's World Classic" (Robert Verdi) **07:**301
"Bibliotheca Alexandrina" (Thomas M. Gaughan) **02:**233
"Bird Flu—The Next Human Pandemic?" (Brian J. Ford) **06:**490
"Blogs Mix Up the Media" (Alan Stewart) **03:**273
"Bollywood" (Karen J. Sparks) **00:**284
"Botox: Quick Fix, Serious Medicine" (Ellen Bernstein) **03:**224
"Boxing's 'Alphabet Soup' of Champions" (Nigel Collins) **06:**302
"Brazil's 500th Anniversary: The Paradox of Celebration" (John Charles Cuttino) **01:**403
"British Election of 2001, The" (Peter Kellner) **02:**509
"British Election of 2005, The" (Peter Kellner) **06:**477
"Cataclysm in Kashmir" (Patricia Bauer) **06:**442
"Charter Schools Gain Momentum" (R. Murray Thomas) **04:**188
"China's Relations with Its Neighbours" (Xiaobo Hu) **06:**381
"Combating the Crisis in Darfur" (Alex Meixner) **09:**467
"Conductors Play Musical Chairs" (Harry Sumrall) **04:**253
"Confronting Childhood Obesity" (Ellen Bernstein) **06:**203
"Craze For Curbing Carbs, The" (Stephen J. Phillips) **05:**145
"Criteria for Joining the Euro Zone" (Toby Helm) **05:**353
"DARPA—50 Years of Innovation (Peter Saracino) **09:**272
"Deadliest Tsunami, The" (Melinda C. Shepherd) **05:**58
"Defining Weapons of Mass Destruction" (Peter Saracino) **04:**249
"Diamonds: Fuel for Conflict" (Matthew A. Cenzer) **01:**390
"Diego Garcia: A Strategic Base" (Charles Cadoux) **04:**354
"Distance Learning—Education Beyond Buildings" (Michael Simonson) **09:**231
"DNA—the Forensic Tool of the '90s" (Sandra Langeneckert) **00:**217
"Dumb?—Like a Fox" (Amy Tikkanen) **00:**266
"Election Reform Debate in the U.S." (Michael Levy) **02:**517
"Enron—What Happened?" (Christopher O'Leary) **03:**193
"European Union's Proposed Constitution, The" (Toby Helm) **06:**353
"Euro's First Birthday, The" (Emma Tucker) **00:**372
"Fan Fiction—TV Viewers Have It Their Way" (Nancy Schulz) **02:**277
"FIFA World Cup 2006" (Jack Rollin) **07:**311
"Figure Skating's New Judging System" (Ron Reid) **06:**316
"Filling Prescriptions for Americans—Big Business in Canada" (Ellen Bernstein) **04:**377
"Floriade, a Fusion of Nature and Art" (Warren Schultz) **03:**217
"French Election of 2007, The" (David Buchan) **08:**400
"French Elections, The" (David Buchan) **03:**431
"Future of Fossil Fuel, The" (Lee Hudson Teslik) **09:**216
"Genealogy Takes Root on the Internet" (Alan Stewart) **04:**167
"Globalization—Why All the Fuss?" (Geza Feketekuty) **01:**191
"Graphic Novels: Not Just Comic Books" (Michael Ray) **05:**239
"Gulf States Construction Boom, The" (John Duke Anthony) **08:**477
"Honeybees and Colony Collapse Disorder" (William Michael Hood) **09:**249
"Horse Racing's Revolutionary Running Surfaces" (John G. Brokopp) **08:**314
"How Many Somali States?" (Virginia Luling) **02:**492
"Hybrid Cars Hit the Road" (William L. Hosch) **05:**193
"In Celebration of the World's First Novel" (Kathleen Kuiper) **02:**260
"In Sight: A World Without Polio" (Ellen Bernstein) **05:**203
"Increasing Safety in Auto Racing: A Winning Formula?" (Robert J. Fendell) **02:**318
"India's Computer Revolution" (Shalaka Paradkar) **01:**442
"Knocking Out Corruption in Boxing" (Nigel Collins) **01:**324
"La Bomb(a): The Latin Pop Explosion" (Jeff Wallenfeldt) **00:**277
"Large Hadron Collider--The World's Most Powerful Particle Accelerator, The" (David G.C. Jones) **09:**292
"Learning at Home" (David R. Calhoun) **00:**193
"Literary Voices for Islam in the West" (Aida A. Bamia) **06:**237
"Macau's Return to China" (Melinda C. Shepherd) **00:**374
"Maha Kumbh Mela" (Shantha Uddin) **02:**308
"Media Voices of the Muslim World" (Ramona Monette Sargan Flores) **02:**272
"Medicare's New Prescription-Drug Program" (David M. Mazie) **05:**285
"Migrant Remittances: A Vital GNP Factor" (Janet H. Clark) **07:**432
"Milestones in Spaceflight" (Dave Dooling) **02:**268
"Mixed Martial Arts Makes Its Mark" (Neil Davidson) **08:**309
"Nanotechnology—Small is Beautiful" (Alan Stewart) **05:**165
"Neanderthals—The Latest News" (Steve Kuhn) **05:**149
"New Frontiers in Radio" (Steve Johnson) **05:**243
"New Millennium—Just When Is It Anyway, The?" (Barbara Whitney) **00:**252
"Olympic-Sized Scandal, An" (Stephen P. Davis) **00:**307
"Palestinian Election" (Leslie D. Susser) **07:**413
"Paralympic Games: A Forum for Disabled Athletes, The" (Melinda C. Shepherd) **09:**330
"Poker Fever" (William L. Hosch) **06:**241
"Pop Goes the Country?" (Jeff Wallenfeldt) **01:**286
"Prosecuting the President" (Robert Rauch) **00:**513
"Reality of Virtual Characters, The" (Barbara Whitney) **04:**265
"Rebuilding the World Trade Center" (David R. Calhoun) **04:**155
"Roman Catholic Church Scandal" (Darrell J. Turner) **03:**304
"Seed Banks—Preserving Crop Diversity" (Gregory McNamee) **09:**235
"Social Networking—Making Connections on the Web" (Michael Ray) **08:**225
"Subprime Mortgages: A Catalyst for Global Chaos" (Janet H. Clark) **08:**484
"Sudoku—the Addictive Numbers Puzzle" (Robin Wilson) **07:**254
"Tehelka Tapes, The" (Shalaka Paradkar) **02:**438
"Text Messaging: WAN2TLK" (Alan Stewart) **06:**165
"Those Bones Named Sue" (Barbara Whitney) **01:**241
"TV—Too Big a Dose of Reality?" (Barbara Whitney) **02:**271
"2003 Cricket World Cup, The" (Andrew Longmore) **04:**301
"2007 Cricket World Cup, The" (Andrew Longmore) **08:**311
"Type 2 Diabetes: A Long-Ignored Epidemic" (Ellen Bernstein) **08:**247
"U.S. 2002 Midterm Elections, The" (David C. Beckwith) **03:**517
"U.S. 2006 Midterm Elections, The" (David C. Beckwith) **07:**481
"Vikings of 2000, The" (Kevin Cox) **01:**409
"Virtual World of Online Gaming, The" (Michael Ray) **07:**191
"World Games and the Quest for Olympic Status" (Janele M. Urbansky; Julie Urbansky) **06:**321

Special Reports and Spotlights

"Advances in Battlefield Medicine" (Peter Saracino) **08:**176
"Africa's Struggle Against AIDS" (Elizabeth Pisani) **00:**450
"Arms Race in Sporting Goods" (Gavin Forbes Ehringer) **00:**336
"Biofuels—The Next Great Source of Energy?" (Clarence Lehman) **08:**174
"Britain: The Radical Stronghold of European Muslims" (Tom Gallagher) **07:**476
"Bush, Iraq, and the World" (Strobe Talbott) **04:**412
"Celebrating the Centennial of Einstein's 'Miraculous Year' " (John J. Dykla) **06:**270
"Census of Marine Life" (David C. Hayes) **07:**226
"Character and Future of Nation Building, The" (Ray Salvatore Jennings) **05:**412
"China: Asia's Emerging Superpower" (Dali L. Yang) **00:**406
"Christianity's Newest Converts" (Kenneth L. Woodward) **02:**306
"Citizen Journalism: A News [R]evolution" (Lawrence Albarado) **09:**180
"Climate Change—The Global Effects" (John Streicker) **08:**170
"Death Penalty on Trial, The" (Andrew Rutherford) **03:**230
"Design for the Third Millennium" (Patrick Coyne) **01:**168
"Digital Consumer Electronics Boom" (Steve Alexander) **07:**188
"Does Testing Deserve a Passing Grade?" (Charles D. Claiborn) **02:**208
"Dollarization: Is It Worth It?" (Guillermo A. Calvo) **02:**420
"Electronic Trading" (Irving Pfeller) **00:**180
"Feminism Reimagined: The Third Wave" (Laura Brunell) **08:**196
"Financial Crisis of 2008, The" (Joel Havemann) **09:**170
"Freegans— The Ultimate Recyclers, The" (Mary Grigsby) **09:**184
"Games of the XXVII Olympiad" (Melinda C. Shepherd) **01:**350
"Games of the XXVIII Olympiad" (Melinda C. Shepherd) **05:**292
"Games of the XXIX Olympiad" (Melinda C. Shepherd) **09:**194
"Genetically Modified Foods: The Political Debate" (Norman Myers) **01:**150
"Green Architecture: Building for the 21st Century" (James Wines) **08:**192
"Human Genome: Ultimate Road Map, The" (Judith L. Fridovich-Keil) **01:**238
"Immigration's Economic Impact" (Richard B. Freeman) **07:**486
"Intelligent Design—Scientific Concept or Religious View?" (Thomas F. Glick) **07:**286
"Invasion of Privacy on the Internet" (Jeffrey Rosen) **01:**178
"Iran's Power Dilemma" (Keith S. McLachlan) **07:**408
"Kabuki Goes West" (Shōzo Satō) **06:**258
"Kyoto Protocol, The: What Next?" (Roger A. Pielke, Jr.) **06:**210
"Leftist Surge in Latin America, A" (Paul Knox) **06:**488
"Legal Debate over Same-Sex Marriages, The" (Andrew Koppelman) **05:**206
"Media Go to War, The" (Peter Kellner) **04:**246
"Mystique of Mars, The" (Dave Dooling) **05:**274
"NATO at 50" (Douglas L. Clarke) **00:**428
"New Frontiers in Cheating" (R. Murray Thomas) **03:**206
"9-11" (Robert G. Kaiser) **02:**8
"XIX Olympic Winter Games, The" (Melinda C. Shepherd) **03:**344
"Nunavut: The Birth of a New Territory" (David M.L. Farr) **00:**398
"Offshoring" (Christopher O'Leary) **05:**178
"Outsider Art: Moving in from the Margins" (Colin Rhodes) **08:**190
"Outsourcing War—The Surge in Private Military Firms" (Peter Saracino) **07:**286
"Perils of China's Explosive Growth, The" (Dorothy-Grace Guerrero) **08:**180
"Piracy on the High Seas" (John S. Burnett) **06:**210
"POWs and the Global War on Terrorism" (Peter Saracino) **05:**250
"Precepts of Traditional Chinese Medicine, The" (Nan Lu) **09:**186
"Preparing For Emergencies" (Susan L. Cutter) **06:**182
"Redefining Art" (Karen J. Sparks) **03:**162
"Redefining the Library in the Digital Age" (George M. Eberhart) **08:**188
"Rembrandt Research Project, The" (Ernst van de Wetering) **07:**180
"Remembering the Jamestown Colony After 400 Years" (David A. Price) **08:**182
"Resisting Disintegration in Post-Suharto Indonesia" (Greg Fealy) **02:**440
"Roma—Europe's Largest Minority, The" (Erika Schlager) **06:**290
"Roman Catholicism at a Crossroads" (R. Scott Appleby) **06:**280
"Science and Ethics of Embryonic Cell Research, The" (Lori P. Knowles and Erik Parens) **00:**210
"Security vs. Civil Liberties" (Stephen J. Phillips) **03:**312
"Serious Fracture in the Anglican Church, A" (R. Scott Appleby) **09:**188
"Skyrocketing Food Prices: A Global Crisis" (Janet H. Clark) **09:**182
"Slavery in the 21st Century" (Charles A. Jacobs) **01:**310
"Socialized Medicine's Aches and Pains" (Bryan Christie) **01:**222
"South America's Indigenous Peoples" (Alcida Rita Ramon) **00:**520
"Strangers at the Gates: The Immigration Backlash" (Bob Birrell) **03:**396
"Sunni-Shi'ite Division Within Islam, The" (R. Scott Appleby) **08:**178
"Ten Years of Progress Toward a World Free of Land Mines" (Jody Williams) **08:**186
"Terror in Mumbai" (Dr. Shanthie Mariet D'Souza) **09:**192
"Tony Blair: A 10-Year Retrospective (Tom Gallagher) **08:**198
"Trouble on the Hoof: Disease Outbreaks in Europe" (Brian J. Ford) **02:**154
"Turkey's Secular/Islamic Conundrum" (Metin Heper) **09:**190
"XX Olympic Winter Games, The" (Melinda C. Shepherd) **07:**296
"U.S. Census of 2000, The" (Eric Schmitt) **02:**514
"U.S. Election of 2000, The" (David C. Beckwith) **01:**514
"U.S. Election of 2004, The" (David C. Beckwith) **05:**484
"U.S. Election of 2008, The" (David C. Beckwith) **09:**176
"U.S. Gun-Control Debate: A Critical Look, The" (Iain Murray) **01:**228
"Warfare in the 21st Century" (Peter Saracino) **03:**280
"What Ails the UN Security Council?" (Edward C. Luck) **04:**348
"What's Next After SARS?" (Brian J. Ford) **04:**204
"Wireless Revolution, The" (Fiona Harvey) **03:**178
"Women at the Crossroads: Advances and Setbacks" (Siobhan Dowd) **00:**298
"World Water Crisis: Is There a Way Out?" (Peter Rogers) **04:**192